CEMVS-PM-E **Date:**

MEMORANDUM FOR RECORD - TECHNICAL REVIEW COMPLETE

SUBJECT: Quality Control Review, Lake Shelbyville Master Plan Update

In accordance with the District's Quality Control Management Plan, the Quality Control Review for the Lake Shelbyville Master Plan Update has been completed and all comments are resolved. We certify the completion of this review.

Cynthia W. Jackson
Technical Reviewer

Roseana M. Burick
Quality Control Reviewer

Technical Checklist
Project: Lake Shelbyville Master Plan Update Date_____

Item	Yes	No	N/A	Comments
GENERAL				
1, AUTHORITY				
Does the activity/project conform with authorized project purposes?				
2. SCOPE				
a. have all significant resources been adequately considered?				
b. Have all foreseeable short-term and long-term needs been adequately considered?				
c. Have all implications outside the activity/project area been properly addressed?				
3. OBJECTIVE OF MASTER PLAN				
Are Master Plan objectives clearly stated?				
4. COORDINATION				
a. Was there adequate coordination with appropriate State, local and Federal agencies and were their views considered in formulating the recommended plan?				
b. Has coordination conformed with law, executive orders and agreements between agencies; and, if not, has the departure been satisfactorily explained?				
c. Have the proper preservation, conservation, historical and scientific interests been consulted and were their views given adequate consideration during plan development?				
5. PUBLIC INVOLVEMENT				
a. Was the scoping process in accordance with EP 1130-2-550, section 3-4d?				
b. Was adequate public involvement conducted during the planning process to fully inform interested parties and to ascertain their views?				
c. Have implications associated with the recommended plan been properly addressed?				
d. Has there been adequate response to public concerns?				
e. Has the public involvement process been documented and a discussion of the process prepared?				

6. POLICY ASPECTS:				
Does the proposed project conform to policies established in ER 1165-2-400 (Water Resource Policies and Authorities)?				
7. LEGAL/INSTITUTIONAL:				
Have the legal and institutional obstacles to project implementation been considered and has a plan been developed to overcome them?				
8. REPORT REVIEW:				
a. Does the report format follow the most recent guidance?				
b. Have all major technical review issues and resolutions been documented?				
c. Is the technical review certification signature page included?				
9. FINANCIAL ANALYSIS				
a. If applicable, does the report state the benefit-cost ratio (BCR) for the recommended plan assuming existing conditions prevail over the period of analysis?				
b. Has the economic evaluation of recreational development been adequately determined?				
10. RECREATION/AESTHETIC				
a. Have the necessary recreational coordination been conducted in accordance with the FNCA of 1944, FPWA of 1965, and the WRDA of 1986, the Land and Water Conservation Fund Act, and appropriate Corps regulations?				
b. Has the assessment of adverse effects dealing with recreation and aesthetic conditions been considered in each alternative plan?				
c. Has coordination with the State Department of Culture, Recreation and Tourism been conducted, and the State Comprehensive Outdoor Recreation Plan been consulted concerning proposed recreational development?				
c. Has appropriate NED unit day values been assessed via Economic Guidance Memorandum, Unit Day Values for recreation? Are current fiscal year rates being used?				

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COMMONLY USED ACRONYMS AND ABBREVIATIONS

ABA – ARCHITECTURAL BARRIERS ACT
CFR – CODE OF FEDERAL REGULATIONS
CFS – CUBIC FEET PER SECOND
CIMBA – CENTRAL ILLINOIS MOUNTAIN BICYCLING ASSOCIATION
DBH – DIAMETER AT BREAST HEIGHT
EA – ENVIRONMENTAL ASSESSMENT
EC – ENGINEER CIRCULAR
EIS – ENVIRONMENTAL IMPACT STATEMENT
EO – EXECUTIVE ORDER
EOP – ENVIRONMENTAL OPERATING PRINCIPLES
EP – ENGINEER PAMPHLET
ER – ENGINEER REGULATION
FAS – FEDERAL AID SECONDARY
FY – FISCAL YEAR
GPM – GALLONS PER MINUTE
IDNR – ILLINOIS DEPARTMENT OF NATURAL RESOURCES
IEPA – ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
INAI – ILLINOIS NATURAL AREA INVENTORY
HPMP – H ISTORIC PROPERTIES MANAGEMENT PLAN
ILSHPO – ILLINOIS STATE HISTORIC PRESERVATION OFFICE
ISOP – INTERPRETIVE SERVICES AND OUTREACH PROGRAM
KRW – KASKASKIA RIVER WATERSHED
LERRD – LANDS, EASEMENTS, RIGHTS-OF-WAY AND RELOCATION
MGD – MILLION GALLONS PER DAY
MOA – MEMORANDUM OF AGREEMENT
MOU – MEMORANDUM OF UNDERSTANDING
MP – MASTER PLAN
MSL – MEAN SEA LEVEL
NAGPRA – NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT
NEPA – NATIONAL ENVIRONMENTAL POLICY ACT
NGVD – NATIONAL GEODETIC VERTICAL DATUM
NOAA – NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION
NPS – NATIONAL PARK SERVICE
O&M – OPERATIONS AND MAINTENANCE
OMBIL – OPERATIONS AND MAINTENANCE BUSINESS INFORMATION LINK
OMP – OPERATIONAL MANAGEMENT PLAN
PDT – PROJECT DELIVERY TEAM
PL – PUBLIC LAW
PMP – PROJECT MANAGEMENT PLAN

PSA – PROJECT SITE AREA
RecBEST – RECREATION BUDGET EVALUATION SYSTEM
SCORP – STATE COMPREHENSIVE OUTDOOR RECREATION PLAN
SHPO – STATE HISTORIC PRESERVATION OFFICE
SMSA – STANDARD METROPOLITAN STATISTICAL AREA
SSEP – SHELBYVILLE SHORELINE EROSION PLAN
SWCD – SOIL AND WATER CONSERVATION DISTRICT
T&E – THREATENED AND ENDANGERED
U of I – UNIVERSITY OF ILLINOIS
UKEP – UPPER KASKASKIA ECOSYSTEM PARTNERSHIP
USACE – US ARMY CORPS OF ENGINEERS
USC – UNITED STATES CODE
USFS – FOREST SERVICE
USFWS – US FISH AND WILDLIFE SERVICE
WRDA – WATER RESOURCE DEVELOPMENT ACT
WRRDA – WATER RESOURCE & REFORM DEVELOPMENT ACT

PREFACE

Lake Shelbyville was authorized for development by the Flood Control Act of 1938 and the Flood Control Act of 1958. Construction began in May 1963 and completed in 1970 with the closure of the gates. The original Master Plan was approved in 1964 and updated in 1974, 1998, and 2004. Each revision reviewed past development and presented proposals for future development.

This Master Plan evaluates trends in outdoor recreation, updates plans for US Army Corps of Engineers and partner development, and addresses several potential issues with proposed developments around the lake. The future of Lake Shelbyville depends on organized development and partnerships that connect the lake with the surrounding communities. These connections include improvements that will reach out to the next generation of visitors and benefit the lake as well as Moultrie and Shelby Counties.

Lake Shelbyville has often been viewed as an 'oasis in a sea of agriculture'. If wildlife habitat disappears on adjacent lands, whether through development or agriculture, the lake will become a more important refuge for that wildlife. Protecting the resource is as important as development and increasing tourism. The Corps, working with its partners, including Illinois Department of Natural Resources and Upper Kaskaskia Ecosystem Partnership, can ensure quality habitat while also providing for the needs of its current and future visitors.

A summary of requested land use classification changes to this Master Plan include:
•Compartment 50 land classification change from Low Density to High Density Recreation
•Compartment 21 land classification change from Low Density to High Density
•Addition of three Environmentally Sensitive Areas:
    West Okaw Biologically Significant Stream
    Coneflower Hill Prairie
    Capel Hill Prairie
•Realign certain Multiple Resource Area classifications, between Vegetative Management and Low Density Recreation to reflect current management practices.

Additional proposed changes to the Master Plan:
•Identification of Timber Stand Improvement areas around the lake

The preparation of an environmental assessment (EA) is required for federal actions that may result in impacts to the environment. Land classification changes which include the change at Compartment 50 and addition of Environmentally Sensitive areas (approximately 50 acres) are included in this Master Plan. Land classification changes are considered major federal actions due to the fact that classifications allow or disallow various actions and/or activities. The reclassification of the Environmentally Sensitive

Areas will afford greater protection to those resources, while the change in Compartment 50 will allow for the future development of that area. The classification changes along with forest management actions are addressed in the EA (Appendix A).

It is Corps of Engineers' policy to identify and avoid adverse impacts as early in the planning process as possible, site plans and/or specific actions that are not available at this time will require further National Environmental Policy Act (NEPA) review and documentation. Environmental compliance documents will follow District and project policy as outlined in Engineering Regulation 200-2-2.

Shoreline erosion continues to be an issue at Lake Shelbyville. A Shoreline Erosion Plan was produced more than 20 years ago to address this issue but the shoreline around the lake continues to change dramatically. Much of the plan discussed changes over 30 years and we are now in year 23 of this plan. It may be time to revisit and reevaluate the plan, noting areas with increased erosion, facilities that need to be protected or removed, and other impacts.

Coordination of this Master Plan with the public and government agencies was very important for identifying resources and determining public needs and desires. News releases sent to the media and letters to partners, legislators and other interested parties not only announced but also invited participation in the Master Plan process. The public and agency partners were given the opportunity to comment on this plan through informal workshops and meetings.

The approval of this Master Plan does not assure that all proposed projects will be implemented. After approval, funding must be secured to complete the projects. Further environmental reviews will be conducted and design requirements considered before moving forward.

LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED SHELBYVILLE ILLLINOIS

CHAPTER 1 - INTRODUCTION

1.1. PROJECT AUTHORIZATION

Federal laws provide that land and water areas of Department of the Army reservoirs, constructed for the primary purposes of flood risk management, navigation, and/or power, shall be administered to encourage and develop all collateral uses such as water supply, public parks and recreation, conservation of fish and wildlife resources, pollution abatement, and other purposes in the public interest.

Lake Shelbyville was authorized by the Flood Control Act of 1938 and modified by the Flood Control Act of 1958 in accordance with the Chief of Engineer's recommendations contained in House Document #232, 85th Congress, 1st session.

1.2. PROJECT PURPOSES

Lake Shelbyville is managed and operated by the U.S. Army Corps of Engineers (Corps) for the authorized purposes of flood risk management, recreation, water supply, navigation, and fish and wildlife conservation. The following Corps of Engineers Civil Works mission statement provides the base for these purposes:

> *"Civil Works' Mission and Vision: Dedicated to providing quality, responsive service to the nation in peace and war. The Directorate of Civil Works is a major component of the U.S. Army Corps of Engineers. The Civil Works programs include water resource development activities including flood risk management, navigation, recreation, and infrastructure and environmental stewardship. Our mission also includes emergency response."*

The Environmental Operating Principles (EOP) were introduced in 2002 and have instilled environmental stewardship across business line practices from recycling and reduced energy use at Corps and customer facilities to a fuller consideration of the environmental impacts of Corps actions and meaningful collaboration within the larger environmental community. These principles dovetail with the Corps' mission by promoting sustainable development within its projects. They are:

•Foster sustainability as a way of life throughout the organization.
•Proactively consider environmental consequences of all Corps activities and act accordingly.
•Create mutually supporting economic and environmentally sustainable solutions.
•Continue to meet our corporate responsibility and accountability under the law for activities undertaken by the Corps, which may impact human and natural environments.
•Consider the environment in employing a risk management and systems approach throughout the life cycles of projects and programs.
•Leverage scientific, economic and social knowledge to understand the environmental context and effects of Corps actions in a collaborative manner.
•Employ an open, transparent process that respects views of individuals and groups interested in Corps activities." *(Environmental Operating Principles, 2012)*

1.3. PURPOSE AND SCOPE OF THE MASTER PLAN

The original Master Plan, developed in 1964, was intended as a guide for the orderly and coordinated development and management of all lands and waters of Lake Shelbyville. It presented data on the scope of development considered adequate for initial public use and an estimate of future requirements. The 2004 revised Master Plan presented an inventory and assessment of land and water resources and physical improvements, analysis of resource use, and an evaluation of existing and future needs required to protect and improve the value of the resource base. The provision of quality and relevant services to the public was also evaluated. An economic evaluation of the market potential for resort and marina development was presented as one of the factors influencing resource development. It also included a Shoreline Erosion plan that was developed to alleviate problems in developed recreation areas.

This 2016 Master Plan updates and builds on those plans and development. It is primarily oriented to reflect current conditions and to eliminate outdated information concerning the allocation of project resources. Changing visitor preferences indicate camping facilities are generally adequate, although improvements to amenities are needed. Meeting the needs of those visitors who do not camp is important. Consideration is given to meeting today's standards for safety, accessibility, and design to maintain facilities. This revision not only reflects the current status of the project and land use but also any proposed plans, actions, and land use classification changes. This Master Plan includes the Letter Report, Lake Shelbyville, Illinois, Shoreline Erosion Management Plan and all actions taken pursuant to that action. The letter report complies with and reflects the Environmental Impact Statement for Operation and Maintenance of Lake Shelbyville, May 1974.

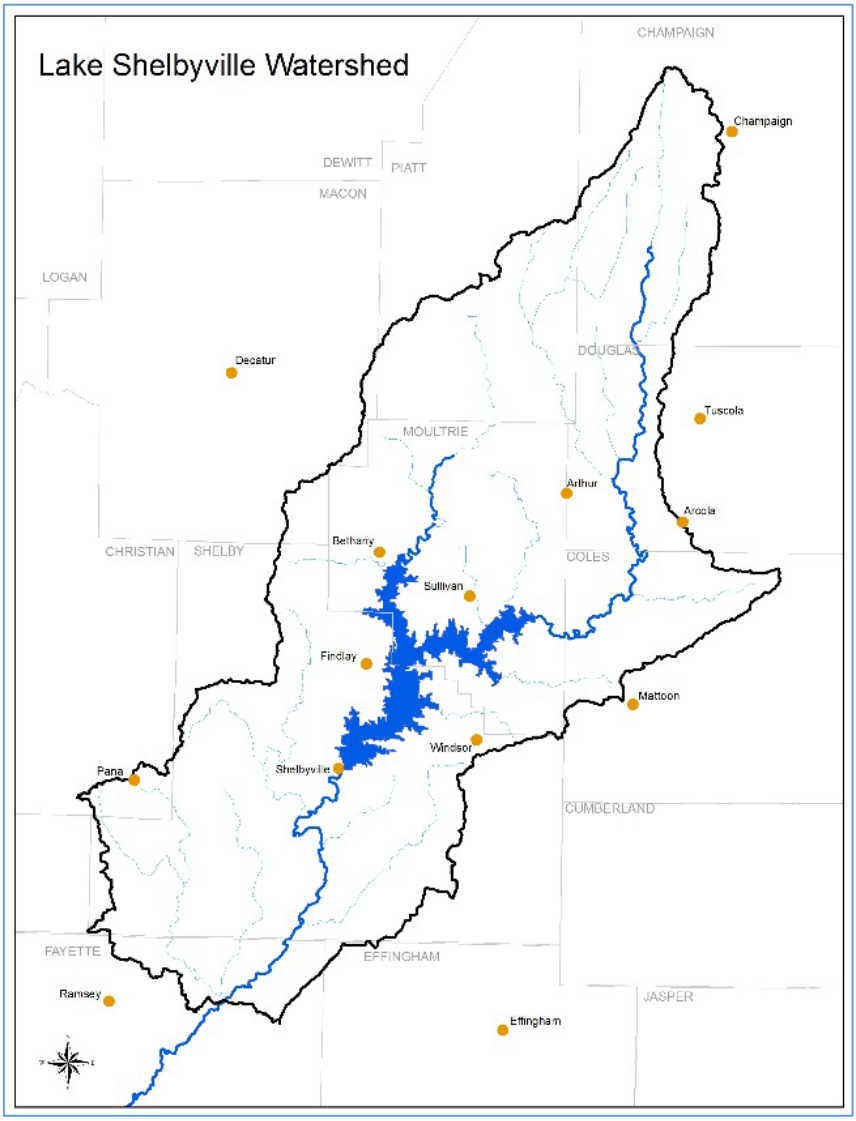
The Master Plan is not intended to address the specifics of regional water quality, shoreline management or water level management. These areas, if applicable, are covered in other project plans. However, specific issues identified through the Master Plan revision process can still be communicated and coordinated with the appropriate

internal Corps resource (e.g. Operations Division for shoreline management) or external resource agency (e.g. Illinois Department of Natural Resources for water quality) responsible for that specific area.

Lake Shelbyville's Operational Management Plan (OMP) uses Master Plan guidelines as a basis to outline upcoming projects. The OMP provides more detail to forthcoming construction and operation activities, which are then implemented through annual management plans. OMP's are updated more frequently to reflect changes in funding and operational priorities.

1.4. BRIEF WATERSHED AND PROJECT DESCRIPTION

Figure 1

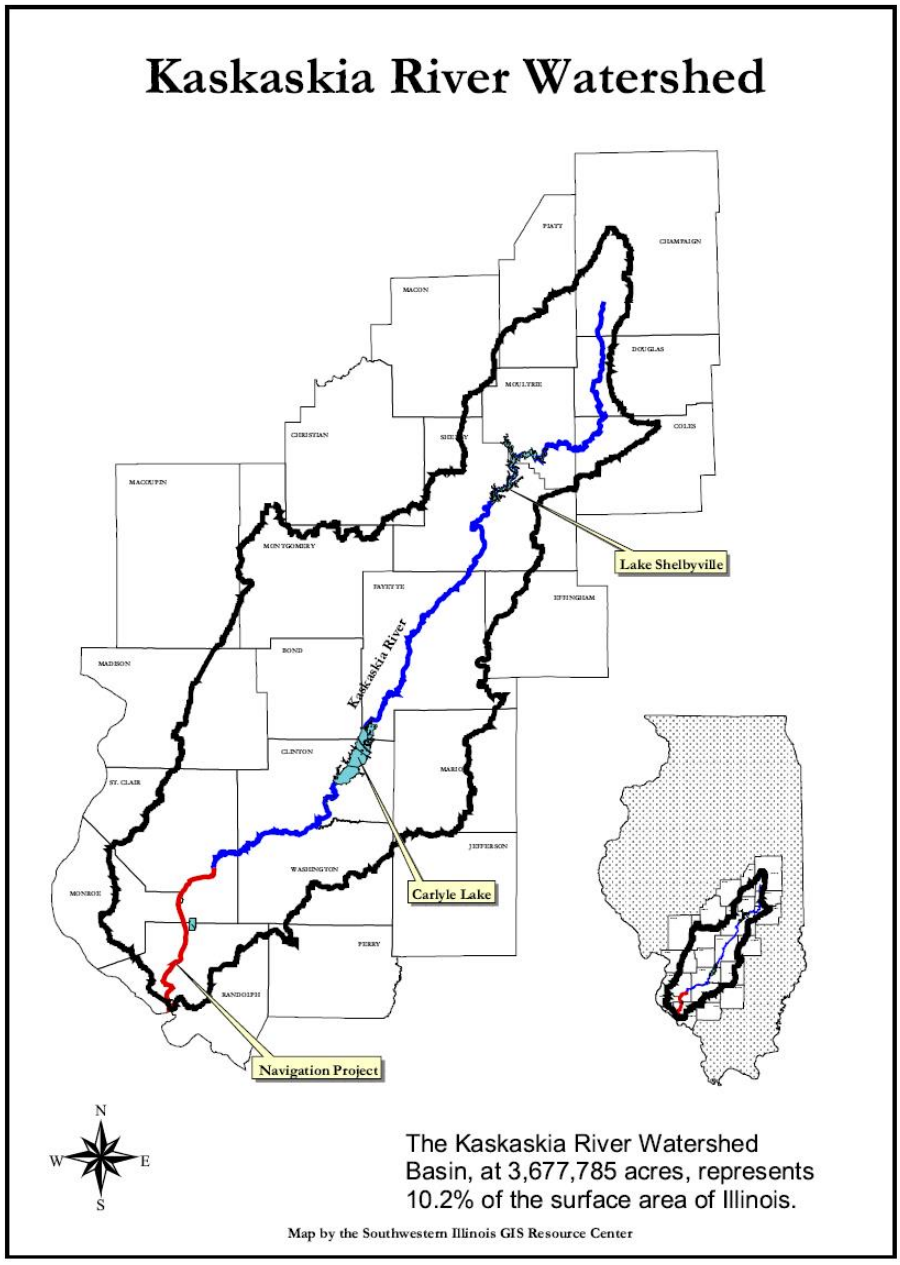


Lake Shelbyville is located in Shelby and Moultrie Counties of east-central Illinois. The dam site is located on the Kaskaskia River about one-half mile east of Shelbyville, Illinois. The lake lies approximately 113 miles northeast of St. Louis, Missouri and 60 miles southeast of Springfield, Illinois. Highways providing direct access to the project area include: Illinois Route 16 running east-west on the south side of the project; Illinois Route 121 running generally east-west on the north side of the project; Illinois Route 128 running north-south on the west side of the project; and Illinois Route 32 running north-south on the east side of the project. The location of the lake and adjacent lands along with a regional highway network are shown on Plate 1.

Two rivers, the West Okaw and the Kaskaskia, drain into Lake Shelbyville. The Kaskaskia River begins its journey in Champaign County, while the West Okaw headwaters drain farmland from Piatt County

south. Much of the land in the Lake Shelbyville watershed is flat or gently sloping. However, the many small tributaries entering the river above the dam site have created ravines and valleys to form a very irregular shoreline. Many coves, both large and small, can be found as a result. Very little dead standing timber remains in these coves as most have decayed over the last 40 years.

Figure 2



At normal recreation pool, the 11,100 acre lake is approximately 20 miles long, varying in width from one-quarter to one mile. Average depth is 19 feet, much deeper in the original river channel.

The Kaskaskia River is an important and prominent natural feature in Central and Southwestern Illinois. The watershed, primarily agricultural, is the second largest river system within Illinois, originating in Champaign County and flowing in a southwesterly direction for approximately 292 miles, where it unites with the Mississippi River in Randolph County. The Kaskaskia River Watershed (KRW) covers all, or parts, of 22 counties and encompasses an area of 5,746 square miles (3,677,787 acres) or 10.2% of the entire state. There are 8,680 miles of tributary streams, including the main river channel, (33% of the state stream-miles), and 843 lakes or ponds covering 79,037 acres. Two large U.S.

Army Corps of Engineers (USACE) reservoirs, Carlyle Lake and Lake Shelbyville, add another 37,000+ acres of surface water. The elevation at the Kaskaskia River headwaters is 740 feet NGVD, and drops to 368 feet NGVD at the Corps' Kaskaskia River Project near the confluence with the Mississippi River.

Approximately 82% of the land in the Kaskaskia River Basin is used for agricultural purposes. Of that 82%, most is cropland, (63%), with other significant land utilized as grassland, (19%). Corn and soybeans are important to the region, but producers also grow 25% of the entire state's crop of wheat. Livestock production, including dairy, swine, poultry, and beef cattle is a significant industry, especially in Clinton, Randolph and Washington Counties. *(Southwestern, 2002)*

Forest cover within the watershed is significant (9% of land area 331,000 acres), particularly along the streams. Good wetland resources also occur (4.5% of land area, 165,500 acres), along streams, where clay soils drain poorly and flooding makes development improbable. The climatic differences from the headwaters to the mouth are substantial, and create a great diversity in the native flora and fauna found within the watershed.

The largest bottomland hardwood forest within Illinois, at 43,000 acres, is located on the Kaskaskia River floodplain between Carlyle Lake and Fayetteville. One tract within this forest is the single largest contiguous tract in Illinois (7,300 acres) and is approximately two miles wide at certain points. In addition, the vast majority of the state's high quality southern flat wood forest occurs within the watershed.

The population of the KRW in 2000 was approximately 553,000 with much of the population living in approximately 100 small villages and cities. Urban land use in 1990 was only 3% (110,300 acres) of the watershed, mostly concentrated in Madison and St. Clair Counties in the East Metropolitan St. Louis. Urban sprawl is a concern in this part of the watershed. *(Southwestern, 2002)*

Two important partners, the Kaskaskia Watershed Association and the Upper Kaskaskia Ecosystem Partnership, are working to improve the health and quality of the entire watershed. These two partners are described in more detail in Chapter 6.

1.5. LISTING OF PERTINENT PROJECT INFORMATON

TABLE 1
LAKE SHELBYVILLE PERTINENT DATA

LOCATION OF DAM	
Stream	Kaskaskia River, Illinois
River Mile, Above Mouth	197.5**
County (IL)	Shelby
Nearest Town	Shelbyville, Illinois
LOCATION OF LAKE	
River Mile Above Mouth	197.9**
Counties (IL)	Shelby and Moultrie
DRAINAGE AREA	
Upstream From Dam Site (sq mi)	1,030
Upstream From Mouth (sq mi)	5,840
LAKE	
INACTIVE POOL (MINIMUM POOL)	
Top Elevation (NGVD)	573.0
Area, Acres of Water	3,000
Depth of Water, Feet*	26.0
Shoreline, Miles	55.0
JOINT-USE POOL (NORMAL RECREATIONAL POOL	
Top Elevation, NGVD	599.7
Area, Acres of Water	11,100
Total Joint-Use Storage, Acre-Feet	210,000
Water Supply Storage Acre-Feet	25,000
Depth of Water, Feet*	53.0
Shoreline, Miles	172.0
Project Fee Lands	23,240
Flowage Easement Lands	6,237
FLOOD CONTROL POOL	
Top Elevation, NGVD	626.5
Area, Acres of Water	25,300
Depth of Water, Feet*	80
Shoreline, Miles	376.0

DAM STATISTICS	
Main Dam	
Type	Earth Embankment
Elevation	643.0
Length of Crest, Feet	3,025.0
Main Spillway	
Type	Concrete Gate Controlled
Width, Feet	136.0
Elevation of Crest NGVD	593
Crest Gates	
Number	3
Size, Feet	45 x 37
Type	Tainter
Elevation, Top of Gate (Closed), Feet	627.5
Tailwater Elevation For Discharge	
Minimum Release, 10 CFS	532.1
Maximum Release, 4,500 CFS	548.7
Outlet Sluices	
Number	2
Size Intake	5.5’ x 11’
Outlet Works	
Size, Feet	2 Sluices Each 5 x 11 Ft.
Flowline, NGVD	549.0
Approximate Fee-Taking Line, M.S.L.	626.5 + 300 Feet Horizontal or 630.5 Whichever Is Greater

*Average over valley floor at dam
** Previous river mileage of 221.8 changed in 2005 due to channelization of the lower river
NOTE: All elevations in this report are based on mean sea level

Lake Regulation. The plan for lake regulation provides for flood risk management, water releases for navigation on the Kaskaskia River, water supply, low water flow augmentation for water quality control, recreation, and fish and wildlife conservation.

Pool fluctuations at Lake Shelbyville are seasonal in nature, usually occurring in the late winter/early spring period. Low flow releases are made through two sluice gates. The fluctuations of Lake Shelbyville, particularly during the intensive recreation season, June through September, complement the recreational use of the project. Pool stage duration and frequency curves are shown on Plate 2 for the period 1985 through 2016. A detailed plan of regulation and pertinent information relative to Lake Shelbyville is contained in the

Water Control Manual, Appendix A to the Kaskaskia River Basin - Master Reservoir Regulation Manual, approved 27 October 2008. Storage allocations for various uses are given in Table 1.

Joint-Use Pool. The general plan for operation of the lake provides for a minimum downstream release of 10 cubic feet per second (cfs) when the lake level is in the joint-use pool zone (elevation 573.0 to 599.7). This is done for water quality purposes.

Flood Control Pool. In the flood control zone (elevation 599.7 to 626.5) releases are made through the outlet works and the three 45' x 37' tainter gates.

Storage Allocations. The three storage levels of the lake and respective purposes are detailed in the following paragraphs.

- (1) Inactive Storage Pool. The inactive storage pool is that portion of the lake below elevation 573.0. At this elevation, the lake has a storage capacity of 30,000 acre-feet. This capacity is sufficient to allow for 100 years of silt accumulation.

- (2) Joint-Use Storage Pool. The joint-use pool is that portion of the lake between elevations 573.0 to 599.7. This zone has a storage capacity of 177,795 acre-feet and a surface area of 11,100 acres. The following are authorized uses of the joint-use pool:

  (a) Water Supply.
  Allocated for water supply are 25,000 acre-feet of the joint-use storage pool. Water supply withdrawal rates have been based on 17.1 cubic feet per second.

  (b) Low-flow Regulation.
  A minimum release of 10 cubic feet per second is maintained to assure downstream flows for water quality control. Zero flow has been experienced several times during the period of record.

  (c) Navigation.
  Within the joint-use pool, 155,000 acre-feet are allocated to navigation water storage.

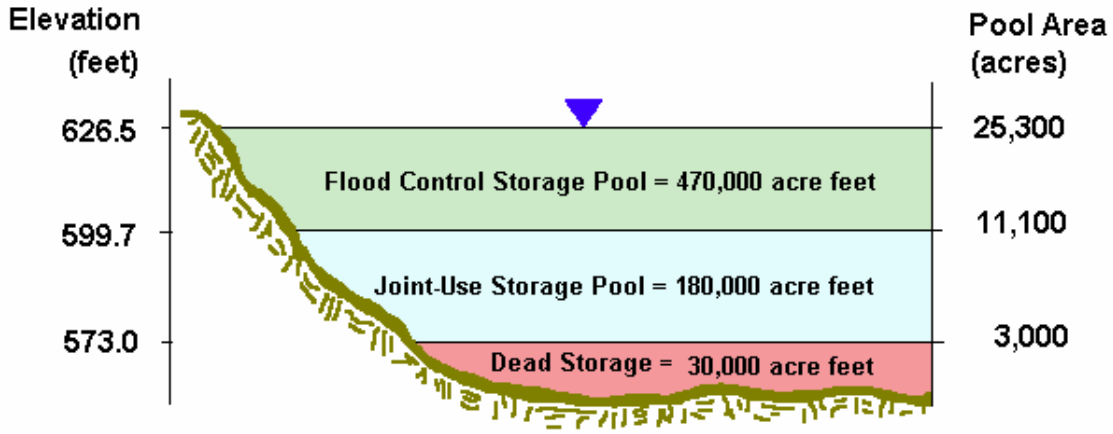
  (d) Fish and Wildlife and Recreation.
  The fluctuations of Lake Shelbyville, particularly during the intensive recreation season, June through September, are favorable for recreational use. Water management complements utilization by waterfowl and other species of wildlife. Except during a period when water level is critical for flooding, it is a fish management goal to maintain a consistent lake level between 15 May and 15 June. This lake level management technique creates a more productive environment for

the spring spawning period. The lake project office relays fish spawning information to the pertinent agencies.

• (3) Flood Control Storage Pool. The flood control pool is that portion of the lake between elevations 599.7 and 626.5, having a storage capacity of 474,000 acre-feet with a surface area of 25,300 acres.

Induced Surcharge Pool. The induced surcharge pool is that portion above elevation 626.5 feet NGVD and below 630.5 feet NGVD and has storage of 107,100 acre-feet. Releases from the induced surcharge pool shall be increased or decreased, on a sliding scale, according to the pool stage. The minimum release shall be 4,500 cfs at elevation 626.5 feet NGVD and the maximum release shall be 116,300 cfs at elevation 630.5 feet NGVD. Should elevation 630.5 feet NGVD be exceeded the spillway gates will be opened above the water surface and free outflow conditions will exist. Releases from the induced surcharge pool will result in flooding and damage to the downstream area.

Figure 3 - Approximate Area & Acre-Feet Each Storage Pool



(Knapp, 2012)

LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED SHELBYVILLE ILLLINOIS

CHAPTER 2 – PROJECT SETTING & FACTORS INFLUENCING MANAGEMENT & DEVELOPMENT

2.1. DESCRIPTION OF RESERVOIR

Lake and Shoreline

The lake is confined by relatively abrupt slopes and has many timbered arms. The abrupt slopes and the erodible soils have resulted in shoreline erosion impacting project facilities. The maximum relief at the dam site area is approximately 125 feet. The topography changes from a streambed elevation of about 535 feet NGVD to an elevation of 650 to 660 feet NGVD at the bordering uplands. Many small tributaries enter the river above the dam site, and the resulting ravines and valleys form a very irregular shoreline. Most of the valley slopes are covered with some virgin timber, but primarily second growth forest. The lake has a water surface area of 11,100 acres at joint-use pool elevation 599.7 feet NGVD. The pool at this elevation extends upstream from the dam approximately 20 miles and varies in width at this elevation from 0.25 to 1.0 mile. The depth of water from the valley floor at the dam to joint-use pool elevation is about 53 feet.

Project Structures

Main Dam and Spillway

The main dam consists of a compacted earthen embankment extending across the main valley floor and a gated concrete spillway founded on rock in the right abutment, with a concrete chute leading to a stilling basin in the flood plain. A gravity outlet structure, extending through the concrete section, discharges into the spillway stilling basin. The crest of the embankment is at elevation 643.0, approximately 108 feet above the riverbed. The total length of the dam and spillway is approximately 3,025 feet.

Remedial Works and Relocation

The reservoir necessitated relocations and remedial measures to railroads, highways, and utilities. These consisted of the following:

- Raising the Illinois Central Railroad at West Okaw and Kaskaskia River crossings, including two new bridges and approximately 6,800 feet of track and embankment.

- Protection of existing embankment of the Chicago & Eastern Illinois Railway at West Okaw River crossing.
- On State Route No. 121, constructing three bridges and placing approximately 7,300 feet of concrete pavement.
- On State Route No. 32, constructing one bridge and placing approximately 3,600 feet of concrete pavement.
- On FAS Highway Route 642, (Shelby County Highway 3, Moultrie County Highway 4) constructing one bridge 3,174 feet long and 1,326 linear feet of macadam road.
- Construction of approximately 10 miles of new secondary roads and removal of 26 county road bridges.
- Relocating 56.2 miles of power lines and approximately 45.5 miles of telephone lines.
- Minor alterations to cemeteries.
- Relocations and alterations to approximately 17,000 linear feet of affected gas and oil pipelines.

2.2. HYDROLOGY

The plan of project operations provides for flood risk management, water supply, water quality control, navigation, low-water flow, recreation and fish and wildlife conservation. The major source of ground water in the area is within the sand and gravel deposits of the alluvial valleys and the sand bodies contained in the glacial drift. Alluvial aquifers are primarily limited to areas within the flood plain of the Kaskaskia River. Glacial drift aquifers fill buried bedrock valleys created by the advances and retreats of the Pleistocene ice sheets. The City of Shelbyville draws its water supply from wells founded in the Kaskaskia River alluvium. These wells produce from 200 to over 500 gallons per minute (gpm). The City of Sullivan, near Forrest W. “Bo” Wood Recreation Area, draws its water from wells that tap sands and gravels of the glacially deposited Glasford Formation. These wells individually produce from 150 to over 600 gpm.

2.3. SEDIMENTATION AND SHORELINE EROSION

At normal pool, Lake Shelbyville’s 172 miles of shoreline is quite irregular and broken by many deep inlets and coves. The configuration of the shoreline does not vary much with the level of the pool as the lake is confined by relatively abrupt slopes and many timbered arms. In most places the land is not readily flooded, as the banks are relatively high. These abrupt slopes and the erodible soils have impacted project facilities.

Shoreline erosion at Lake Shelbyville is caused by a combination of factors: fluctuating lake level, waves created by wind and boat actions, and the soil surrounding Lake Shelbyville being predominately glacial sandy clay with little resistance to erosion.

The Final Letter Report, Lake Shelbyville Shoreline Erosion Management Plan, 29 January 1993, was prepared to recommend the facilities needing protection, consolidation, removal, or replacement because of predicted shoreline erosion over the next 30 years (baseline 1990). A summary from the Shoreline Erosion Management Plan is described in Chapter 6.

Erosion was considered during project design to have minimal impact on pool storage in early years. However, because the last full sedimentation survey was conducted in 1984, there is no way of knowing exactly what that impact is today. The 1984 survey concluded that although the lake was estimated to lose 6.8% of its storage capacity in 50 years (by 2034), that rate of deposition was 2.5 times higher than original estimates. A bathymetric survey of Lake Shelbyville boat ramps was conducted in 2002, but this information is only a small part of the total view of sedimentation ranges. A sedimentation survey coupled with a revised shoreline erosion plan are needed to get a clearer picture of future needs.

2.4. WATER QUALITY

Water quality monitoring provides early warning signs of possible future degradation within the lake area. According to the 2014 Shelbyville Lake Water Quality Report, issued by the Hydrologic and Hydraulics Branch, Environmental Quality Section, St. Louis District, Corps of Engineers - in general, the lake and downstream river channel maintains good water quality. The exception is Total Suspended Solids and aquatic plants listed by the Illinois Environmental Protection Agency (IEPA). The sources for these impairments are runoff, crop production, shore modifications, and recreational pollution. *(2014 Shelbyville Lake Water Quality Report, 2014)*

Water quality data is shared with the IEPA to be used in their Illinois Integrated Water Quality Report, required every two years by the Clean Water Act Sections 303(d) and 305(b). IEPA does not test Lake Shelbyville waters, so this data is important to their meeting their requirements.

The Kaskaskia Watershed Association (KWA) is working with State and Federal government agencies to encourage landowners along the Kaskaskia River to reduce silt runoff into the river through participation in government sponsored programs, such as USDA's Regional Conservation Partnership Program, Environmental Quality Incentives Program (EQIP), and National Water Quality Initiative.

Another group, the Upper Kaskaskia Ecosystem Partnership evolved from an organized group of landowners representing the five county Farm Bureaus and Soil and Water Conservation Districts in the Lake Shelbyville watershed. Since 1995, the group has sought to promote nitrogen management, filter strips, no-till, and other best management

practices. The history, goals, and plan of action for the Upper Kaskaskia River Ecosystem Partnership is explained in Chapter 6 and the Lake Shelbyville Operational Management Plan (OMP).

2.5. PROJECT ACCESS

Lake Shelbyville is located in Shelby and Moultrie Counties of east-central Illinois. The dam site is located on the Kaskaskia River and about one-half mile east of Shelbyville, Illinois. The lake lies approximately 113 miles northeast of St. Louis, Missouri and 60 miles southeast of Springfield, Illinois. Lake Shelbyville is served by four state highways: Illinois 32 on the east, Illinois 16 to the south, Illinois 121 at the north, and Illinois 128 to the west. The location of the lake, adjacent lands and highway network are shown on Plate 1.

These major roads provide access to township and county roads, which in turn connect to project roads. Regional access to the project is by Interstate Highway 57, the north-south interstate route, for those visitors from east-central Illinois, north-east and southern Illinois. St. Louis area and Terre Haute visitors use Interstate Highway 70, the east-west interstate route, as access to the project. Consistent, adequate signage directing visitors to Lake Shelbyville as well as surrounding communities is important to regional success.

The following is a descriptive listing of the road network. All of the primary and secondary roads and part of the tertiary roads are shown and indexed on Plate 1.

Primary Roads

Illinois Route 128 north from Shelbyville to Macon County.
Western primary access road for Dam West, Opossum Creek, Coon Creek, and Lone Point Recreation Areas, Eagle Creek State Park, and Findlay Marina.

Illinois Route 121 from Bethany to Sullivan and Allenville.
Northern primary access road for Wilborn Creek Recreation Area. Highway bisects both West Okaw and Kaskaskia Wildlife Management Areas.

Illinois Route 32 from north of Sullivan to Windsor and Illinois Route 16.
Eastern primary access road for Whitley Creek, Sullivan Beach, and Forest W. "Bo" Wood Recreation Areas, Sullivan Marina and Campground, and Wolf Creek State Park.

Illinois Route 16 from Shelbyville to Windsor.
Southern primary access to Dam East, Dam West, Spillway, and Lithia Springs Recreation Areas and Lithia Springs Chautauqua Area. This is also the primary access for the operation lands that includes the Main Dam, Administration and Maintenance complexes, and Visitor Center.

Secondary, Tertiary and Access Roads

County and township roads connect the project recreation areas with the major roads. These minor roads are maintained by local, county, and township road districts. Generally, the conditions of these roads are good relative to their surface condition and width.

Secondary road from Shelbyville to Findlay, Shelby County Highway 5.
Provides access to Opossum Creek, Coon Creek, and Lone Point Recreation Areas, and Eagle Creek State Park.

Secondary road from Findlay to Bethany, Shelby County Highway 2 (2100 E), Moultrie County Highway 13.
Provides access to West Okaw Wildlife Management Area.

Secondary road from Illinois Route 128 crosses Illinois Route 32 to Illinois Route 121, Shelby County Highway 3/ Moultrie County Highway 4, (Shelby County 2100 North).
This road is commonly known as the Bruce-Findlay Road. Provides access to Coon Creek, Lone Point, and Whitley Creek Recreation Areas, Eagle and Wolf Creek State Parks, and Findlay Marina.

Secondary road from Illinois Route 121, County Road 625 East.
Provides access to Wilborn Creek Recreation Area and Coal Shaft Bridge.

Secondary road from Illinois Route 32, 1125 North to County Rd 1000 East to 1100 North.
Provides access to Camp Camfield Environmental Study Area.

Secondary road from Shelby County Highway 3 (2100 North), 2500 East. Provides access to Wolf Creek State Park.

Secondary road from Illinois Route 32 to Lithia Springs Recreation Area, Shelby County Highway 4 (1500 North).
Provides access to Lithia Springs Recreation Area and northern access to Lithia Springs Chautauqua Area.

Secondary road from Illinois Route 16, 2200 East. Provides access to Lithia Springs Recreation Area.

2.6. CLIMATE

The Lake Shelbyville area is situated in the humid continental climatic region, which comprises the largest climatic region in Illinois. This broad region, extending southward from the northern cool-summer region to the ridges of southern Illinois, provides a moderate climate.

Temperature

The temperature in the Lake Shelbyville area is quite variable. Air masses of polar origin meet with warm masses from tropical regions that produce frontal activities resulting in a variety of water types. The average annual temperature in this area is about 55º F and the average monthly temperature ranges from 78º F during July to 30º F in January. The winters are usually short and moderate, although temperatures below zero are occasionally experienced. The coldest recorded temperature of -36º F occurred on January 5, 1999 in Congerville, IL. Occasional temperatures of 100º F or higher, have been experienced. The maximum observed temperature of 117º F occurred to the southwest at East St. Louis on July 14, 1954.

Wind Movement

Winds in the project area average 5-15 miles per hour with no set pattern of wind direction. The migration of air masses over this relatively flat area is the determining factor. Available data indicates that a larger percentage of wind movements come from a south-southwesterly direction.

Humidity

The mean relative humidity varies from about 59 to 86 percent in the winter, and from 51 to 89 percent during the other seasons of the year.

Precipitation

The average annual precipitation over the drainage area is 39.3 inches, of which about 22 percent falls in May and June. Rainstorms are frequent in the spring. Local snowfall is usually limited to the period from November through March and seldom covers the ground for more than a few days at a time. The average snowfall amounts to about 20 inches per year. According to the National Oceanic & Atmospheric Administration's (NOAA) National Centers for Environmental Information, the average precipitation over a 10-year period has increased from 32.09 inches (1895-1905) to 39.3 inches (2005-2015). *(NOAA National Centers for Environmental Information, 2016)* This increase in precipitation is may be reflected in four of Lake Shelbyville's top ten highest pool elevations occurring since 2005, including January 2016.

Figure 4 - Shelbyville Climate Data

Lake Shelbyville area weather averages – 1981 - 2010

High Temp:	63.5 F
Mean Temp:	53.4 F
Low Temp:	43.3 F
Cooling DD:	1200
Heating DD:	5420
Days above 90:	23.5
Days above 100:	0.4
Days below 0:	5.2
Days below 32:	112.2

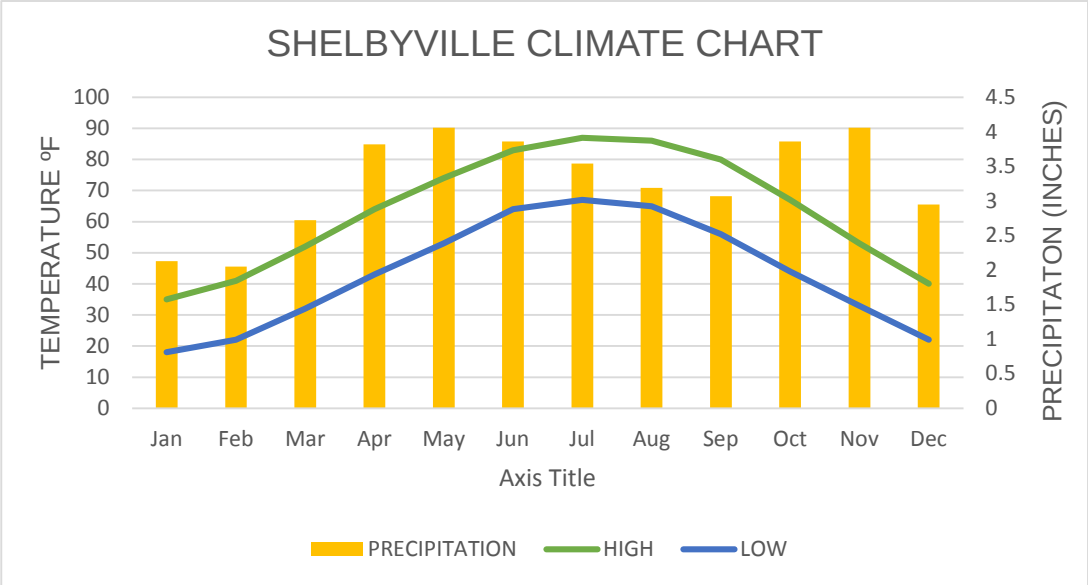
DD: Degree Days

Source: Illinois State Water Survey Prairie Research Institute

Shelbyville IL Climate Averages - 1981-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average high in °F:	35	41	52	64	74	83	87	86	80	67	53	40
Average low in °F:	18	22	32	43	53	64	67	65	56	44	33	22
Average precipitation in inches:	2.13	2.05	2.72	3.82	4.06	3.86	3.54	3.19	3.07	3.86	4.06	2.95

Climate data for Shelbyville dam, Longitude: -88.774, Latitude: 39.4067



Source: www.usclimatedata.com

2.7. TOPOGRAPHY, GEOLOGY AND SOILS

Topography

The flood plain in the upper reaches of the Kaskaskia River is fairly narrow varying in width from one-quarter mile to approximately one mile. The drainage basin is long and narrow. The river is a slow, turbid, meandering stream that has an average fall of less than one foot per mile. Tributaries are few and small, and the uplands are mainly undissected. Remnants of terrace deposits, which are very similar in composition to the recent alluvium, are scattered along the valley. Glacial drift of Illinoisan and Wisconsinan age blankets most of the uplands and forms the drift hills that consist of an intimate mixture of clay with pebbles and a few small rocks. Boulders larger than one-half cubic foot are rarely found in the area. Underlying the glacial drift is Pennsylvanian deposits of shale and sandstone.

The present area topography is largely a result of the past glacial deposition and subsequent stream erosion. The vertical change in relief is quite extensive in this portion of the Kaskaskia Valley. Here narrow, deep valleys have been submerged by the formation of Lake Shelbyville. Shoreline erosion has occurred since the creation of the lake, primarily during periods of sustained high pool levels. These high water levels plus wave action caused erosion especially along the lakeshores' steeper slopes.

Geology

Bedrock in the area consists of Pennsylvanian age strata that occur in sequences of sandstones and shale. Mineral resources consist of oil, coal, sand, and gravel. There are a few oil wells in the vicinity of Lake Shelbyville. The local coal workings extracted the Shelbyville Coal, a 2-foot thick coal seam that was mined by the room and pillar method. Access to the coal was obtained through vertical shafts or through stopes driven in the valley walls. The abandoned mine workings located in the dam and spillway foundations were thoroughly explored and sealed by cement grouting. As these and the surrounding coal workings were already old and abandoned at the time of dam construction the extent of the mines in the reservoir area is not known. Although abandoned, the existence of these workings in underlying areas of reservoir lands creates the potential for future ground subsidence.

The major geologic resources present in the reservoir area consist of the soils and ground water. The potential for future ground subsidence and subsequent reparations exists due to collapse of abandoned mines. Special programs for protection beyond the basic management procedures of controlling soil erosion and ensuring wellhead protection are not warranted.

Soils

The surficial soils in the immediate project area consist of alluvial deposits in the valleys and floodplains of the major streams and Wisconsinan age glacial tills in the uplands. Sandy and gravelly clay tills are the predominant soil types in the uplands and silt and lean clays in the bottomlands.

Groundwater

The major source of ground water in the area is within the sand and gravel deposits of the alluvial valleys and the sand bodies contained in the glacial drift. Alluvial aquifers are primarily limited to areas within the flood plain of the Kaskaskia River. The glacial drift aquifers fill buried bedrock valleys created by the advances and retreats of the Pleistocene ice sheets. The City of Shelbyville withdraws its water supply from wells founded in the Kaskaskia River alluvium. These wells produce from 200 to over 500 gallons per minute (gpm). The City of Sullivan, near Forrest W. “Bo” Wood Recreation Area, draws its water from wells that tap sands and gravels of the glacially deposited Glasford Formation. These wells individually produce from 150 to over 600 gpm.

2.8. RESOURCE ANALYSIS

The objective of the Corps of Engineers’ natural resource management program is to improve and sustain the health of the ecosystem in order provide both game and non-game wildlife for the benefit of the public. Non-consumptive uses of wildlife, such as sightseeing and photography, will receive equal consideration with that of consumptive uses, such as hunting. Vegetative and water level manipulation will be the principal methods of fish and wildlife habitat management, and will be consistent with other joint uses and basic physical limitations at Lake Shelbyville. Accepted wildlife management techniques such as prescribed fire, timber stand improvements, succession mowing, exotic control, etc. will be utilized to improve/manage the habitat to benefit many plants and animals.

2.8.1. Fish & Wildlife Resources

The fish population of Lake Shelbyville and its tailwater is typical of Midwestern waters. Major sport and forage species are white crappie and black crappie, bluegill, green sunfish, longear sunfish, warmouth, muskellunge, white bass, walleye, yellow and black bullhead, channel and flathead catfish, largemouth bass, freshwater drum, carp, sauger, smallmouth bass, yellow bass, numerous species of buffalo fishes, bowfin, gizzard shad, brook silversides, and many species of minnows, shiners, and darters. There are approximately 50 species of fish found in this area. The waters of the lake and tailwater support a diversity of forms of phytoplankton, zooplankton, aquatic insects, crustaceans, and mollusks indicating the health of the food chain supporting the lake fisheries.

The Corps of Engineers and the Illinois Department of Natural Resources (IDNR) work together to manage twenty-one fishing ponds ranging from one-quarter acre to 30 acres in size. A joint fish habitat day with IDNR and volunteers is held each year to place discarded Christmas trees and artificial structures in the lake to help provide fish habitat. The Fin and Feathers Nursery Pond is used annually to produce walleye, sauger and occasionally largemouth bass fingerlings for supplemental stocking into Lake Shelbyville.

Numerous species of wildlife, such as rodents, small gamebirds and mammals, waterfowl, shorebirds, songbirds, furbearers, white-tailed deer, wild turkey, and

predatory mammals and birds, are native to this area. A diverse habitat ensures the success of these native animals. Flooded timber areas provide nest trees for woodpeckers and wood ducks. Other wildlife management practices such as prairie and woodland burns have also benefited wildlife species. In addition, the number and diversity of shorebirds and waterfowl using this area has steadily increased, in part due to the creation of Okaw Bluff Wetlands Complex and waterfowl areas managed by IDNR.

Much of the land is relatively dense forest with a moderate amount of openings. In the existing openings, edge is maintained/developed through succession control and/or plantings. Maintaining edge effect can be very beneficial for many wildlife species, however, it can be detrimental to others such as Neotropical migrants. Other than reclaiming old fields taken over by exotic species, no new openings will be created for this reason.

2.8.2. Vegetative Resources

The plant resources at Lake Shelbyville include a diverse forested area ranging from light seeded species which usually populate stream valleys prone to seasonal flooding to the complex association on the upper slopes classified by the generic oak-hickory forest type. About half of Lake Shelbyville's fee land is above the 10-year flood pool. Consequently, these lands are not subject to frequent inundation. When floods do occur, the production of wildlife within the low areas is jeopardized. However, since this occurs infrequently, it does not greatly affect vegetative planting and manipulation techniques or nesting habitat.

The upper slopes of the hillsides above the lake have an oak-hickory association. White oak, northern red oak, black oak, post oak, pignut hickory, shagbark hickory, white ash, and elm are the major species present in the overstory. The midstory consists primarily of eastern hophornbeam, sugar maple and hickory species. Due to the closed canopy in the overstory, mostly only shade tolerant species such as sugar maple and hickories are present in the understory. Amur honeysuckle, a non-native shrub, is also prevalent in much of the woodland understory. Numerous old field sites occur along the perimeter of Corps fee lands and on high points of land existing between tributary streams feeding into the lake. The species in these areas are typically, elm, ash, black walnut and shingle oak with a heavy exotic understory component of multi-flora rose, Amur honeysuckle and autumn olive.

Lake Shelbyville habitats range from high quality to poor. Oak-hickory woodlands, exotic-choked old fields, re-established prairies, and leased agricultural fields account for much of the variety. Wildlife habitat improvement practices will seek to increase the value of the present habitat for native plant and animal species. Exotic species causing considerable problems are Amur honeysuckle and multiflora rose to woodlands, autumn olive to prairies and old fields and common carp to aquatic plants. Efforts will be made to control exotics as much as possible, while enhancing good quality habitat.

Non-recreation areas are being managed to provide quality wildlife habitat. Vegetation, including trees, is being planted to provide cover and a certain amount of food. These plantings are in contrast to the "clean farm" agricultural practices on adjacent lands and are planned to maintain existing edge. Together, the private farms and public wildlife areas provide a more balanced relationship of food and cover for wildlife over much of the project.

Agricultural subleases on state property are managed to provide the same relationship in addition to furnishing a food supply for waterfowl in the two subimpoundment areas.

Occasional sightings of tall grass prairie species is a reminder that these persistent plants once populated the flat prairie adjacent to the forested river valley. In sharp contrast to the surrounding farmland, the vegetative resources and qualities of the project land is an aesthetic change of pace.

Vegetative management practices vary from tree planting in recreation areas and old field sites to succession control of other sites by succession mowing or prescribed burning to discourage unwanted species and set back succession.

Land management on lower elevations will be left primarily to flooding to control succession. Typically, every two to three years these low lying areas are inundated long enough to reset succession. The only exceptions to this will be for waterfowl management areas within the Okaw Wetlands, which is managed primarily for waterfowl.

Prairie Habitat Enhancement

Prior to westward expansion, large portions of Illinois were covered with native grasses and other plants. The Prairie Habitat Enhancement Program helps reestablish some of those grasses and plants. Currently, 151 acres of prairie is being actively managed on Lake Shelbyville with more planned each year to include areas within recreation areas for demonstration purposes. Approximately two-thirds of these acres have been established since 2007.

Environmental Study and Demonstration Area

Approximately 226 acres of the 443 acres in the Camp Camfield Multiple Resource Area has been designated as the Camp Camfield Environmental Study Area. This area contains 11 acres of prairie demonstration plots that are part of the prairie habitat enhancement program. An oak-hickory timber association is present throughout the area in various successional stages. Lowe Pond is located in this area and is visited by fishermen. This area also includes a trail system, vault comfort station, picnic shelter, picnic area, stage area, and two fire rings.

2.8.3. Threatened & Endangered Species

At the present time Lake Shelbyville has no known endangered species of plants or animals. The Lake Shelbyville area may provide seasonal non-critical habitat for the federally endangered Indiana bat, and piping plover and critical habitat for the eastern prairie fringed orchid, although there are no known records for any of these species. Funding is requested during every budget cycle to sample for Indiana bat, however, funding has never been approved.

In an effort to conserve the northern long-eared bat (Myotis septentrionalis), the U.S. Fish and Wildlife Service implemented a final rule under section 4(d) of the Endangered Species Act (ESA) on January 14, 2016 to tailor protections to areas affected by white-nose syndrome (WNS) during the bat's most sensitive life stages. Lake Shelbyville falls within the range of this species and may provide seasonal non-critical habitat. The rule is designed to protect the bat while minimizing regulatory requirements for landowners, land managers, government agencies and others within the species' range. A more detailed description of the issue and implications at Lake Shelbyville are described in the OMP.

Additionally, potential habitat exists for the federally listed species of concern, the loggerhead shrike, but there has been no documented sightings at Lake Shelbyville. Bald eagles have been completely delisted and are considered a recovery success story. There were three known active nests found on the lake as of the spring of 2015.

The Lake Shelbyville project and vicinity provides habitat for one state threatened plant species known to be found on the lake, False Hellebore.

TABLE 2
FEDERAL AND STATE THREATENED AND ENDANGERED SPECIES
THAT OCCUR OR MAY OCCUR IN THE LAKE SHELBYVILLE AREA

Federal List Species	Status	Scientific Name
Indiana Bat *	Endangered	Myotis sodalis
Piping Plover*	Endangered	Charadrius melodus
Eastern Prairie Fringed Orchid**	Threatened	Platanthera leucophaea
Northern Long-Eared Bat	Threatened	Myotis septentrionalis
Loggerhead Shrike	Species of Concern	Lanius ludovivianus
State List Species	**Status**	**Scientific Name**
Western Sand Darter	Endangered	Ammocrypta clarum
Smooth Softshell	Endangered	Apalone mutica
Upland Sandpiper	Endangered	Bartramia longicauda
American Bittern	Endangered	Botaurus lentiginosus
Fibrous-rooted Sedge	Threatened	Carex communis
Kirtland's Snake	Threatened	Clonophis kirlandi
Violet Collinsia	Endangered	Collinsia violacea
Spike	Threatened	Elliptio dilatata
Bigeye Chub	Endangered	Hybopsis amblops
Least Bittern	Threatened	Ixobrychus exilis
Loggerhead Shrike	Endangered	Lanius ludovicianus
Black Sandshell	Threatened	Ligumia recta
Bigeye Shiner	Endangered	Notropis boops
Black-crowned Night-Heron	Endangered	Nycticorax nycticorax
Osprey	Endangered	Pandion haliaetus
Tube Beard Tongue	Endangered	Penstemon tubaeflorus
Wilson's Phalarope	Endangered	Phalaropus tricolor
Sheepnose	Endangered	Plethobasus cyphyus
King Rail	Endangered	Rallus elegans
Ornate Box Turtle	Threatened	Terrapene ornata
Buffalo Clover	Threatened	Trifolium reflexum
Barn Owl	Endangered	Tyto alba
False Hellebore**	Threatened	Veratrum woodii

Federal Species: *(Environmental Conservation Online System County Report, 2016)*
State Species: *(Illinois Threatened and Endangered Species By County, 2015)*

*Although habitat exists at Lake Shelbyville, there are no documented sightings of the Indiana Bat.

** The False Hellebore has been sighted in the following areas at Lake Shelbyville, Coneflower Hill Prairie, Pogue Timber (also known as Sullivan Woods), and Great Blue Heron Rookery. Coneflower Hill Prairie and Pogue Timber (Sullivan Woods) are Illinois Natural Area Inventory (INAI) Sites.

2.8.4. Invasive Species

Exotic species are becoming more and more of an issue throughout the project. From non-native fishes such as common carp to insects, animals and plants, these non-native species are causing considerable problems for our native species. There are a number of invasive plant species that suppress regeneration in the Oak/Hickory forests around Lake Shelbyville. They do this by out-competing the native vegetation for water, sunlight, nutrients, and space. Invasive and/or weedy species of special concern are listed below:

- Amur honeysuckle
- Autumn olive
- Black locust
- Garlic mustard
- Multiflora rose
- Phragmites
- Reed canary grass

A more detailed description of these invasive species and control measures is outlined in the OMP.

Monitoring sites have been established in all campgrounds for the emerald ash borer. While none have been found on the project, they have been found on lands immediately adjacent to the project and in all likelihood are present. Monitoring stations for zebra mussels were placed around the lake in the mid 1990's. Although no evidence of zebra mussels has been found in Lake Shelbyville to date, scaled back monitoring efforts continue.

2.8.5. Ecological Setting

The Kaskaskia and Okaw River Valleys in the vicinity of Lake Shelbyville have been shaped by water erosion creating a deep valley with steep banks. Many small tributaries enter the major valley system above the dam site creating an irregular shoreline dissected by a system of valleys and ravines. Most of the valley slopes above the lake are covered with second growth predominately oak-hickory forest. These steep wooded slopes and ravines provide the camper, boater,

naturalist, and the casual visitor with aesthetically pleasing views of wooded vistas in this largely agricultural section of Central Illinois. The body of the lake now occupying the valley bottom is confined by the steep slopes and timbered arms. Developed lookout points take advantage of the excellent scenic qualities along the lake edge. Scenic views can also be seen from some off project roads as the wooded project lands provide stark contrast to the adjacent flat agricultural lands.

The lands at Lake Shelbyville provide opportunities for land- and water-based recreation, wildlife management, and forest management and for historic, cultural and ecologic study and interpretation. These activities are for the most part complementary to varied scenic qualities of the area. Specific tracts of land have been developed, re-vegetated, or succession controlled to provide the maximum recreational value to the public while preserving and increasing the scenic diversity and wildlife management opportunities. The zoning of the land and water resources is discussed in Chapter 4.

The lake itself is the largest, strongest visual element in this geographic area. The steep valley carved by an ancient river system provides an abrupt topographic change in the surrounding glaciated prairie. The steep wooded slopes of the valley, dissected by tributary streams provide a shoreline with unusual visual contrast. These visual qualities add a unique aesthetic experience to recreational activities at Lake Shelbyville.

2.8.6. Wetlands

Most of the lake shoreline is rather steep, with few true wetlands. Areas such as the Okaw Bluff Wetlands Complex were created to improve the diversity and quality of this important habitat.

The 57-acre complex, used by numerous waterfowl and shore birds, is part of the Illinois Watchable Wildlife Program. Facilities that enhance this area include a nature trail, information boards, observation and hunting blinds, and an observation platform.

The seven-acre Fin & Feathers Fish Nursery Pond, constructed in 1993, is located northwest of Woods Lake. Managed in cooperation with the IDNR, the pond is designed to raise two crops of fish a year. Walleye and sauger are the primary species raised in the pond. Largemouth bass have been reared as well but adequate reproduction in the lake of this species has shifted the focus to walleye and sauger.

Two new fish nursery ponds are proposed for the Dam West Recreation Area and Whitley Creek Bottoms Multiple Resource Area. There is also a proposal to convert the decommissioned Whitley Creek wastewater treatment facility to a nursery pond. The addition of these ponds is necessary to maintain adequate fish populations in Lake Shelbyville, which is experiencing declining fish habitat for

production and rearing. The IDNR has suggested that 30 to 40 surface acres of nursery ponds would be ideal to supplement the Lake Shelbyville fishery program. That need would be met with the existing nursery pond northwest of Woods Lake and with the addition of the new nursery ponds. See Chapter 5 for more detailed descriptions of the proposed projects.

2.9. BORROW AREAS, RAILROAD, ROADS, AND UTILITIES

2.9.1. Borrow Areas

One large borrow area, part of Dam West Recreation Area, was re-vegetated and transformed into a recreation area. Several other unsightly borrow areas on project land used for road construction were also re-vegetated.

2.9.2. Railroads

Construction and operation of the lake necessitated raising the Illinois Central Gulf Railroad tracks at West Okaw and Kaskaskia River crossings. This included two new bridges and approximately 6,800 feet of track and embankment. Remedial measures were necessary for the protection of the existing embankment of the Chicago and Eastern Illinois Railway at the West Okaw Crossings.

2.9.3. Highways and Roads

Three bridges and approximately 7,300 feet of concrete pavement were constructed on Illinois Route 121. On Illinois Route 32, one bridge and about 3,600 feet of concrete pavement were constructed. One bridge and 1,326 feet of asphalt pavement were constructed on FAS Route 642 (Shelby Co. Hwy 3/Moultrie Co. Hwy 4). Initial project operation necessitated construction of approximately 10 miles of new secondary roads and removal of 26 county road bridges.

2.9.4. Utilities and Pipelines

Fifty-six miles of local power lines and forty-five miles of telephone lines required relocation.

Prior to project operation, approximately 17,000 feet of gas and oil pipelines were either relocated or altered.

2.10. MINERAL AND TIMBER RESOURCES

2.10.1. Minerals

Mineral resources consist of oil, sand, gravel and coal. There are a few oil wells in the vicinity of Lake Shelbyville. Coal mining activities have long been abandoned. None of these mineral resources has a large impact on the local economy or a great impact on resources management operations at Lake Shelbyville. Ground subsidence caused by collapse of underlying abandoned coal mines could affect reservoir facilities such as comfort stations, parking lots, roadways and other structures surrounding the lake.

Mineral rights were retained by the original owners and assigned heirs on the Walter Welsh property located in Section 16 of T13NR5E, Moultrie County, Illinois. Approximately 20 to 30 loads (300 – 400 tons) of low-grade gravel are removed from the surface pit annually. If these mineral rights become available to be purchased it might be in the best interest of the government to purchase them.

Recent research has shown there may be other parcels of Corps land where the previous landowners retained mineral rights. The extent of this ownership will need to be researched further and a plan of action developed should owners decide to pursue operations.

2.10.2. Timber Resources

The topography of the woodlands at Lake Shelbyville graduates from steep to relatively progressing from south to north and the quality of the timber corresponds with this graduation. The southern 2/3's of the lake was for the most part not suitable for agricultural production while much of the northern 1/3 of the uplands was used for production. Because of this, the vast majority of quality oak/hickory woodlands occurs on the southern 2/3's of the property with the northern 1/3 of the lake's woodlands consisting of highly degraded stands consisting of ash, honey locust, osage-orange and shingle oak with a high exotic component in the understory with small pockets of quality oak/hickory. Only one known location of old growth timber remains, Pogue Timber, a 40-acre site located northeast of the Village of Findlay, listed on the Illinois Natural Area Inventory (INAI), and listed as an Environmentally Sensitive Area in this Master Plan.

Prior to construction of the lake, the lower elevations of the basin, generally the portion inundated to form the lake, were dominated by an overstory of pin oak, cottonwood, sycamore and silver maple. The understory was composed of a variety of shrubs and minor associations of grasses. Remnants of this vegetative association can still be found in the southern portion of the lake at the very back of coves, along uncleared stream channels in the upper reaches of the lake and along the waterfowl sub-impoundments in areas not inundated for long periods. However, much of these bottomland hardwoods were lost due to long periods of inundation and have been replaced by willow and non-native reed canary grass.

Timber value, while not a main priority, is taken into consideration when planning prescribed burns and timber stand improvements (TSI). Forest management priorities consider the current health of the timber stand and the desired outcome. These priorities vary with the inventory, land classification and stand prescription. Timber stand improvement measures transform a degraded forest into a healthy, diverse system. A healthy system provides food and shelter to a number of both game and non-game species, improves recreational enjoyment as well as protecting against erosion and insect/disease infestation. Typically, only high quality sites will receive treatment as highly degraded sites are simply too expensive to rehabilitate. Specific TSI measures are outlined in the OMP.

2.11. CULTURAL RESOURCES

Archaeological Studies

Two important management documents prepared in the late 1980's guide compliance and summarize our current knowledge of historic properties at the lake. Together they provide the basic references for managing the lake's archaeological resources and should be the first sources consulted.

The St. Louis District Historic Properties Management Plan, Lake Shelbyville (HPMP), completed in 1986, is a guide to assist lake and other District personnel in meeting federal regulations concerning historic properties management at Lake Shelbyville. The HPMP includes chapters on organizational structure, compliance procedure, long term resources management, tasks and priorities (tied to the Operational Management Plan), training, staffing, and budget. This document is long overdue for an update and talks of a digital GIS based system are ongoing. However, there is no current timeframe for this to happen.

The second important management document, Historic Properties Data Synthesis: Compliance Document, Lake Shelbyville, Illinois was completed in 1989. This document summarizes the lake's archaeological background. It includes chapters on the lake environment, previous archaeological investigations, all historic properties identified at the lake and the lake's cultural history. The concluding chapter establishes priorities for future historic properties investigations at the lake.

Previous Archaeological Survey and Investigation Results

During the pre-impoundment investigations conducted by the National Park Service (NPS) from 1960 to 1965, much of the reservoir was surveyed. Surveys focused almost exclusively on prehistoric sites (no historic sites or standing buildings) in plowed fields (no shovel testing in woods). Surveys recorded 62 sites, of which one was tested and four were excavated. Sites ranged from the Middle Archaic (about 5000 B.C.) thru Mississippian periods and were most numerous adjacent to the Kaskaskia River.

Post-impoundment investigations began in 1978. Three shoreline surveys between 600 and 610 feet elevation were conducted in 1978, 1981, and 1983 respectively. Most of the lake shoreline below the Shelbyville State Fish & Wildlife Management Areas was surveyed. A small portion of the Kaskaskia Unit was surveyed. These surveys recorded 255 sites, and revisited numerous previously recorded sites. Many sites were tested and five sites (11Mt-5, -14, -53, -56, and 11Sy-64) were extensively excavated. Other post impoundment projects recorded 19 more new sites, revisited several known sites, tested 23 sites, and excavated portions of 10 sites.

The University of Illinois – Urbana (U of I) performed virtually all of these investigations except a 1985 excavation project conducted by the University of Missouri, St. Louis. As a result, two U of I doctoral dissertations were written on Shelbyville archaeology: "The Mississippian Occupation of the Upper Kaskaskia Valley: Problems in Culture History and

Economic Organization" by Charles R. Moffat, P. McGowan, 1990 and "The Raspberry Mound Mortuary Site Shelbyville Reservoir, Illinois: An Analysis of Skeletal Material" by Anna Fernyhough, 1983. Projects on land outgranted for state parks to the Illinois Department of Conservation, now known as the Illinois Department of Natural Resources (IDNR), including Eagle Creek Resort, were conducted by the Illinois State Museum and published in the annual cultural resources studies of the IDNR state parks and recreation areas.

In 1986, the St. Louis District began a five-year program of site revisiting and monitoring prescribed by the HPMP. By 1989, a total of almost 400 archaeological sites had been recorded, revealing the presence of human groups during every major cultural period, from the Paleo Indian to the historic. The most numerous components (occupation during a specific period, sites may have more than one component) are the Middle Woodland, Late Woodland and Mississippian; this may be related to the length of occupation, the presence of diagnostic pottery and the intensity of study. The high number of Late Archaic components is likely related to length of occupation also. Few components have been recorded as Early Woodland because there are few artifacts diagnostic of this period. There are relatively few Paleo Indian, Dalton, Early Archaic, and Middle Archaic components due to low occupation density. Protohistoric, Historic Indian and Historic Settlement components are under-represented because they were not systematically recorded until recently. The highest investigative priority is immediate recovery of exposed human skeletal remains, followed by periods for which there is little or no information: Paleo Indian, Dalton, Protohistoric and Historic Indian.

Current Archaeological Surveys and Investigations

In 1988 in response to 36 CFR 79, the St. Louis District developed a curation program to store all District artifacts from the State of Illinois at the Illinois State Museum, Springfield, Illinois. All Lake Shelbyville artifacts collections, including pre-impoundment items recovered by the NPS, post-impoundment collections from the U of I and elsewhere, and miscellaneous collections at the lake office were moved to the Illinois State Museum and are currently curated under a contract through the Illinois State Museum Society. Artifacts and associated documents (field notes, photographs, contract papers, etc.) were inventoried and re-boxed for long-term storage. Required Native American Graves Protection and Repatriation Act (NAGPRA) compliance was also conducted on the Shelbyville museum collection.

From 1989 – 1996 several in-house archaeological surveys were conducted prior to construction or maintenance projects. The Opossum Creek Land Treatment Plant surveys (1989, 1993) located two small upland prehistoric sites (ineligible). In 1992, the boundaries of eligible Late Woodland site 11Mt-151 were determined and the Bruce Wetland borrow area was moved to avoid the site. Also in 1992, sites 11Mt-5 (George Ward), 11Mt-14 (Neva Fultz), 11Mt-56 (Stop Sign) and one historic and archaeological site, Lithia Springs Chautauqua were investigated. In 1993, an eroding burial at Whitley Creek Recreation Area was removed under NAGPRA. In 1994, the proposed Whitley Creek Wastewater Land Treatment System location was surveyed; no sites, only isolated

prehistoric chert flakes and worked chert were found. In 1995 at Coon Creek Campground, prehistoric upland site 11Sy-300 was investigated by a volunteer archaeologist assisted by the local Kaskaskia Archaeological Society.

In the winter of 1996, fieldwork for the Shelbyville Shoreline Erosion Project (SSEP), (construction of Phase I) began. The work was done in-house since these were small projects at eight recreation areas near the lake's south end. Five previously reported sites were revisited and two isolated finds were recorded. Of these sites, sites 11Sy-79, -85, -97, and the two isolated finds were determined ineligible; site 11Sy-98 had been destroyed, and 11Sy-183 was considered potentially eligible, but would not be impacted by the project.

In the summer of 1996, as part of SSEP (the construction of Phase II) Southwest Missouri State University archaeologists surveyed upland areas at Bo Wood and Lone Point Recreation Areas, where campground relocations were planned (total 120 acres). Two previously recorded sites at Lone Point (11Sy-159, -186) were revisited; 18 new sites and 9 isolated finds were recorded. Six sites were evaluated for eligibility: 11Sy-305 at Lone Point and 11Mt-203, -207, -208, -209, -211 at Bo Wood. Further testing at 11Mt-203, -207, and -209, revealed that only 11Mt-209 was eligible.

Cemeteries

Design Memorandum 8D, Cemetery Relocation Plan, identified three cemeteries to be relocated. Remains from these cemeteries were reinterred at Quigley Cemetery, located within Wolf Creek State Park, in 1966. As much as possible, descendants were notified of the move. Some were present during the relocation.

Hidden Cemetery, located in the Lone Point Recreation Area, was an inactive, unmaintained family cemetery. The remains of 14 unknown and one known burial were disinterred and reinterred as part of the original contract. The land on which the cemetery sat is cut off from land and becomes an island around the lake elevation of 603 feet above sea level. In 1987, human remains were discovered by fishermen at the base of the old cemetery. A total of three individuals were disinterred from the location and reinterred at Quigley Cemetery. A fourth individual was recovered in 1991, again discovered by a passing fisherman. This individual was also reinterred at Quigley.

Carpenter Cemetery, located approximately one mile northeast of Shelbyville was an inactive, unmaintained cemetery. One known burial and 14 unknown burials were disinterred and reinterred at Quigley Cemetery.

McDaniel Cemetery, located approximately one-half mile north of Bruce, was an unmarked, unmaintained, inactive family cemetery. The remains of one unknown and one known burial were disinterred and reinterred at Quigley Cemetery.

The only known historically significant property within the lake boundaries is the Lithia Springs Chautauqua Area. The Chautauqua, a Seneca (Iriquoian) word meaning possibly

"one has taken out fish there," but an alternative suggested meaning is "raised body", was a national movement to bring culture, education, and religion to rural America. *(Meaning of Chautauqua, 2015)* Jasper Douthit, a self-taught Unitarian minister, built a religious and educational gathering place on his family land east of Shelbyville. The natural lithium springs were a focal point for the annual gatherings from 1890 to 1921. Comfortable cabins and famous speakers including William Jennings Bryan, Carrie Nation, and Billie Sunday also attracted people from all over the state. The permanent facilities consisted of privately owned and rental cabins, dormitories, pavilions, a library, and chapel. No buildings remain, but many foundations lie buried, making this an important historic archaeological site. Today, Lithia Springs Chautauqua shows little trace of its former history, with the exception of the springs, which are still active. In 1992, the Chautauqua area was formally determined eligible for the National Historic Register, based on documentary and archaeological investigations conducted by American Resources Group, Ltd, Carbondale, Illinois. Plans to nominate the Chautauqua area to the National Register of Historic Places are in limbo as the National Registry has requested additional data on subsurface features that are currently unavailable. A plaque has been placed at the entrance that explains the historical significance of the area. Future plans include placing a shelter over the springs and establishing a self-guided interpretive trail.

2.12. DEMOGRAPHICS

Population Growth and Distribution

Moultrie and Shelby Counties are primarily agricultural, with approximately 79% of Shelby County acres (387,288) and 76% of Moultrie County acres (167,791) in farms according to the 2007 Census of Agriculture. Shelby County, with an area of 768 square miles, has a lower density of people per square mile (29.5) than Moultrie County (44.2), which has an area of 344 square miles. Approximately 58% of those living in Moultrie County and 54% of those living in Shelby County reside in cities or villages, rather than on farms. Table 3 shows that between 2000 and 2010, the population of Moultrie County increased (3.9%) while Shelby County decreased (-2.3%). There are various reasons for changes in directions and rates of population growth in rural areas. One reason may be tied to the number of job postings. Indeed.com, an Internet job search engine, reports the Shelbyville job market as weak with a decline in job postings over the past year of 37%. *(Shelbyville IL, 2016)* *I*n contrast, Sullivan job postings by the same website have increased by 9%. *(Sullivan Jobs, 2016)* This can make a difference if an employee desires to live in the community where they work rather than commute. The lack of jobs in Shelby County could be a reason for population declines.

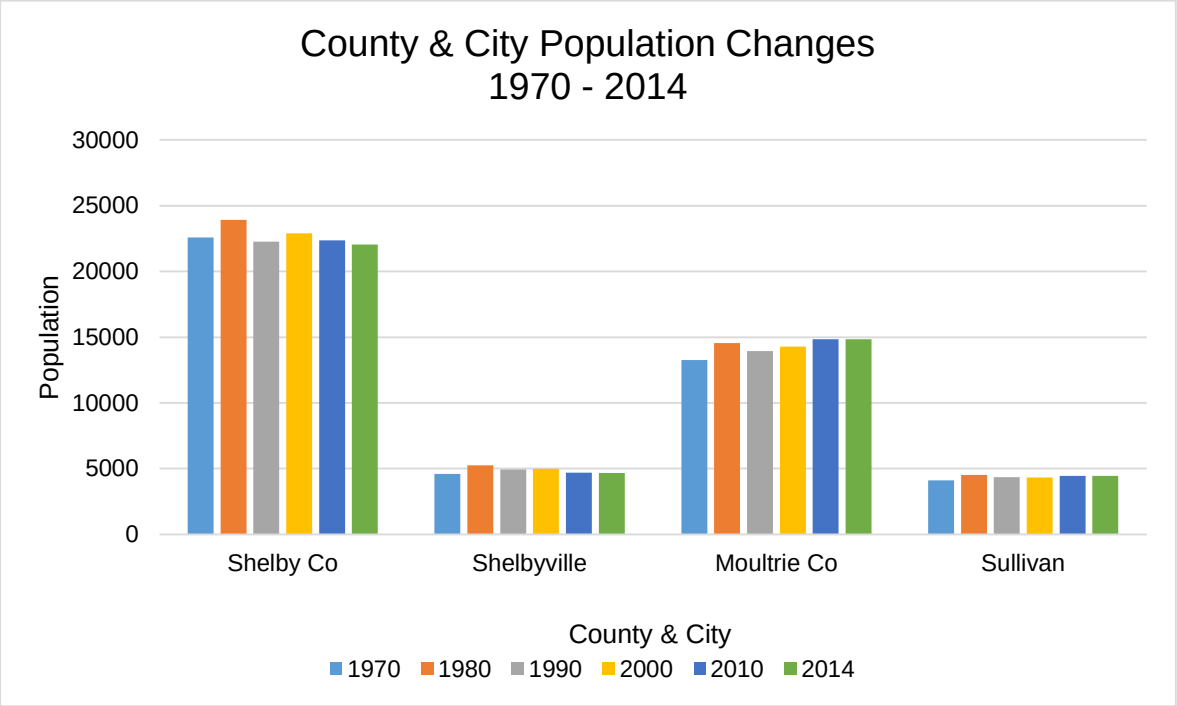
Another reason that may apply to the Lake Shelbyville area of influence is an individual's amenity preference. Both counties and communities have attracted residents due to their close proximity to urban areas and the amenities provided there. The cities of Decatur, Mattoon and Effingham support larger manufacturing, financial, and retail employment, however, individuals may choose to live in a rural area and commute to their urban work locations. This proximity to urban areas may help keep Shelby County population from declining further.

TABLE 3
POPULATION FOR MOULTRIE AND SHELBY COUNTIES AND OTHER SELECTED AREAS 1970 - 2010

PLACE	1970	1980	1990	2000	2010
Illinois					
Moultrie Co.	13,263	14,546	13,930	14,287	14,846
Sullivan	4,112	4,526	4,354	4,326	4,440
Shelby Co.	22,589	23,923	22,261	22,893	22,363
Shelbyville	4,597	5,259	4,943	4,971	4,700
Coles Co.	47,815	52,260	51,644	53,196	53,873
Mattoon	19,681	19,055	18,441	18,291	18,555
Macon Co.	125,010	131,375	117,206	114,706	110,768
Decatur	90,397	94,081	83,885	81,860	76,122
Vermilion Co.	97,047	95,222	88,257	83,919	81,625
Danville	42,570	39,019	33,828	33,904	33,027
McLean Co.	104,389	119,149	129,180	150,433	169,572
Champaign Co.	163,281	168,392	173,025	179,669	201,081
Springfield	91,753	99,637	105,227	111,454	116,250
Chicago Metro.			8,065,633	8,272,768	9,461,105
Missouri					
St. Louis Metro. (MO & IL)			2,444,099	2,603,607	2,787,701

SOURCE: US Census Bureau, Census 2010

Figure 5 – County & City Population Changes



Employment

Moultrie and Shelby Counties have experienced changes in their areas of employment, and subsequently their sources of income. Agricultural employment was the primary occupation for both counties until the late 1950's. Since then, agricultural employment has declined while manufacturing, wholesale and retail trade, and professional services have become the primary areas of employment. Recent years have experienced minimal fluctuations in employment characteristics. Table 4 shows the civilian labor force of each county while Table 5 displays the numeric and percentage breakdown by industry for civilian labor force employees of Moultrie and Shelby Counties.

TABLE 4
CIVILIAN LABOR FORCE STATUS
MOULTRIE AND SHELBY COUNTIES AND THE STATE OF ILLINOIS, 2013

	MOULTRIE	SHELBY	ILLINOIS
Population 16 Years and Over	11,630	17,976	10,124,119
Civilian Labor Force	7,137	10,788	6,698,936
Percent in Labor Force	61.4%	59.9%	66.2%
Percent Employed	58.0%	55.5%	59.2%
Percent Unemployed	3.4%	4.4%	6.9%

Source: US Census Bureau

Agriculture, however, remains a major factor in the economy of both Moultrie and Shelby Counties, as well as in the State of Illinois as a whole. Recent trends indicate a continued increase in the size and value of farming units, and value of products sold, for both counties and the state.

TABLE 5
CIVILIAN EMPLOYMENT BY INDUSTRY, 2013

COUNTY	MOULTRIE		SHELBY	
Industry	Employed Persons	% of Labor Force	Employed Persons	% of Labor Force
Agriculture, Forestry, Fishing, Hunting & Mining*	270	4.0%	533	5.3%
Construction	505	7.5%	715	7.2%
Manufacturing	1,640	24.3%	1,990	19.9%
Wholesale Trade	228	3.4%	345	3.5%
Retail Trade	747	11.1%	1,160	11.6%
Transportation and warehousing, and utilities	271	4.0%	586	5.9%
Information	164	2.4%	233	2.3%
Finance and Insurance, and Real Estate and Rental & Leasing*	256	3.8%	423	4.2%
Professional, Scientific, & Management, and Administrative and Waste Management Services	310	4.6%	509	5.1%
Education Services and Health Care & Social Assistance*	1,510	22.4%	2,263	22.7%
Arts, Entertainment, & Recreation & Accommodation & Food Services	424	6.3%	391	3.9%
Other Services (except Public Administration)	210	3.1%	422	4.2%
Public Administration*	211	3.1%	411	4.1%
TOTAL	6,746		9,981	

* Denotes range average for these industries, actual numbers are not specified due to industry competition

SOURCE: US Census Bureau, Census 2010

Existing Land Use

In 1964, Shelby and Moultrie Counties were almost entirely agricultural with the exception of scattered incorporated areas. This pattern remained reasonably intact until the construction of Lake Shelbyville, which removed thousands of acres from agricultural use. The most significant residential development has occurred since 1970, with the platting of 18 separate subdivisions adjacent to the federal lands around the lake. To date, all contain some dwelling units or improvements and all have been residentially zoned and range in size from 4 to 170 lots. The subdivision represents a major change in the development pattern with residential construction being oriented toward the lake, rather than the surrounding towns. This development influences use patterns on adjacent Corps lands as hunters and other visitors are limited in their access to some areas. Although populations may be declining (Shelby County) or slowly growing (Moultrie County) development around the lake has increased as more people desire to live close to the lake.

TABLE 6
MEDIAN INCOMES FOR SELECTED AREAS, 2009-2013

	FAMILY	HOUSEHOLD
Moultrie County	$54,837	$46,622
Sullivan	$49,327	$35,100
Shelby County	$56,074	$47,188
Shelbyville	$49,730	$42,461
Vermilion County	$51,322	$41,400
Danville	$46,062	$34,426
Macon County	$59,682	$46,559
Decatur	$49,975	$39,514
Coles County	$54,489	$37,040
Mattoon	$48,296	$35,836
Cook County	$65,842	$54,548
Chicago	$54,077	$47,270
Illinois	$66,806	$56,797

SOURCE: US Census Bureau, 2009-2013 Median Values

Commercial construction since 1970 has also resulted in some changes in land use to allow for recreation-oriented commercial activities. The principal businesses are bait shops, marinas, and storage sheds for recreational vehicles. There has also been some new public and industrial construction in the towns around the lake, particularly Shelbyville and Sullivan, but land use changes in these categories have not been significant in terms of size during the period 2000-2010.

TABLE 7
GENERAL HOUSING CHARACTERISTICS

MOULTRIE COUNTY	**2000**	**2010**
NUMBER OF HOUSING UNITS	5,743	6,260
PERCENT OCCUPIED	94.1	92.0
PERCENT OWNER OCCUPIED	78.5	77.1
PERCENT RENTER OCCUPIED	21.5	22.9
PERCENT VACANT	5.9	8.0
CITY OF SULLIVAN	**2000**	**2010**
NUMBER OF HOUSING UNITS	3,002	3,476
PERCENT OCCUPIED	93.5	91.7
PERCENT OWNER OCCUPIED	78.5	75.9
PERCENT RENTER OCCUPIED	21.5	24.1
PERCENT VACANT	6.5	8.3
SHELBY COUNTY	**2000**	**2010**
NUMBER OF HOUSING UNITS	10,060	10,396
PERCENT OCCUPIED	90.0	88.6
PERCENT OWNER OCCUPIED	81.0	80.9
PERCENT RENTER OCCUPIED	19.0	19.1
PERCENT VACANT	10.0	11.4
CITY OF SHELBYVILLE	**2000**	**2010**
NUMBER OF HOUSING UNITS	3,462	3,578
PERCENT OCCUPIED	92.4	90.7
PERCENT OWNER OCCUPIED	77.9	77.0
PERCENT RENTER OCCUPIED	22.1	23.0
PERCENT VACANT	7.6	9.3

Source: US Census Bureau

Future Land Use

Future land use in Shelby and Moultrie Counties will be determined to a great extent by the amount of use Lake Shelbyville receives as a major regional recreation area. Land use forecasts made for both counties in 1980 indicated expected growth of residential development around the lake and a subsequent growth of the nearby towns, particularly Shelbyville and Sullivan. Residential growth near Lake Shelbyville since the year 2000 has increased, although the larger communities have experienced little growth or some decline in population. Even with more housing being developed in both counties, populations are stagnant to declining, indicating smaller families. Land use plans also exhibit a growing awareness in the impact area of the value of conserving lands and limiting development in flood zones. Despite county-wide growth around the lake and some recreational facilities development, the major land use in terms of total acres in both counties is expected to remain primarily agricultural with some industrial components in the foreseeable future.

2.13. ECONOMICS

According to the Corps' Value to the Nation Fast Facts from FY 2013, Lake Shelbyville's visitation resulted in more than $120,000,000 in visitor spending within a 30-mile radius of the lake, supporting 958 jobs. Factoring in multiplier effects, visitors to Lake Shelbyville supported 1,173 jobs. In turn, those jobs added $47,815,000 to the economy in wages & salaries, payroll benefits, profits, rent and indirect business taxes.

Lake Shelbyville has unique physical qualities not found elsewhere in Central Illinois. The lake is quite scenic by boat, by automobile, or on foot, which accounts for a large percentage of sightseers. The project also has an outstanding reputation with campers and statistics indicate that the majority are return visitors.

Local area tourism groups work hard at promoting the project and its activities, which could also increase visitation. Development at the lake includes Findlay Marina, Lithia Springs Marina, Sullivan Marina and Campground, and Eagle Creek State Park Resort. Eagle Creek Resort is currently closed indefinitely. The increased interest in alternative ways to enjoy the lake has changed the complexion of boating and appeals to a broader population. A viable resort will add to that appeal.

Presently, there are three concessionaires at Lake Shelbyville offering water based recreational services. These include power boat sales and service, rental slips, boat rentals, marine supplies, fishing supplies, and food and drink concessions. Based on actual demand for facilities and services, these concessionaires may wish to expand their marina operations in future years. Requests for marina expansion will be carefully considered.

Areas where possible resort-type concession facilities could be constructed include Dam West Recreation Area, an area within Compartment 50 and an area in Compartment 32 adjacent to Findlay Marina. These facilities could feature overnight accommodations,

convention center, tourist center, golf, tennis or other recreational amenities. These would be major developments not necessarily to be constructed at the same time.

An EA and a positive recommendation based on a market study will be required before construction of any more resort facilities at Lake Shelbyville is considered.

The Eagle Creek State Park Resort and Conference Center has been closed since 2009. The facility catered to the demographic that desired an outdoor setting but did not necessarily like to camp. These visitors now have no place else to stay on the lake and have left the area. Although the golf course remains open, it has not attracted visitors as it had in the past because of the lack of overnight accommodations. A recent facility assessment identified extensive repairs to the buildings, with IDNR contemplating demolishing the complex. The State of Illinois is considering a plan to request information from interested developers to create a new resort complex.

Another positive factor of economic consideration is the project accessibility. The regional highway network allows ease of travel by Interstates 57 and 70. Although Chicago is 200 miles away, most of this distance is by Interstate 57. State roads carry visitation traffic from Decatur (36 miles), Champaign-Urbana (77 miles), Effingham (31 miles), Springfield (60 miles), and other urban areas. The St. Louis metropolitan area is slightly over 100 miles away via Interstate 70 and state two-lane highways.

2.14. RECREATION FACILITIES, ACTIVITIES AND NEEDS

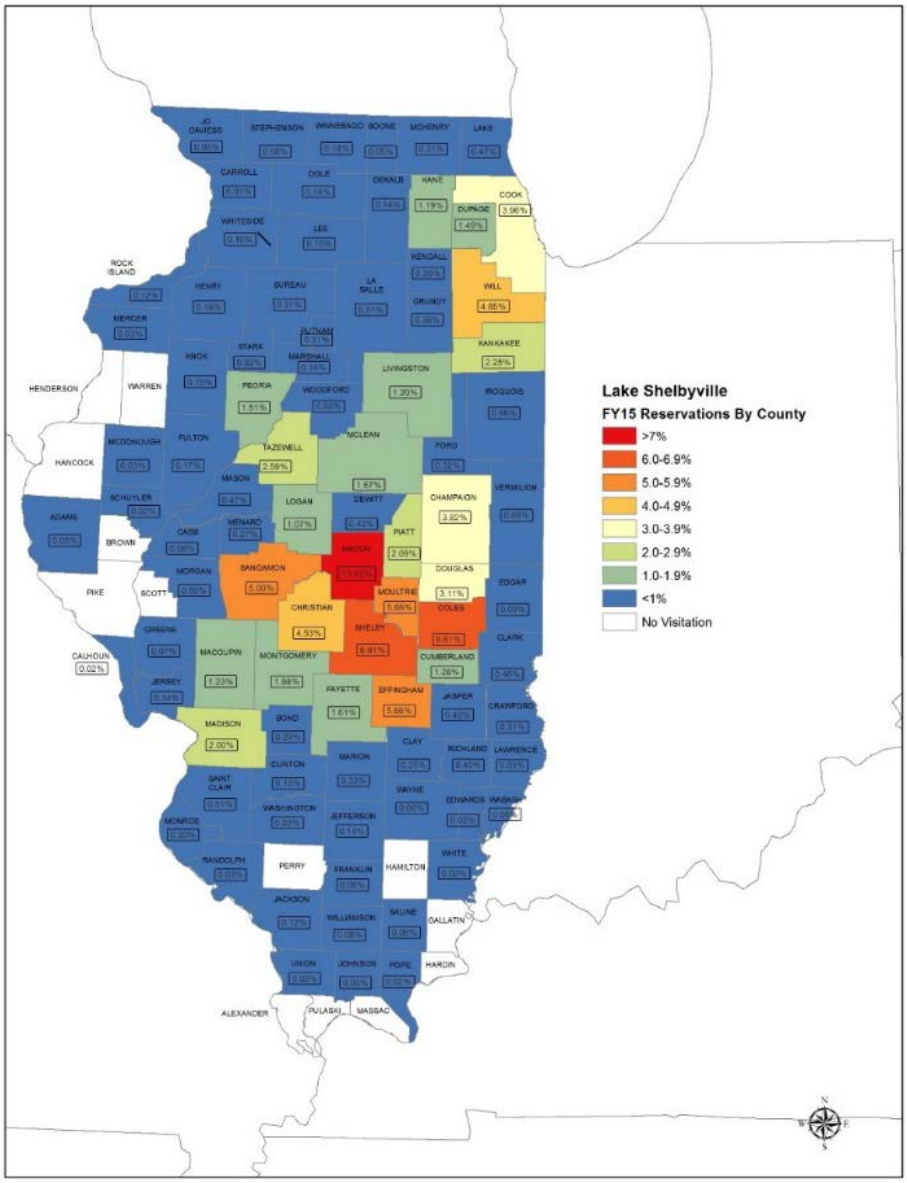
The recreational developments at Lake Shelbyville provide opportunity for outdoor recreation activities such as sightseeing, fishing, boating, water skiing, camping, picnicking, swimming, hiking, and hunting. Areas around the lake have been developed to provide both extended-use and day-use opportunities. Presently there are fourteen recreation areas, two wildlife management areas, and three marinas at Lake Shelbyville. Eleven recreation areas are operated by the Corps of Engineers, two state parks and two wildlife management areas are operated by the Illinois Department of Natural Resources, and private concessionaires operate three marinas. A description of land use and recreational development is presented in Chapter 5.

Overnight accommodations at Lake Shelbyville, both camping and lodging, are attractive to people from St. Louis and Chicago metropolitan areas and urban places in Central Illinois and families from western Indiana.

2.14.1. Zones of Influence

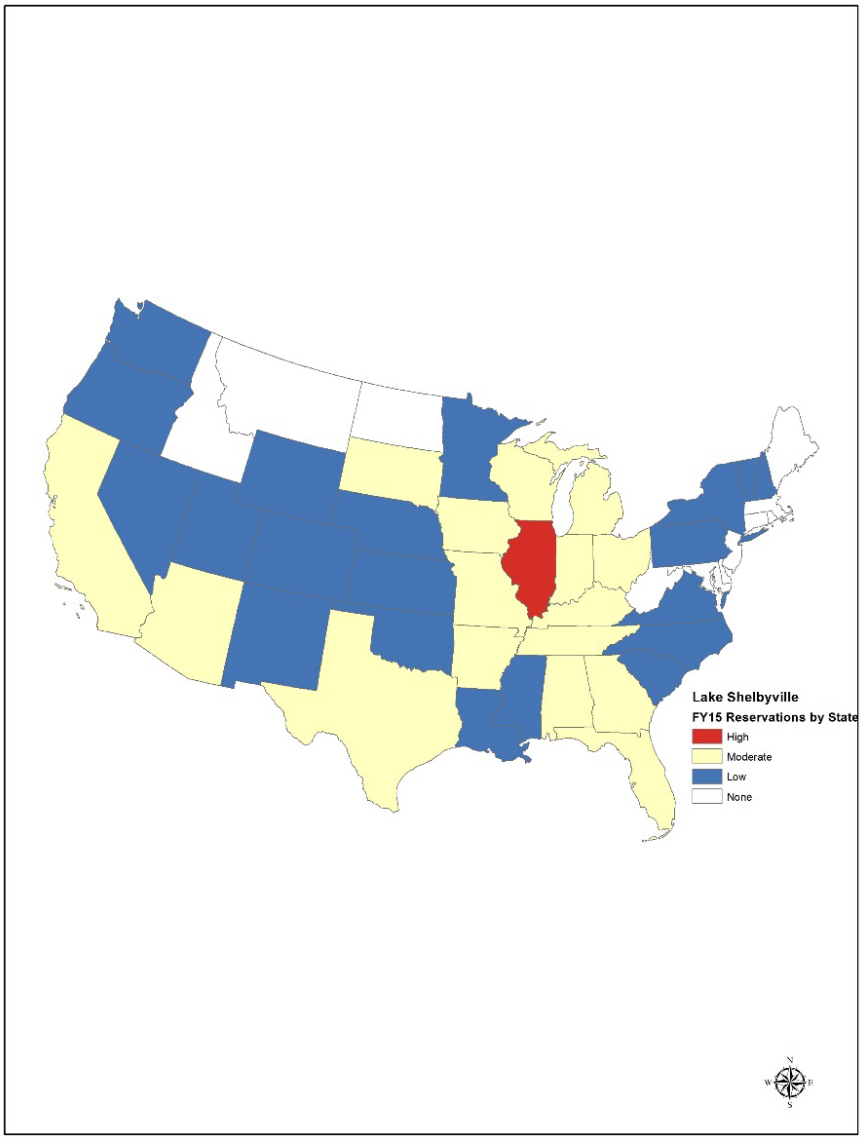
Data collected from camper registration shows the highest percentages of Lake Shelbyville's campers come from three counties – Shelby, Moultrie and Macon. Other high percentages of campers come from metropolitan areas with good interstate or state highway access (Cook, Will, Kankakee, Champaign, Douglas, Coles, Tazewell, Madison, Sangamon, Christian, and Effingham Counties).

Figure 6 - Percentages of Campers from Illinois



Although visitors from other states are a smaller percentage, the lake does attract a moderate number from neighboring states as well as southern states. Lake Shelbyville's regional influence over time is steady, but can vary year-to-year based on fishing prospects, water levels, economic or other factors discussed below.

Figure 7 – Visitation from Other States



2.14.2. Visitation Profile

Lake Shelbyville visitors are a diverse group including fishermen, campers who utilize both Corps campgrounds and those around the lake, visitors who prefer cabins or other accommodations, full time and part time residents adjacent to the lake, hunters, day users, marina customers, and other user groups. Severe weather conditions occurring during December, January and February generally restrict recreational use of the project during that period, except for bank fishing along the downstream spillway. The lake level, too, is usually much lower at this time of year. Lake Shelbyville's peak visitation occurs between Memorial Day and Labor Day. Spring and fall visitation largely depends on weather and fishing opportunities. Approximately 48 percent of the lake's total visitation occurs during the summer months.

Visitation calculation formulas have changed over the years. Table 8 represents visitation over the past 40 years with several different methods of calculation. In general, visitation has fluctuated little across various methods. Year to year variations largely have been due to changes in water, lake levels, cost and supply of gasoline, the economy in general, the level of development of facilities on the lake, and people attending special events within a 60-mile radius of Lake Shelbyville. An example would be peak visitation in the late 1980's to early 1990's. Eagle Creek Resort opened in 1989 along with the short-lived Okaw Valley Amphitheater, south of Shelbyville. The amphitheater featured nationally known entertainment, which attracted visitors from all over the area. When Okaw Valley closed some of those visitors stayed in the area, attracted by the lake and the resort. When Eagle Creek closed in 2009, those visitors moved on to other venues. Although the lake's visitation has been steadily increasing since 2009, the lack of a resort-type facility may have a deep impact on the lake and surrounding communities by not providing a complementary, alternative venue for visitors.

High lake levels have impacted visitation in past years. In some years, visitation dropped dramatically when water levels closed facilities. Since early 2000, efforts to improve access to the lake during high water events has made a difference. The addition of high water boat ramps around the lake and a high water beach at Wolf Creek State Park means the lake is now accessible at most water levels.

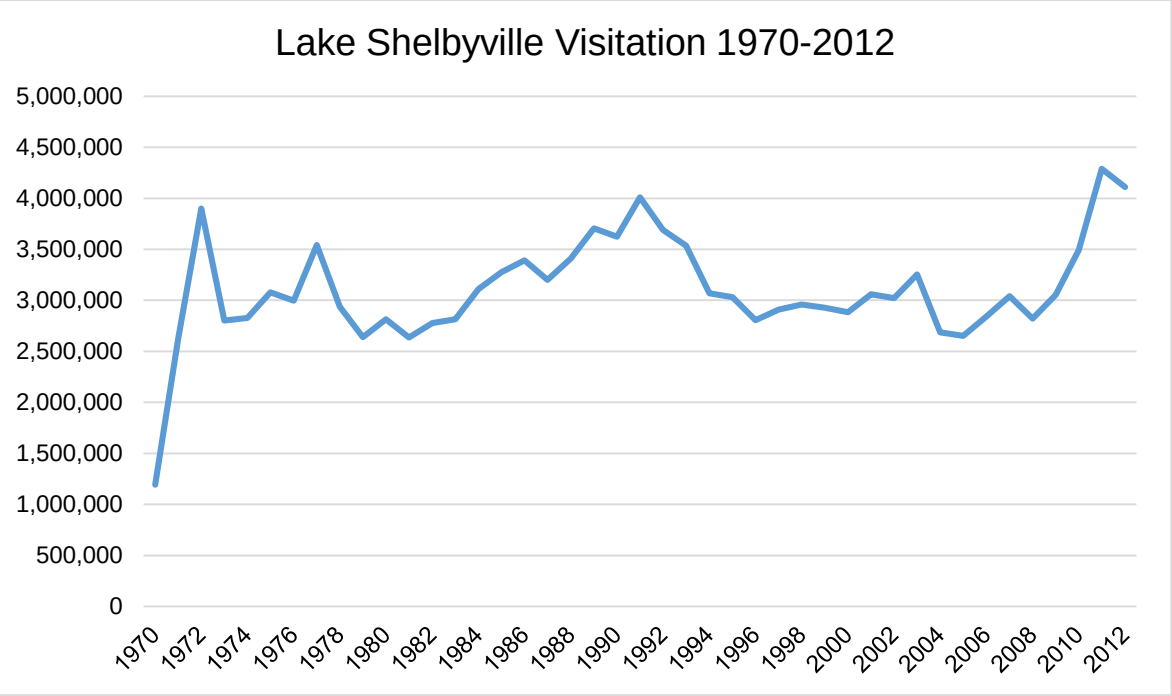
The next generation of visitors, the millennials (the group of people born between the mid 1980's and early 2000's), views nature and the outdoors differently than their parents and grandparents. Although there are large variations in the Millennial Generation, there are some things that are fairly consistent. Getting online and social media savvy is a must. *(purposefulentrepreneurship.com, 2013)* This generation is more interested in participating in activities with their friends, posting their experiences and being comfortable. In order to attract and retain these visitors, Lake Shelbyville will need to rethink camping and providing the outdoor experience. In the article "7 Ways to Make Your Parks Millennial Friendly", the author describes ways to attract this next generation of outdoor users. *(Hornick, 2015)* Technologically proficient, this group uses Wi-Fi and apps to find the next vacation spot. Consideration to providing Wi-Fi access in the recreation areas may be crucial to attracting and retaining these visitors in the future. Some research shows by 2025 millennials will become 75 percent of the global workforce. This demographic will become important to Lake Shelbyville's future management recommendations and success.

TABLE 8
LAKE SHELBYVILLE ANNUAL ATTENDANCE*

1970	1,193,000	1992	3,688,976
1971	2,628,000	1993	3,536,086
1972	3,901,000	1994	3,069,358
1973	2,803,000	1995	3,032,087
1974	2,828,000	1996	2,804,417
1975	3,077,000	1997	2,908,891
1976	2,997,000	1998	2,958,829
1977	3,542,000	1999	2,927,405
1978	2,937,241	2000	2,884,436
1979	2,640,415	2001	3,060,415
1980	2,813,522	2002	3,021,764
1981	2,636,245	2003	3,254,928
1982	2,777,302	2004	2,685,450
1983	2,815,026	2005	2,651,084
1984	3,108,404	2006	2,843,701
1985	3,275,904	2007	3,040,299
1986	3,390,884	2008	2,821,713
1987	3,201,590	2009	3,052,617
1988	3,410,220	2010	3,492,657
1989	3,704,914	2011	4,288,264
1990	3,622,523	2012	4,111,287
1991	4,010,874		

*2012 Visitation is most current

Figure 8 - Lake Shelbyville Visitation Chart



2.14.3. Recreation Analysis.

The 2015 Illinois Statewide Comprehensive Outdoor Recreation Plan, SCORP, is an examination of Illinois' outdoor recreation resources and needs. The plan looks at how best to meet those needs using available resources. Each year millions of people enjoy Illinois' outdoor recreation sites and facilities. Illinois collected data for the SCORP through three different surveys over time from the fall of 2013 through spring 2014. A random survey of 6,200 residents followed up with a subsample from the same group along with a sample of college students comprised the three surveys. The survey requested information concerning participation in thirty-seven different activities including how often and where they participate. Additional information was requested concerning attitudes and opinions about outdoor recreation availability. *(Illinois Department of Natural Resources, 2015)*

According to the SCORP – 'A substantial proportion of the respondents to the 2013-2014 Illinois Outdoor Recreation Survey indicated that outdoor recreation was important in their everyday lives. Well over eight out of ten respondents (85.4%) indicated that at the very least, outdoor recreation was of some importance in their everyday lives. *(Illinois Department of Natural Resources, 2015)* Top reasons for engaging in outdoor recreation varied from New Challenges to Experience Nature. Lake Shelbyville provides this outdoor experience through a variety of activities.

Eight out of ten (80.7%) respondents to the Illinois Outdoor Recreation Survey reported pleasure walking as the most popular outdoor activity in the state. In terms of gross participation levels, pleasure walking and observing wildlife/bird watching were the two activities with the most participation. Half of the respondents engage in pleasure walking over 30 times per year, and half of the respondents engage in nature observation and bird watching over 10 times per year. Jogging was also among the most intensive activities.' *(Illinois Department of Natural Resources, 2015)*

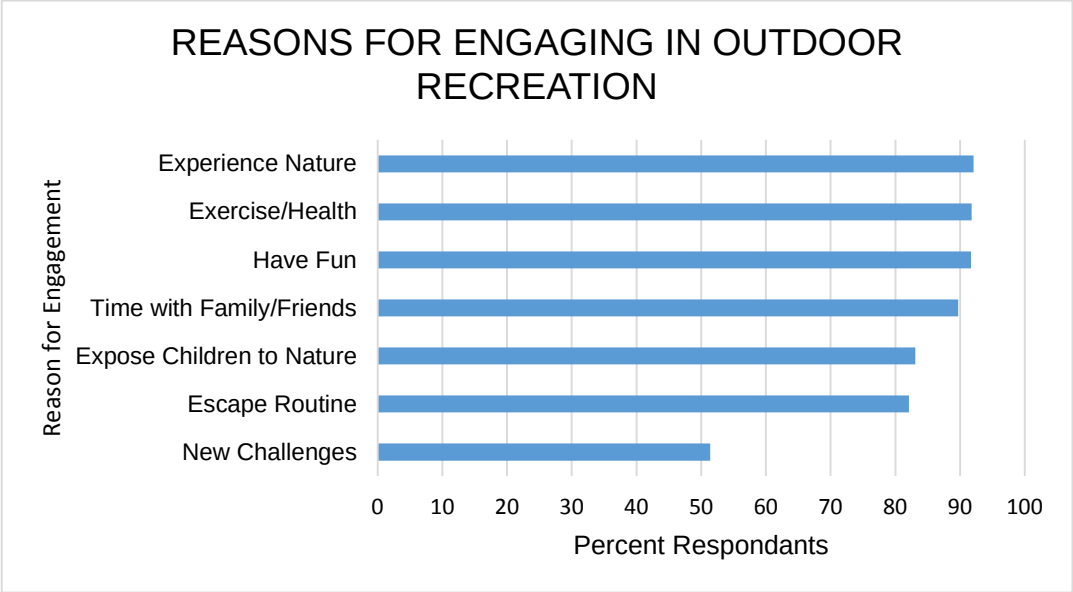
The economic potential relative to water recreation commercial uses can generally be based on the degree of visitor attraction the project possesses. At Lake Shelbyville, past visitation fluctuated based on lake conditions. High water years saw a reduced number of visitors as it was more difficult to access the lake. Boat ramps and beaches began closing when lake levels reached six feet over summer recreation pool. Over the years, high water boat ramps were added, making the lake accessible at any level. In 2013, Lake Shelbyville and Wolf Creek State Park partnered to change Wolf Creek's beach buoy system, allowing the beach to remain open when others were closed.

Recreational use at Lake Shelbyville continues to evolve as more families move to the area. A balanced approach to managing federal lands that considers public access to recreation and respect of adjacent landowner property will allow for a peaceful coexistence. Visitation in Corps-managed recreational areas remains strong. Increased development around the lake has put pressure on outlying land resources as wildlife are concentrating on government property.

According to the SCORP, trails are among the most requested amenity with visitors to an area. Bike/hiking trails are extremely popular with tourists and residents alike. The General Dacey Trail is slowly expanding at both ends of the lake and has become a major attraction. The Central Illinois Mountain Bicycling Association (CIMBA) has hosted regional mountain bike competitions at Camp Camfield in the north, while the Dacey Trail segment in the south, which has attracted foot races and winter luminary walks, sees trail use nearly every day. More detail on the General Dacey Trail concept and plans can be found in Chapter 5 and on Plate 37.

In a 2010 Forest Service assessment of recreation trends, Ken Cordell noted participation in outdoor recreation is growing and America's youth do spend time in the outdoors. Estimates from the National Fishing, Hunting and Wildlife Associated Recreation Survey indicated that 39 percent of hunters used public lands. Although not the fastest growing segment of outdoor recreation fishing and hunting still remain an important outdoor activity. *(Cordell, 2012)*

Figure 9 - Engaging in Outdoor Recreation



Source: (Illinois Department of Natural Resources, 2015)

2.14.4. Recreational Carrying Capacity

The US Army Corps of Engineers is the largest water-based outdoor recreation provider in the country. Most of the 403 projects nationwide are located close to metropolitan areas. Lake Shelbyville is within a two-hour drive from St. Louis and a four-hour drive from Chicago.

Lake Shelbyville continues to be a regional magnet for visitors looking for a place to unwind and relax in an outdoor setting. There is a constant public desire to enjoy the parks and waters of the lake, especially Memorial Day to Labor Day. During these times, especially weekends, the lake can appear to be overcrowded. Carrying capacity is the maximum number of individuals an area's resources can sustain indefinitely without significantly depleting or degrading those resources. Determining the carrying capacities for most organisms is fairly straightforward. For humans, carrying capacity is much more complicated. The definition is expanded to include not degrading our cultural and social environments and not harming the physical environment in ways that would adversely affect future generations. *(Abel, n.d.)*

Carrying capacity can also have a different meaning depending on its application. In a recreational setting, carrying capacity relates to the resource and the point at which it becomes degraded from overuse. The degradation can be to the environment or the social quality. If a visitor does not have a satisfactory experience because of overcrowding, they may not return whether it be from noisy, too close neighbors or poor physical quality of the recreation area itself.

Many factors influence the carrying capacity at Lake Shelbyville. They can be the number of visitors, vehicles or boats; types of users; level of adjacent development; or changing demographics. Lake Shelbyville visitors are very diverse. Some come for the solitude, others for the community of fellow users. The lake is large enough to host that variety of users with few issues. Overcrowding sometimes tends to be self-regulating. In other cases, a change in how the park is managed will relieve pressure on the resources. Lake Shelbyville has addressed overcrowding in some parks by providing more amenities to underutilized parks or raising prices in more popular parks.

2.15. RELATED RECREATIONAL, HISTORICAL AND CULTURAL AREAS

Lake Shelbyville is the primary source of outdoor recreational activities for the area. Recreational facilities located within a 125 mile radius are listed in Table 9. Some of the lakes are small water supply reservoirs, which are also used for recreation. All are smaller than Lake Shelbyville except for Carlyle Lake and Rend Lake.

TABLE 9
RECREATIONAL FACILITIES WITHIN AREA OF INFLUENCE

Illinois	Fishing	Swimming	Boating	Camping	Picnicking	Hunting	Marina	Lodge	Trails	Principal Managing Agency	Miles from Lake Shelbyville
Beaver Dam State Park	X			X	X	X			X	IDNR	80
Cahokia Mounds State Historic Site					X				X	IDNR	94
Carlyle Lake	X	X	X	X	X	X	X	X	X	USACE	98
Clinton Lake	X	X	X	X	X	X			X	IDNR	52
Coffeen Lake	X		X		X	X				IDNR	38
Frank Holten State Park	X		X		X	X				IDNR	110
Fox Ridge	X		X	X	X	X			X	IDNR	36
Horseshoe Lake State Park	X		X	X	X	X			X	IDNR	109
Illinois River	X		X	X	X			X	X	Various agencies	
Kickapoo State Park	X		X	X	X	X			X	IDNR	73
Lake Benton	X		X							City of Benton	97
Lake Bloomington	X		X							City of Bloomington	74
Lake Charleston	X		X		X					City of Charleston	34
Lake Decatur	X	X	X		X	X	X			City of Decatur	31
Lake Jacksonville	X	X	X							City of Jacksonville	80
Lake Mattoon	X	X	X		X		X			City of Mattoon	24
Lake Pana and City Park	X	X			X					City of Pana	15
Lake Sara	X	X	X	X	X		X			Effingham Water Authority	24
Lake Taylorville	X	X	X	X	X				X	City of Taylorville	26
Lake Lou Yaeger	X	X	X	X	X	X			X	City of Litchfield	48
Lincoln Log Cabin State Park					X					IDNR	28
Lincoln's New Salem State Park				X					X	IDNR	70
Lincoln Trail Homestead State Park	X		X	X	X	X			X	IDNR	60
Marshall State Fish & Wildlife Area	X		X	X	X	X			X	IDNR	65
Newton Lake	X		X		X	X			X	IDNR	45

Illinois	Fishing	Swimming	Boating	Camping	Picnicking	Hunting	Marine	Lodge	Trails	Principal Managing Agency	Miles from Lake Shelbyville
Oakland Walnut Point	X			X	X	X			X	INDR	45
Pere Marquette State Park	X		X		X			X	X	IDNR	92
Pickneyville Reservoir	X				X					City of Pickneyville	97
Pool at Dam 24	X		X		X	X				USACE	113
Pool at Dam 25	X		X		X	X				USACE	108
Pool at Dam 26	X		X		X	X	X			USACE	80
Pool at Dam 27	X		X		X	X				USACE	86
Ramsey Lake State Park	X		X	X	X	X			X	IDNR	24
Red Hills State Park	X		X	X	X	X			X	IDNR	69
Rend Lake	X	X	X	X	X	X	X	X	X	USACE	117
Rice Lake Conservation Area	X		X	X	X	X				IDNR	103
Sam Parr State Park	X		X	X	X				X	IDNR	45
Sanganois Conservation Area	X					X				IDNR	84
Sangchris	X		X	X	X	X			X	IDNR	46
Shelbyville City Park	X	X			X					City of Shelbyville	1.5
Spitler Wood State Park				X	X				X	IDNR	26
Springfield Lake	X	X	X		X		X		X	City of Springfield	52
Stephen A. Forbes St Pk.	X	X	X	X	X	X			X	IDNR	44
Twin Lakes	X		X		X					City of Paris	61
Vandalia Lake	X	X	X	X	X		X		X	City of Vandalia	53
Indiana											
Cagles Mill Lake	X	X	X	X	X	X		X	X	Indiana State Park	108
Madsfield Lake	X	X	X	X	X	X			X	Indiana State Park	88
Monroe Lake	X	X	X	X	X	X			X	Indiana State Park	123
Cataract Lake	X	X	X	X	X	X		X	X	Indiana DNR	108
Wabash River	X		X		X			X		Various Agencies	100

2.16. REAL ESTATE

The acquisition policy for the Lake Shelbyville Project was based on the hydrology and hydraulic analyses and on engineering requirements. In general, the purchase of a fee area encompassed the majority of lands lying below the top of induced surcharge pool elevation (630.5 feet NGVD) or top of flood control pool elevation (626.5 feet), plus 300 feet horizontally, whichever was greater. Additional lands were purchased above this elevation to support project missions and/or operations including recreation. The total fee title real estate interest at the Lake Shelbyville Project is 34,340 acres. The total flowage easement interest at Lake Shelbyville is 6,237 acres.

The majority of fee title land is managed by the U.S. Army Corps of Engineers in accordance with its authorized purposes and regulatory requirements. The Illinois Department of Natural Resources leases 2,752 acres for two State parks and 6,286 for two Wildlife Management Areas. Other lessees include the Sullivan Marina and Campground, Findlay Marina and Lithia Springs Marina.

2.17. PERTINENT PUBLIC LAWS

Development and management of Federal reservoirs for various purposes is provided under several statutes. These laws cover development of recreation facilities, licensing of lake lands for fish and wildlife purposes, protection of natural resources, and leasing of public lands for incidental uses other than recreation.

Recreation

Development and management of recreation facilities at Department of Army constructed reservoirs by the Corps of Engineers, other governmental agencies, local groups, and individuals is authorized under the following public laws:

•Section 1 and 4 of the Flood Control Act, approved 22 December 1944 (PL 534, 78th Congress) authorizes providing facilities for public use, including recreation and conservation of fish and wildlife.

•The River and Harbors Act, approved 2 March 1945 (PL 14, 79th Congress), specifies the rights and interests of the states in watershed development and water utilization and control, and the requirements for cooperation with state agencies in planning for flood control and navigation improvements.

•Section 209 of the Flood Control Act of 1954, approved 3 September 1954, (PL 780, 83rd Congress), amended the Flood Control Act of 1944. It authorized the Secretary of the Army to grant leases to federal, state or governmental agencies without monetary considerations for use and occupation of land and water areas under the jurisdiction of the Department of the Army for park and recreation purposes when in the public interest.

•Section 207 of the Flood Control Act of 1962, approved 23 October 1962 (PL 874, 87th Congress, 76 Stat.1195) amended the Flood Control Act of 1954. It authorized the Chief of Engineers to construct, maintain, and operate public park and recreation facilities at water resource development projects under the control of the Department of the Army, permit construction of facilities by local interests and permit the maintenance and operation of facilities by local interests.

•The Land and Water Conservation Fund Act, approved 1 September 1964 (PL 578, 88th Congress, 78 Stat. 897), contains provisions by which the Corps of Engineers may charge for admission and use of its recreation areas under prescribed conditions.

•The Federal Water Project Recreation Act, approved 9 July 1965 (PL 72, 89th Congress, 79 Stat. 213), contains cost sharing provisions for acquisition of lands and development of recreation facilities for water resources projects authorized after 1965. It also provides for cost sharing development of new areas that were not part of initial project construction.

•The Architectural Barriers Act of 1968, approved 12 August 1968 (PL 480, 90th Congress), together with the acts and amendments listed in 9, 10, and 11 below, provides information and guidance regarding universal accessibility for persons with disabilities to the Corps of Engineers recreation facilities and programs.

•The Rehabilitation Act of 1973, approved 26 September 1973 (PL 112, 93rd Congress) and the Rehabilitation Act Amendments of 1974, approved 7 December 1974 (PL 93-516, 93rd Congress). See Architectural Barriers Act above.

•The Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978, approved 6 November 1978 (PL 602, 95th Congress). See Architectural Barriers Act above.

•The Water Resource Development Act of 1986, approved 17 November 1986, (PL 662, 99th Congress), Section 103 (c) (4) states that the non-Federal share of the costs assigned to recreation, is 50 percent of the separable costs, to be paid during the construction period. Non-Federal sponsors must also provide all lands, easements, rights of way, relocations, and disposal sites (LERRD) assigned to the recreation purpose and perform all necessary relocations.

•The Americans with Disabilities Act of 1990, approved 26 July 1990 (PL 336, 101st Congress). See Architectural Barriers Act above.

•The Water Resources Development Act of 1992, approved 31 October 1992 (PL 580, 102nd Congress), authorized the Challenge Cost Sharing Program (Section 225) that permits the Corps to develop and implement a program to accept contributions of funds, materials and services from non-Federal public and private entities to be used in managing recreation facilities and natural resources.

•The Omnibus Budget Reconciliation Act – Day Use Fees, approved 10 August 1993 (PL 66 103rd Congress), contains provisions by which the Corps of Engineers may collect fees for the use of developed recreation sites and facilities, including campsites, swimming beaches, and boat launching ramps but excluding a site or facility which includes only a boat launch ramp and a courtesy dock.

•The Water Resources Development Act of 1996, approved 12 October 1996 (PL 303 104th Congress), Section 208 (Recreation Policy and User Fees) directed the Corps to put increased emphasis on recreation opportunities at Corps projects and specifies that a portion of the recreation fees collected at Corps projects remain for use at the project where they are collected. Section 519 (Recreation Partnership Initiative) directed that, in general, the Corps is to promote federal, non-federal and private sector cooperation in creating public recreation opportunities at Corps projects.

•The Water Resources Development Act of 2000, approved 11 December 2000 (PL 541 106th Congress) Section 552 Watershed Management, Restoration and Development amended Section 503(d) of the Water Resources Development Act of 1996 by adding (29) Kaskaskia River Watershed, Illinois. The Corps may provide technical, planning, and design assistance to non-Federal interests for carrying out watershed management, restoration, and development projects. The non-Federal share of the cost of assistance provided will be 50 percent.

•Architectural Barriers Act (ABA) standards and guidelines for accessible design, 2004.

•Accessibility Guidelines for Outdoor Developed Areas, 26 September 2013.

Fish and Wildlife

The fish and wildlife aspects of resource development were authorized under the following public laws:

•The Fish and Wildlife Coordination Act, enacted 10 March 1934, as amended 14 April 1946 (PL 732, 79th Congress, 48 State. 401), and 12 August 1958 (PL 624, 85th Congress, 72 State. 563), provides authority for making project lands of value for wildlife purposes available for management by interested federal and state wildlife agencies. It further provides for more effective integration of a fish and wildlife conservation program with federal water resources developments.

•The National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq), declares a national environmental policy and requires that all federal agencies shall, to the fullest extent possible, use a systematic, interdisciplinary approach which integrates natural and social sciences and environmental design arts in planning and decision making.

•The Endangered Species Act of 1973 as amended (16 USC 1531 and 1536) requires that federal agencies shall, in consultation with the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service), use their authorities in furtherance of conserving endangered and threatened species and take such action as necessary to assure that their actions are not likely to jeopardize such species or destroy or modify their critical habitat.

•The Water Resource Development Act (WRDA) of 1986, Section 1135, provides for modifications in the structures or operations of a project, consistent with authorized project purposes to improve the quality of the environment, i.e. restoration of fish and wildlife habitat. WRDA 1996 amended Section 103 of WRDA 1986 by specifying that the non-federal share of environmental restoration and protection projects shall be 35 percent.

•Executive Order (EO) 12962, 7 June 1995, entitled Recreational Fisheries directs Federal agencies to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities by means of a number of duties. In addition, it establishes a National Recreational Fisheries Coordination Council consisting of seven members (including one designated by the Secretary of Defense). The “Coordination Council” is charged with developing a comprehensive Recreational Fishery Resources Conservation Plan. This EO also directs all Federal agencies to identify and minimize conflicts between recreational fisheries and their responsibilities under the Endangered Species Act of 1973 and expands the role of the Sport Fishing and Boating Partnership Council.

Forest Resources – Protection and Improvement of Natural Resources

The Forest Conservation Act, approved 6 September 1960 (PL 717, 86th Congress, 74 Stat. 817), provides for the protection of forest cover in reservoir areas, and specifies that reservoir areas of projects for flood control, navigation, hydroelectric power development, and other related purposes, owned in fee and under the jurisdiction of the Secretary of the Army and the Chief of Engineers, shall be developed and maintained so as to encourage, promote and assure fully adequate and dependable future resources of readily available timber through sustained yield programs, reforestation, and accepted conservation practices, and to increase the value of such areas for conservation, recreation and other beneficial uses; provided, that such development and management shall be accomplished to the extent practicable and compatible with other uses of the project. The law further provides that in order to carry out the national policy declared in the first section of this Act, the Chief of Engineers, under the supervision of the Secretary of the Army, shall provide for the protection and development of forest or other vegetative cover and the establishment and maintenance of other conservation measures on reservoir areas under his or her jurisdiction, so as to yield the maximum benefit and otherwise improve such areas. Programs and policies developed pursuant to the preceding sentence shall be coordinated with the Secretary of Agriculture, and with appropriate state conservation agencies.

Other Incidental Uses

Title 10, United States Code (USC), Section 2667, authorizes the lease of land at water resource projects for any commercial or private purpose not inconsistent with other authorized purposes, subject to specific restrictions thereupon, as set out in regulations, policy, and Delegations of Authority. Title 16, United States Code, Section 460d, authorizes use of public lands for any public purpose, including fish and wildlife, if it is in the public interest. Such uses are also subject to regulations, policy and Delegations of Authority. The use of project lands for easements and licenses is authorized in various Congressional Acts and codified in Titles 10, 16, 30, 32, and 43 of the United States Code. Lands and rights-of-way will be acquired pursuant to provisions of the Uniform Real Property Acquisition and Relocation Assistance Act of 1970, Public Law 91-646, as amended.

Cultural and Historical Considerations

A number of laws mandating the protection of cultural resources on public lands have been passed during the last century. These laws and Executive Orders are summarized in Appendix A of the St. Louis District Cultural Resource Management Policy (April 1982). The following laws subsume, clarify or supersede all previous cultural resource law:

• The National Historic Preservation Act of 1966, approved 15 October 1966 (PL 665 89th Congress), as amended through 2000 (PL 91-243, PL 93-54, PL 94-422, PL 94-458, PL 96-1999, PL 96-244, PL 96-515, PL 98-483, PL 99-514, PL 100-127, PL 102-575, PL 103-437, PL 104-333, PL 106-113, PL 106-176, PL 106-208 and PL 106-355), states a policy of preserving, restoring and maintaining cultural resources and requires that federal agencies take into account the effect any undertaking may have on sites that may be eligible for inclusion on the National Register of Historic Places.

•The Archaeological and Historic Preservation Act of 1974 (16 USC 469 et seq.) (Reservoir Salvage Act, Public Law 86-532, 27 June 1960, as amended) provides for the preservation of historical and archaeological data that might otherwise be lost or destroyed as the result of flooding or any alteration of the terrain caused as a result of any federal construction projects.

•The Archeological Resources Protection Act of 1979 approved October 31, 1979 (PL 95 96th Congress) (16 USC 470 et seq.) as amended. This law protects archaeological resources and sites that are on public lands and Indian land, and fosters increased cooperation and exchange of information between governmental authorities, the professional community, and private individuals.

Other Cultural / Historical Laws

•American Indian Religious Freedom Act, approved 11 August 1978 (PL 341 95th Congress) 42 USC Sect.1996, amended 1994. As stated in the implementing guidance, Chapter 6 of ER and EP 1130-2-540, the Commander shall consult with affected tribes, groups or individuals regarding appropriate action for project effect upon sacred sites, important to the practice of Native American religion.

•Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, 1983, 48 FR 44716-44742 are intended to provide technical advice about archeological and historic preservation activities and methods. These standards and guidelines are not regulatory and do not set or interpret agency policy.

•The Native American Graves Protection and Repatriation Act, approved 16 November 1990 (PL 601 101st Congress) requires federal agencies and museums to inventory human remains and associated funerary objects and to provide culturally affiliated tribes with the inventory of collection. The Act requires repatriation, on request, to the culturally affiliated tribes and establishes a grant program within the Department of the Interior to assist tribes in repatriation and to assist museums in preparing the inventories and collections summaries.

•Curation of Federally-Owned and Administered Archeological Collections, 1990 (36 CFR 79) governs the Federal Archeology Program that establishes definitions, standards, procedures and guidelines to be followed by Federal agencies to preserve collections of prehistoric and historic material remains, and associated records, recovered under the authority of the Antiquities Act (16 U.S.C. 431- 433), the Reservoir Salvage Act (16 U.S.C. 469-469c), a section of the National Historic Preservation Act (16 U.S.C. 470h-2) or the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm).

•Religious Freedom Restoration Act of 1993, approved 16 November 1993 (PL141 103rd Congress), 42 USC 2000bb, guarantees application of the compelling interest test in all cases where free exercise of religion is substantially burdened provides a claim or defense to persons whose religious exercise is substantially burdened by government. The compelling interest test, as set forth in prior Federal court rulings is a workable test for striking sensible balances between religious liberty and competing prior governmental interests.

•Indian Sacred Sites, Executive Order 13007 of May 24, 1996 (61 FR 26771-26772) orders Executive branch agencies to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. Where appropriate the agency shall maintain the confidentiality of sacred sites.

•The Water Resources Development Act of 2000, approved 11 December 2000 (PL 541 106th Congress) Section 208, authorizes the army to rebury Native American human remains that were discovered on Civil Works project lands and have been rightfully claimed by a tribe on those lands.

•Preserve America, Executive Order 13287, of 4 March 2003 states it is the policy of the Federal Government to provide leadership in preserving America's heritage by actively advancing the protection, enhancement, and contemporary use of historic properties

owned by the Federal Government, and by promoting intergovernmental cooperation and partnerships for the preservation and use of historic properties.

2.18. MANAGEMENT PLANS

Lake Shelbyville uses various management plans in the overall operation of the lake.

Emergency Action Plan, 2014. The Emergency Action Plan covers emergency actions for all work areas and facilities for the protection of employees and others from emergencies.

Environmental Compliance Policy, 2016. The 1975 Lake Shelbyville Environmental Impact Statement (EIS) acknowledges and states that the operation of Lake Shelbyville is intended to achieve the greatest possible benefit for each project purpose over the long run.

Flood Emergency Plan, 2016. The Flood Emergency Plan outlines steps initiated when pool exceeds normal recreation pool. Those steps detail how a facility is impacted and what steps are needed to protect the facility and the public from rising waters. The plan also identifies emergency contacts locally and within the Division.

General Dacey Trail Master Plan, 2002. This plan provides a conceptual framework guiding future trail development around Lake Shelbyville and to nearby communities. The goal of the plan is to ultimately connect population centers, recreation areas and wildlife areas regionally and statewide. The comprehensive trail plan encourages partnerships and inter-governmental agreements for construction and maintenance. See Chapter 6 for more detail on the General Dacey Trail Plan.

Historic Properties Data Synthesis: Compliance Document, Lake Shelbyville, Illinois, 1989. This document summarizes the lake's archaeological background. It includes chapters on the lake environment, previous archaeological investigations, all historic properties identified at the lake and the lake's cultural history. The concluding chapter establishes priorities for future historic properties investigations at the lake.

Lake Shelbyville Site Safety Plan, 2015. The primary goal of the project safety plan is to eliminate or control both known and potential safety and health hazards employees face on the job. This includes the safety and well-being of employees, the employees of contractors, and individuals of the visiting public, as well as the prevention of wasteful and inefficient operations, and damage to property and equipment.

Operational Management Plan (OMP), 2016. The OMP provides more detailed descriptions of facilities and the process for management of the lake's resources.

Physical Security Plan, 2013. The Physical Security Plan prescribes responsibilities, policies, procedures, and standards pertaining to physical security operations at Lake Shelbyville, US Army Corps of Engineer, St. Louis District. Applicable to all personnel assigned to Lake Shelbyville, the plan's objective is to minimize theft or destruction of public property.

St. Louis District Cultural Resource Management Policy, 1982. The Cultural Resource Policy governs the investigation and protection of cultural resources within the District

The St. Louis District Historic Properties Management Plan, Lake Shelbyville (HPMP), 1986. This plan is a guide to assist lake and other District personnel in meeting federal regulations concerning historic properties management at Lake Shelbyville. The HPMP includes chapters on organizational structure, compliance procedure, long term resource management, tasks and priorities (tied to the Operational Management Plan), training, staffing, and budget. This document is overdue for an update and talks of a digital GIS based system are ongoing.

St. Louis District Policy on Management of Flowage Easement Lands, 2011. This policy defines Corps and landowner responsibilities as well as the process for submitting and approval of construction permits.

Shoreline Erosion Plan, 1993. The Final Letter Report on Shoreline Erosion at Lake Shelbyville outlined a plan for consolidation, protection, removal or replacement of facilities that were in danger of periodic flooding.

Shoreline Management Plan, 1974. The Shoreline Management Plan governs the use and development of Lake Shelbyville's lands. It is the policy that private exclusive use will not be permitted on new lakes or on lakes where no private facilities existed as of 13 December 1974, the date of the implementing regulation (ER 1130-2-406). Current policy is documented in the Lake Shelbyville OMP.

Site Specific Security Plan, 2016. This document provides guidance on the execution of Risk Assessments for Stand Alone Facilities in order to facilitate informed decisions, commit resources, or enact policies and procedures. The process will assess threats; determine the criticality of the asset; identify vulnerabilities and include mitigation measures. This document coincides with the Emergency Action Plan.

The Water Control Manual – Appendix A to Master Reservoir Regulation Manual, 2008. This plan presents a detailed plan of water control and pertinent information relative to Lake Shelbyville and affects the general operation of water releases according to an established operational plan.

LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED
SHELBYVILLE ILLLINOIS

CHAPTER 3 – MANAGEMENT GOALS AND RESOURCE OBJECTIVES

The purpose of this section is to define a series of resource use objectives for Lake Shelbyville. Resource use objectives are statements specific to Lake Shelbyville that describe the selected options for resource use, development, and management as determined through study and analysis of regional needs, resource capabilities and potentials, and public desires. As defined, resource use objectives provide general guidance and direction for the use, development, and management of project resources. Site specific resource use objectives include development and management measures.

As stated in Chapter 1, the authorized purposes of Lake Shelbyville are flood risk management on the Kaskaskia and Mississippi Rivers, navigation releases for the Kaskaskia River, domestic and industrial water supply, water quality control, fish and wildlife conservation, and recreation. Certain project purposes by nature can be conflicting. For example, under certain conditions, the lake's flood control purpose can conflict with other project purposes such as recreation and fish and wildlife management. Determining management goals sets the overall vision for the future path of development. These goals can be summarized as:

- Protect the lake's natural and cultural resources
- Identify visitor needs and provide quality facilities
- Engage in partnerships that promote the lake regionally and leverage resources to provide a quality outdoor recreation experience
- Provide educational opportunities that encourage the visitor to respect the environment and safely use the project
- Maintain and build upon local, regional and statewide connections that will link Lake Shelbyville to the community

The development of sound resource use objectives should assist in minimizing conflicts between project purposes through compromises that do not seriously detract from achievement of any or all project purposes. Resource use objectives based on project purposes at Lake Shelbyville are identified and discussed in the following paragraphs.

The general resource use objectives, applicable to the project as a whole are presented below. They are formulated so as to provide general guidance and direction to the overall management and development of Lake Shelbyville resources. These objectives give a general guide to Lake Shelbyville operations. A more detailed description and outline of operation is listed in the OMP. The objectives are grouped into three categories: Project Operations, Recreation, and Environmental Stewardship. Additional information that supports these objectives can be found in Chapter 5, Resource Plan.

3.1. PROJECT OPERATIONS

•Ensure that quality administration and management of all project lands, waters and other associated man-made and natural resources is consistent and thorough and all project administrative and management decisions/actions will adhere to all applicable laws, regulations, polices, and agreements.

•Partner with existing and potential concessions to provide quality, viable recreation opportunities. These will include both lodging and marina type services.

•Provide public use areas and facilities that are safe and environmentally sound.

•Partner with other agencies, groups, organizations and individuals to:

- Accomplish resource use objectives.
- Use all available opportunities to maximize efficiency in operations and funding.
- Periodically review and improve management practices.
- Effectively utilize the lands and its natural resources.
- Manage the public land and create a safe and enjoyable environment.
- Make facility improvements that optimize the visitor experience.

3.2. RECREATION

•As funds become available, renovate and upgrade recreation areas to improve the available facilities and to reduce maintenance costs.

•Identify and undertake the modifications necessary to make facilities accessible to all user groups as mandated by Uniform Federal Accessibility Standards (UFAS), Americans with Disabilities Design Guidelines (ADDG), and new recreation standards.

•Maintain and improve camping facilities to redistribute use, meet public demand, reduce operation and maintenance costs, and generate revenues for future operation and maintenance of recreation facilities.

•Accommodate increasing water and land-based day-use activities in a manner compatible with other site activities while maintaining the integrity of the project's natural resources.

•Reduce operation and maintenance costs by raising facilities to minimize inundation during high water events.

•Improve high water access where applicable by expanding facilities where appropriate.

•The Interpretive Services and Outreach Program (ISOP) encompasses Public Affairs, Public Safety, Education / Events, Outreach, Interpretive Efforts, Marketing Efforts, and Visitor Center Operations. Maximize public contact by utilizing all available methods.

•Collaborate to leverage resources through partnerships, stakeholders, community members, volunteers, and the project's cooperating association.

•Improve the lake's website to provide visitors with current, relevant information.

•Provide online interactive opportunities for visitors and potential visitors.

3.3. ENVIRONMENTAL STEWARDSHIP

•Continue to monitor resources to ensure protection against fire, overuse, erosion, insect, and disease infestation. This includes control of non-native pests. Take corrective actions when warranted.

•Encourage optimal utilization by the greatest number of wildlife species through manipulation, management, and protection of diverse habitats through methods such as succession control such as prescribed fire, native warm season grass plantings, wildlife plantings, timber stand improvements, and exotic plant control.

•Continue to monitor and maintain the vegetative conditions of trees for their scenic, recreational, wildlife, and monetary values.

•Manage existing prairie stands, re-establish native warm season grasses and forbs where warranted and manage timber stands through prescribed fire.

•Re-establish and maintain high quality wetlands to improve water quality and to provide habitat for wetland dwelling species.

•Partner with the Illinois Department of Natural Resources (IDNR) in the maintenance and enhancement of a high quality fishery as a perpetual resource. Provide additional support to the Illinois Natural History Survey (INHS) for continued sampling and research.

•Control and stabilize land and shoreline erosion. Follow guidance from the Shoreline Erosion Management Plan that shows areas that will be impacted over the next 30 years.

•Update Shoreline Erosion Management Plan to reflect shoreline changes that have occurred over the 25 years and were not identified in the original plan.

•Conduct sedimentation survey to reflect current conditions and present a clearer picture of storage capabilities.

•Identify, evaluate, and preserve significant archaeological and historical sites through yearly monitoring and protection as needed.

•Support partners' efforts to encourage upstream landowners to participate in sediment reduction practices in order to improve water quality.

LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED
SHELBYVILLE ILLLINOIS

CHAPTER 4 – LAND ALLOCATION, LAND CLASSIFICATION, WATER SURFACE & EASEMENT LANDS

Project zoning provides guidance for the orderly development, use, and management of the lake's resources. Resource planning recognizes the authorized project purposes and the opportunities and constraints that influence development and management. All development will be screened to determine compatibility with the lake's natural and cultural resources. Primary planning and zoning considerations include seasonal flooding, soils, ecological conditions, existing and projected recreation demand, state and local participation and interest, and applicable laws, regulations, and policies.

4.1. LAND ALLOCATION

All lake area lands have been allocated for the authorized purposes for which they were acquired. The land use allocations are depicted on Plate 3

Land Allocation identifies the congressionally authorized purposes for which Corps lands were acquired. Lake Shelbyville public land and waters total approximately 34,340 acres. These lands were allocated in accordance with the authorized purpose for which they were acquired. There are four categories of allocation applicable to Corps projects:

4.1.1. Operations (i.e. flood control, hydropower, multiple resource management, etc.).
Lands acquired for the congressionally authorized purpose of constructing and operating the Project.

4.1.2. Recreation
Lands acquired specifically for the congressionally authorized purpose of recreation. These lands are referred to as separable recreation lands. Allocated recreation lands can only be given a land classification of *Recreation*.

4.1.3. Fish and Wildlife
Lands acquired specifically for the congressionally authorized purpose of fish and wildlife management. These lands are referred to as separable fish and wildlife lands. Allocated fish and wildlife lands can only be given a land classification of *Wildlife Management*.

4.1.4. Mitigation
Lands acquired or designated specifically for the congressionally authorized purpose of mitigating losses associated with the development of the Project.

Two allocations (Operations and Recreation) occur at Lake Shelbyville, and established the basis for the authorized acquisition of 23,240 fee title lands and 6,237 acres of flowage easement lands which provide safe, efficient operation of the Project for its authorized purposes.

Figure 10 – Percentage of Land Allocation

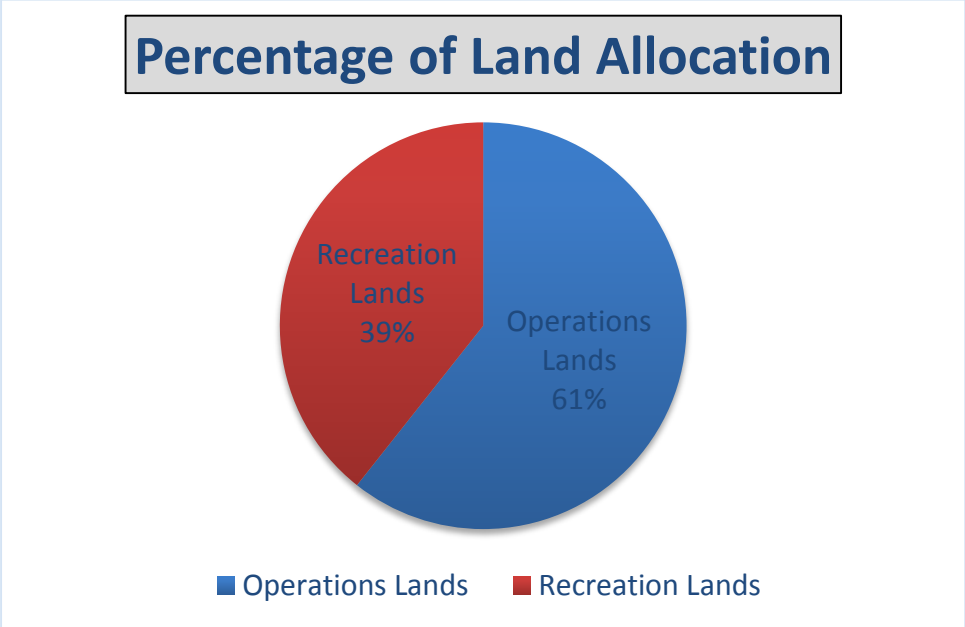


TABLE 10
LAND ALLOCATION

LAND ALLOCATION	
Operations Lands	15,856 acres
Recreation Lands	7,384 acres

4.2. LAND CLASSIFICATION

Land use classifications have been determined through the guidance contained in ER 1130-2-550 and EP 1130-2-550. The land use classification for project lands is shown on Plate 4. Land use classifications and descriptions include the following:

4.2.1 Project Operations
The objective of this zoning is to provide adequate land for safe and efficient operation and management of the lake's land and water resources for all authorized purposes. Lands classified in this category include the main dam and

lands required for administrative and maintenance needs. Lands classified as Project Operations are shown on Plate 5.

4.2.2. High Density Recreation
The objective of this zoning is to classify lands, by virtue of location and natural resources, for intensive recreational use. These park and recreation lands are developed to provide for the recreational activities of the visiting public. No agricultural uses are permitted on these lands except on an interim basis for terrain adaptable for maintenance of open space and/or scenic values. Factors such as road access, natural resources, and recreational facility design and management practices make these lands conducive to accommodating major use by the visiting public. Lands in this classification include areas for concession, state and local agencies, quasi-public and group use development. Lands classified as High Density Recreation are shown on Plate 6.

4.2.3. Mitigation
No mitigation lands currently exist at Lake Shelbyville.

4.2.4. Environmentally Sensitive Areas
In this classification, areas are identified for the preservation of scientific, ecological, historical, archeological and/or aesthetic value. A general description of the Ecological Areas and Cultural Areas classification are further detailed in Chapter 5. Lands classified as Environmentally Sensitive are shown on Plate 7.

4.2.4.1 Ecological Areas
Included in this category are areas providing habitats for rare or endangered species. Limited agricultural practices are permitted in certain portions of these areas. Normally, development for public use is prohibited or limited on land in this classification.

4.2.4.2. Cultural Areas
Included in this category are areas that have historical and archeological significance. Management practices are followed to ensure protection of these resources.

4.2.5. Multiple Resource Management Lands
This classification further distributes lands to one or more of the following uses based on their location and natural resources: (a) Recreation – Low Density, (b) Wildlife Management – General, (c) Vegetative Management and (d) Inactive and/or Future Recreation Areas. Areas in these categories are found in are shown on Plates 4 and 8.

4.2.5.1. Low Density Recreation
Lands zoned in this category offer recreation to the public in an unstructured natural setting as an alternative to the experience

generally associated with intensively developed recreation areas. These areas also serve as a buffer between other land uses. Uses for these areas include hiking, walk-in hunting and fishing, and nature study. Lands required for ecological workshops and forums are also included in this allocation. Agricultural use is not permitted except on an interim basis to maintain open space and scenic values. Land management practices in these areas include prescribed fire, timber stand improvements, exotic control, wildlife clearings, succession mowing, and tree and prairie plantings.

4.2.5.2. Wildlife Management

Lands zoned in this category are continuously available for low-density recreational activities. Agricultural leases, and in some cases timber harvesting, are allowed to the extent practicable and compatible with other uses of the project. These activities generate revenue and maintain habitat conditions beneficial to wildlife. The Operational Management Plan (OMP) describes the general practices and techniques employed to implement a viable program for fish and wildlife at Lake Shelbyville. Lands on the northern end of the lake, managed by the Illinois Department of Natural Resources (IDNR), have been assigned to this land-use classification. Land management practices in these areas include prescribed fire, timber stand improvements, exotic species control, wildlife clearings, succession mowing, and tree and prairie plantings.

4.2.5.3. Vegetative Management

Management activities for these lands include protection and development of forest and vegetative cover and wetland restoration. All lands in government fee ownership are being managed to maintain their forest resources for recreation, wildlife, and scenic values. Land management practices in these areas include prescribed fire, timber stand improvements, exotic species control, wildlife clearings, succession mowing, and tree and prairie plantings. Timber will be harvested when required to achieve other management objectives such as wildlife habitat improvement. Specific resource use objectives and management practices are described in the Operational Management Plan on an area-by-area basis.

4.2.5.4. Inactive and/or Future Recreation Areas

These areas include those areas designated for future intensive recreation, or those lands that have been used for intensive recreation in the past and are now temporarily closed. When they recover or meet criteria for recreation use they will be opened or reopened for intensive recreation. Interim use should follow the

guidelines described for low-density recreation. No land at Lake Shelbyville is in this land classification.

4.2.6. Water Surface

The water at Lake Shelbyville is zoned into four units and are shown on Plates 9 and 10. They are described as follows:

4.2.6.1 Restricted

Water areas restricted for project operations, safety, and security purposes. An area of water around the upstream side of the spillway structure is signed and all public use is restricted in this area for safety and security reasons. The upstream side of the dam is buoyed and all public use is restricted as well. These areas are zoned as Project Operations Lands (OP-1) as part of the Main Dam. All beaches, an area around the Okaw Bluff levees and one cove behind the Maintenance Compound are also restricted to boat traffic.

4.2.6.2. Designated No-Wake

Waters restricted to wakeless speeds in order to protect environmentally sensitive shoreline areas, recreational water access areas from disturbance, and for public safety.

4.2.6.3. Fish and Wildlife Sanctuary

Annual or seasonal restrictions on areas to protect fish and wildlife species during periods of migration, resting, feeding, nesting, and/or spawning. Waterfowl sanctuaries are located on the Kaskaskia and Okaw Wildlife Units in State managed areas.

4.2.6.4. Open Recreation

Acreage of open lake waters is zoned for use by all legitimate forms of water recreation. The southern boundary is the main dam and the northern boundary is approximately 20 miles north of the main dam. Seaplane landing areas are only authorized in certain locations as described in the OMP.

4.3. Easement Lands

Use and management of easement lands is in accordance with the terms and conditions of the easement estate, which was acquired for the project. Easement lands at Lake Shelbyville are lands the Corps maintains the right to use including flowage and operational easements. Easement land maps will be added to the Master Plan as a supplement at a later date.

4.3.1. Flowage Easement

The Corps of Engineers holds an easement interest on 6,237 acres of land outside the fee boundary. Flowage easements give the government the right to flood lands that are generally below 630.5 NGVD. Flowage easements are managed under the St. Louis District Policy on Management of Flowage Easement Lands.

4.3.2. Operational Easement

Operational easements give the government access to its lands across private property. Lake Shelbyville operational easements account for only 2 acres for access to a wastewater treatment system at Opossum Creek.

Figure 11 – Land Classification

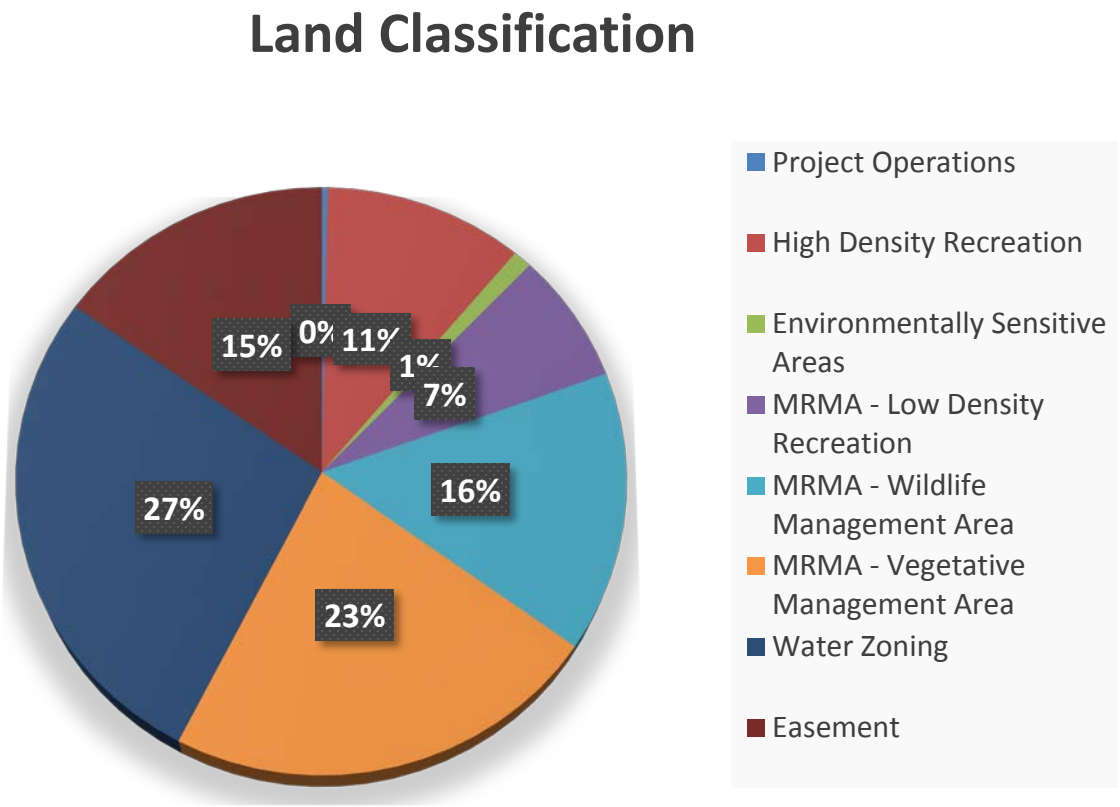


TABLE 11
COMPARTMENT LAND CLASSIFICATION DESIGNATIONS.

Project Operations	Recreation Areas	Low Density Recreation	Wildlife Management	Vegetative Management	Environmentally Sensitive Areas
Parts of 1, 5, 14, 20, 22, 41, 54, 61, 64	1, 6, 14, 20, 23, 27, 29, 32, 41, 49, 50, 51, 59, 61, 64	5, 18, 19, 21, 30, 31, 44, 46, 56, 59, 60	39, 53, 54	2, 3, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 22, 24, 25, 26, 28, 32, 33, 34, 35, 36, 37, 38, 40, 42, 43, 45, 47, 48, 49, 52, 55, 57, 58, 62, 63	4, 14, 32, 39, 44, 54

(Compartments may have more than one designation.)

LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED
SHELBYVILLE ILLLINOIS

CHAPTER 5 – RESOURCE PLAN

5.1. MANAGEMENT BY CLASSIFICATION AND JUSTIFICATION

Recreational development has generally proceeded as described in the original Master Plan. An analysis of the resources and use classifications of all lake lands and waters has been made with the objective to classify lands that provide an integration of appropriate land and water uses into a balanced plan. Land classifications are depicted on Plates 4 through 10.

5.1.1. Resource Objectives

General resource objectives are described in Chapter 3. These objectives cover operations, recreation and environmental lands mentioned below. Site specific objectives, if any, are described within each area.

5.1.2. Acreages

TABLE 12
LAND CLASSIFICATION ACREAGES

Land Classification	Acres	Total Acres
Project Operations		126
High Density Recreation		4,435
Environmentally Sensitive Areas		414
Multiple Resource Areas		18,509
Low Density Recreation	2,983	
Wildlife Area	6,286	
Vegetative Management	9,240	
Water Surface		11,100
Restricted	27	
No Wake	810	
Open Water	10,069	
Fish & Wildlife Sanctuary (seasonal, fall only)	194	
Easement		6,239
Operations	2	
Flowage	6,237	

5.1.3. Description of Use by Classification
Operations Lands

The following paragraphs provide a brief description of eleven areas classified as Project Operations Lands. A detailed description of project structures located on these lands is contained in the OMP. General site layout of the OP-1, OP-2, and OP-3 facilities is located on Plates 11 and 21. All area locations are described below:

TABLE 13
PROJECT OPERATIONS LANDS

Area Name	Area No.	Acres	Plate No.	Environmental Stewardship	Recreation
Main Dam & Outlet Works	OP-1	44	11	Minimal	Minimal
Project Administrative/Visitor Center Complex	OP-2	1	21	Minimal	Intensive
Maintenance Complex	OP-3	8	21	Minimal	Minimal
Lithia Springs Land Treatment Facility	OP-4	3	20	Minimal	Minimal
Opossum Creek Land Treatment Facility	OP-5	3	13	Minimal	Minimal
Whitley Creek Land Treatment Facility	OP-6	3	19	Minimal	Minimal
Wilborn Creek Sewage Treatment Facility	OP-7	1	16	Minimal	Minimal
Eagle Creek State Park	OP-8	4	30	Moderate	Moderate
Wolf Creek State Park	OP-9	6	31	Moderate	Moderate
Kaskaskia Biological Research Station Complex	OP-10	51	33	Minimal	Minimal
West Okaw WMA	OP-11	2	32	Intensive	Moderate

OP-1. Main Dam and Outlet Works (44 acres)
The main dam consists of a compacted earth fill embankment and a concrete spillway section with tainter and sluice gates. The crest of the dam embankment is at elevation 643 NGVD and the crest of the spillway is at elevation 593 NGVD. The dam is 3,025 feet in length and comprises approximately 44 acres. The length of the dam was measured from the road intersection where the Spillway East road meets the Dam Road to 300 feet west of the Dam West Overlook Cemetery parking lot. The spillway is 960 feet in length and comprises approximately 8.3

acres. The length of the spillway is measured from the dam concrete wall to the IL Route 16 Bridge. OP-1 is shown on Plate 11.

The road on the main dam offers an excellent view of the lake and is heavily used by the general public. Interpretive tours are conducted of the dam upon request from group organizations or schools. The spillway is an excellent area for the general public to enjoy bank fishing. The integrity of the main dam and security of the water control facilities must be maintained.
Proposed Actions:
Repaint bridge and other metal works. Special precaution needs to be taken during this process due to the presence of lead-based primer.

Construct a walkway/trail for pedestrian and bike traffic across the main dam outside of the guardrail on the east side of the dam that will connect with the Dacey Trail. This walkway/trail will be in accordance with the General Dacey Trail Master Plan.

OP-2. Project Administration Complex and Lake Shelbyville Visitor Center (1 acre)
This building, completed in 2010, contains the project's administrative office as well as the public visitor center. The administrative facility is located on the second floor of the building and contains office space, storage space, kitchen facilities, and file space. The first floor features a 1,544 square foot exhibit hall with space for rotating exhibits, auditorium with kitchen facilities for group use and a sales area operated by the Lake Volunteers Association. The building is a LEED Silver eligible building, utilizing energy efficient means where possible. OP-2 is shown on Plate 21.

OP-3. Maintenance Complex (8 acres)
Facilities in this area include equipment and material storage buildings, a compound large enough to securely store equipment, and maintenance work areas. One of the three trilateration stations that is used to monitor movement of the dam is located in this area. OP-3 is shown on Plate 21.

OP-4. Lithia Springs Land Treatment System (3 acres)
A land treatment system for wastewater disposal is located in the Lithia Springs Recreation Area. This facility occupies 3 acres on the eastern portion of this area, east of the main entrance of the Lithia Springs campground on the south side of the road. This area is shown on Plate 20.

Proposed Actions:
Connect wastewater treatment facilities and associated lift stations to the City of Shelbyville Force Main or turn the system over to the City. This will eliminate the land treatment system and/or the Corps of Engineers responsibility for maintaining land treatment facilities in this area, which will reduce Operation and Maintenance (O&M) costs and increase efficiency.

OP-5. Opossum Creek Land Treatment System (3 acres)
A land treatment system for wastewater disposal is located in the Opossum Creek Recreation Area and services the Opossum Creek, Coon Creek, and Lone Point Recreation Areas. This facility occupies 3 acres on the western portion of this area, west of the main entrance located down an access road on the north side of the road. This area is shown on Plate 13.

Proposed Actions:
Connect wastewater treatment facilities and all associated lift stations to the City of Shelbyville Force Main. This will eliminate this land treatment system and the Corps of Engineers responsibility for maintaining land treatment facilities in this area, which will reduce Operation and Maintenance (O&M) costs and increase efficiency.

OP-6. Whitley Creek Land Treatment System (3 acres)
An inactive land treatment system for wastewater disposal is located in the Whitley Creek Recreation Area. Facilities formally served by this treatment system have been connected to the City of Sullivan. This facility occupies 3 acres on the western portion of this area, west of the main entrance. This area is shown on Plate 19.

Proposed Actions:
Decommission, clean and remove treatment system in accordance with IEPA standards.

Renovate the land treatment system pond into a fish nursery pond.

OP-7. Wilborn Creek Wastewater Treatment System (1 acre)
An inactive treatment system for wastewater disposal is located in the Wilborn Creek Recreation Area. Facilities served by this treatment system have been connected to the City of Sullivan. This facility occupies approximately one acre in the central portion of this area, north of the Wilborn Creek Group Camp. This area is shown on Plate 16.

Proposed Actions:
Decommission, clean and remove the treatment system in accordance with IEPA standards.

OP-8. Eagle Creek State Park Office Complex (4 acres)
Within the confines of the Eagle Creek State Park, the Illinois Department of Natural Resources (IDNR) maintains an administration/maintenance building and a vehicle and equipment compound. The office building is the main headquarters for all daily operations at Eagle Creek State Park and is administered through the IDNR's Region III office in Clinton, Illinois. The Superintendent of Parks office is located in this building. The superintendent oversees Eagle Creek and Wolf Creek

State Parks, which are both located at Lake Shelbyville. This area is shown on Plate 30.

Proposed Actions:
The IDNR proposes update to existing sewer line running under the lake from Eagle Creek to Wolf Creek.

OP-9. Wolf Creek State Park Office Complex (6 acres)
Within the confines of the Wolf Creek State Park, the Illinois Department of Natural Resources (IDNR) maintains an administration/maintenance building, a Conservation Police law enforcement office, a vehicle and equipment compound, and a wastewater treatment system. The office building is the main headquarters for all daily operations at Wolf Creek State Park and is administered through the IDNR's Region III office in Clinton, Illinois. This area is shown on Plate 31.

OP-10. Kaskaskia Biological Research Station Office Complex (51 acres)
This office complex is located on the land that is at the south end of the Kaskaskia Wildlife Management Area. IDNR maintains this office complex and it is part of the Wolf Creek State Park lease to operate a field research facility. Several buildings are located in this area that include offices, laboratories, and support facilities. A general site layout of these facilities is located on Plate 33.

OP-11. West Okaw Wildlife Management Area (2 acres)
The Illinois Department of Natural Resources maintains an office complex at the West Okaw Unit of the State Wildlife Management Area. The area consists of an office building/maintenance compound with vehicle and equipment compound. The office is the headquarters for maintenance of the wildlife management area. A general layout of facilities is located on Plate 32.

Recreation Lands

A description of all recreation development at Lake Shelbyville is presented in this section. A total of fifteen areas are classified as Recreation Lands. A summarization of development, including existing facilities and proposed actions are listed for each recreation area. The following sub-paragraphs describe recreation areas at Lake Shelbyville as shown on Plate 6. The individual recreation area plates are noted in the sub-paragraphs.

Primary boat ramps at Lake Shelbyville were constructed in 1970 based on proposed use criteria and standards that accommodated the average boat and trailer size for that time period. According to current Corps of Engineers Recreation Facilities and Customer Services Standards, EM-1110-1-400, a boat ramp is required to have a minimum of two launch lanes, with a minimum boat ramp launch lane width of 15 feet. A courtesy dock with a minimum width of six feet and a minimum length of 20 feet is also required. By these standards a four-lane boat ramp should be 66 wide. The four-lane ramps at Lake Shelbyville are only 58 feet wide, 8 feet short of meeting today's standards.

Each boat ramp has a portable courtesy dock per Corps standard, which takes up at least one lane at each ramp. Due to the size of boats and courtesy dock placement a four-lane boat ramp is only operational as a three-lane ramp and a two-lane boat ramp is only operational as a one-lane ramp. EM 1110-1-400 also requires that a boat ramp have a minimum of two launch lanes. Most primary boat ramps must be expanded in some way to accommodate courtesy docks. This will relieve congestion at ramps on busy summer days. An upgrade is proposed for each recreation area with a substandard primary boat ramp.

Currently, the northern portion of the lake has two two-lane high water boat ramps, located at Bo Wood and Wilborn Creek Recreation Areas. Courtesy dock placement reduces the two-lane ramps to one usable lane. When lake levels are between 610 and 614, these two ramps accommodate all activity from Bo Wood, Wilborn Creek, and Whitley Creek Recreation Areas, Sullivan Marina and Campground, Okaw Bluff Group Camp, and all minor access areas on the northern portion of the lake. During this time, Bo Wood and Wilborn Creek boat ramps become heavily congested and launch waiting time can be up to two hours.

The Wilborn Creek boat ramp parking lot becomes impacted when the lake level reaches 610.10 and at 615.90, the lot is completely submerged. Because the high water ramp uses the same parking lot, public health and safety are affected while there is water on the lot. The Wilborn high water ramp closes at 615.90 and the single useable launching lane within Bo Wood Recreation Area serves the entire northern portion of the lake. Congestion and launch waiting time at the Bo Wood ramp increases and at

times becomes unmanageable. Parking at the Bo Wood boat ramp area includes 49 vehicle towing trailer spaces and 91 individual vehicle spaces. Two individual vehicle spaces can accommodate a trailer and tow vehicle. When the only ramp open on the northern portion of the lake is the one at Bo Wood, all of the spaces fill quickly and vehicles park along the road and on the grass within the picnic area. Proposed remedies are outlined below.

TABLE 14
PROJECT RECREATION LANDS

Area Name	Area No.	Acres	Plate No.	Environmental Stewardship	Recreation
Dam West Recreation Area	1	182	12	Minimal	Intensive
Opossum Creek Recreation Area	2	133	13	Minimal	Intensive
Coon Creek Recreation Area	3	223	14	Minimal	Intensive
Lone Point Recreation Area	4	147	15	Minimal	Intensive
Wilborn Creek Recreation Area	5	209	16	Moderate	Intensive
Forrest W. ”Bo” Wood Recreation Area	6	182	17	Minimal	Intensive
Sullivan Beach and Okaw Bluff Group Camp	7	150	18	Moderate	Intensive
Whitley Creek Recreation Area	8	51	19	Moderate	Moderate
Lithia Springs Recreation Area and Lithia Springs Marina	9	194	20,36	Minimal	Intensive
Dam East Recreation Area	10	72	21	Minimal	Intensive
Spillway Recreation Area	11	18	21	Minimal	Intensive
Eagle Creek State Park	12	1,162	30	Moderate	Intensive
Wolf Creek State Park	13	1,590	31	Moderate	Intensive
Findlay Marina	14	50	34	Minimal	Intensive
Sullivan Marina and Campground	15	72	35	Minimal	Intensive

Area 1. Dam West Recreation Area

This 182-acre area has been developed as a day-use area. Facilities in this area include 48 picnic units, 4 group picnic shelters, 2 playground areas (one of the playground areas is accessible to those with disabilities), 1 fish cleaning station, 6 drinking fountains, 1 boat ramp with four launch lanes, 1 two-lane high water boat ramp with parking lots, 1 large beach with bathhouse; 1 outdoor beach shower; 1 multipurpose trail; 9 bench shelters; 2 lift stations; 1 fee booth; 6 information boards; 1 sand volleyball court; 4 waterborne comfort stations (1 with an overlook canopy and 2 attached to group shelters), 3 full hook-up volunteer campsites; a one-acre pond and a warning siren for severe weather. This area also contains a portion of the General Dacey Trail with exercise stations along the trail. One of the three trilateration stations that are used to monitor movement of the dam is located in this area. All facilities within this recreation area are shown on Plate 12.

Stabilization of parts of the shoreline, removal and replacement of a picnic shelter and related parking facilities from Opossum Creek Recreation Area have been completed as part of the Shoreline Erosion Management Plan.

Proposed Actions:

Construct a Fish Nursery Pond in the area between the primary boat ramp parking lot and the high water boat ramp parking lot near the lake. The Illinois Department of Natural Resources (IDNR) has determined that thirty to forty surface acres of nursery ponds are needed to supplement existing fisheries management efforts on Lake Shelbyville. These ponds are critical to ensuring viable fisheries for the future as the natural habitat needed for production and rearing continues to decline due to siltation and flood damage reduction operations. This pond will be used as a means to meet supplementation goals and provide a visible interpretative tool for wetlands and fisheries management at Lake Shelbyville. Working with the IDNR, funding for the project will be sought through the Continuing Authorities Program, Challenge Cost Share Partnership Agreements, and/or donations.

Dam West Recreation Area is the busiest day-use recreation area at Lake Shelbyville. This area is heavily congested due to use by both the general public and fishing tournament participants, especially on the weekends from Memorial Day to Labor Day. Congestion is exacerbated by insufficient launch lanes. Propose investigating expansion of boat ramp as well as reviewing traffic flow and boat ramp congestion to determine plan of action.

Widen high water ramp to accommodate courtesy dock to bring ramp up to standard and lengthen ramp to allow better transition between normal pool and high water

Area 2. Opossum Creek Recreation Area
This 133-acre area has been developed for day-use and camping opportunities. Facilities in this area include 70 campsites (all campsites have electric hookups, 12 are full hook-up sites; 1 double site and 17 tent sites), 1 medium shower house; 2 comfort stations; 2 drinking fountains; 1 four-lane boat ramp with courtesy dock; 1 two-lane high water boat launching ramp with courtesy dock; 1 fish cleaning station; a one-acre pond with fishing pier and parking lot that is designed for people with disabilities; 1 trailer dump station; 1 wastewater land treatment system; 1 lift station; 1 fee booth; 2 information boards; 1 amphitheater; 1 set of horseshoe pits and 1 playground. All facilities within this recreation area are shown on Plate13.

Proposed Actions:
Develop a hiking trail or 3D archery range from the fishing pond to the boat ramp.

Connect to City of Shelbyville Force Main and Eliminate Land Treatment Facility. This would eliminate the Corps of Engineers responsibility for maintaining and operating this facility.

Widen high water ramp to accommodate courtesy dock to bring ramp up to standard and lengthen ramp to allow better transition between normal pool and high water.

Area 3. Coon Creek Recreation Area
This 223-acre area has been developed for camping opportunities. Facilities in this area include 183 campsites all of which have electrical service (21 campsites have electric, water, and sewer hook-ups, 13 campsites are double sites, and 4 campsites are administrative sites). In addition, there is 1 two-lane boat launching ramp with courtesy dock, 1 two-lane high water ramp with courtesy dock, 1 beach, 1 nature trail, 1 shower building with laundry facilities, 3 comfort stations with add-on showers, 10 comfort stations, 29 fountain/hydrants, 1 trailer dump station, 1 fish cleaning station, 1 playground, 1 swing set area, 1 sand volleyball court, 2 horseshoe pits, 1 outdoor beach shower, 5 lift stations, 1 fee booth, 3 information boards, and 1 amphitheater. All of the facilities within this recreation area are shown on Plate 14.

Proposed Actions:
Connect to City of Shelbyville Force Main and eliminate the Land Treatment Facility at Opossum Creek, which services this area.

Renovate primary boat launching ramp to accommodate courtesy dock so that two launching lanes can be utilized.

Widen high water ramp to accommodate courtesy dock to bring ramp up to Corps standard.

Area 4. Lone Point Recreation Area
This 147-acre area has been developed for day-use and camping opportunities. Facilities in this area include 79 total campsites, 10 campsites in one group use area, and 2 picnic sites. In addition there are 2 picnic shelters, 3 waterborne comfort stations, 1 shower building, 7 fountain/hydrants, 1 trailer dump station, 1 fish cleaning station, 1 two-lane boat launching ramp with courtesy dock, 1 two-lane high water boat ramp with courtesy dock, 1 amphitheater, 1 horseshoe pit, 1 lift station, 1 fee booth, 1 backpacking trail, 1 foot bridge, 4 information stations, 2 picnic sites, 1 amphitheater, 1 swing set area, and 1 playground. All facilities within this recreation area are shown on Plate 15.

Proposed Actions:
Connect to City of Shelbyville Force Main and eliminate the Land Treatment Facility at Opossum Creek, which services this area.

Renovate primary boat launching ramp to accommodate courtesy dock so that two launching lanes can be utilized.

Widen high water ramp to accommodate courtesy dock and bring ramp up to Corps standard.

Comfort station #3 has been removed from the main campground area and will be replaced with a mini-shower building within Walleye Group Camp. For public health and safety reasons the replacement building will be located within the group camp for those visitors that do not have access to the facilities within the main campground. Combining this proposed action with the existing facilities, which includes a group picnic shelter and 10 campsites with electricity, will increase utilization.

Add a trailer dump station near the boat ramp for the group camp users.

Remove campsites 56, 55, and 54 and convert area into walk-in tent area with electrical service. Shoreline erosion will eventually cut into the roadway, making access to those three sites unavailable. Options may include moving campsites, armoring shoreline or decommissioning campsites. The cost to place rip rap along the shoreline exceeds the benefit of protecting these three sites at this time.

Area 5. Wilborn Creek Recreation Area
This 209-acre area is a day-use and group camp area. Facilities in this area include 1 beach, 1 four-lane boat launching ramp with courtesy dock, 1 two-lane high water boat launching ramp with courtesy dock, 1 playground, 24 picnic units, 5 fountain/hydrants, 1 bath house, 2 comfort stations, a group camp with 15 campsites, 6 tents sites near the beach, 1 lift station, 4 information boards, 1 horseshoe pit, 1 outdoor beach shower, and 1 fish cleaning station. All of the facilities within this recreation area are shown on Plate 16.

Proposed Actions:
Renovate group camp area

Renovate primary boat launching ramp to accommodate courtesy dock so that four launching lanes can be utilized.

Widen high water ramp to accommodate courtesy dock to bring ramp up to Corps standard and lengthen ramp to allow easier transition between normal pool and high water.

Area 6. Forrest W. "Bo" Wood Recreation Area
This 182-acre area has been developed for both day-use and camping opportunities. Currently, the area has 144 total campsites, 54 sites with full hook-up, 7 picnic units, 1 four-lane boat launching ramp with courtesy dock, 1 two-lane high water launching ramp with courtesy dock, 1 shower building with laundry facilities, 2 shower buildings with no laundry facilities, 3 waterborne comfort stations, 11 fountains/hydrants, 1 picnic shelter, 1 playground, 2 trailer dump stations, 1 fish cleaning station, 3 lift stations, 1 fee booth, 1 horseshoe pit, 5 information boards, and 1 amphitheater. All of the facilities within this recreation area are shown on Plate 17.

Proposed Actions:
Renovate primary boat launching ramp to accommodate courtesy dock so four launching lanes can be utilized.

Widen high water ramp to accommodate courtesy dock to bring ramp up to Corps standard.

Construct dog freedom park for pet owners to give their dogs an enclosed area to exercise off leash.

Area 7. Sullivan Beach Recreation Area and Okaw Bluff Group Camp
This 150-acre area serves three separate and distinct recreation functions, day-use, group camping and fishing/hunting. There are 51 acres in the Sullivan Beach area and 99 acres in the Okaw Bluff Group Camp area. The Sullivan Beach Recreation Area has been developed for day-use opportunities. Facilities in this area include 1 swimming beach, 1 shower house, 1 playground, 2 fountains/hydrants, 15 picnic sites, 1 picnic shelter, 1 lift station, 2 information boards, and 1 outdoor beach shower. The Okaw Bluff Group Camp Area has been developed for day-use and group camping opportunities. Facilities in this area include 2 group camp areas, which includes 2 houses with dormitory and meeting room facilities; 1 administrative campsite, 1 nature trail, 1 hunter-fisherman access parking area, 1 equipment storage area, 37 acres of developed wetlands (classified low density recreation), 1 information board, 10 observation blinds, 1

observation platform, 1 lift station, and 1 set of horseshoe pits. Hidden Pond and Bruce West hunter/fisherman parking lot and minor boat access are also located in this area. All facilities within this recreation area are shown on Plate 18.

Proposed Actions:
Replace group camp houses with enclosed universally accessible multipurpose group shelters and mini-shower buildings in an area outside erosion limits.

Area 8. Whitley Creek Recreation Area
This 51-acre area is designated for picnicking and boat launching. The campground portion of the recreation area is closed, campsites consolidated with Bo Wood. Remaining open are 1 fish cleaning station, 1 comfort station, 1 fountain/hydrant, 1 information board, 1 lift station, 2 picnic sites, and a four-lane boat launching ramp with a courtesy dock. All of the facilities within this area are shown on Plate 19.

Proposed Actions:
Construct a four-lane high water ramp. This would alleviate congestion and launch waiting times that occur within the Bo Wood and Wilborn Creek Recreation Areas at high pool levels. Before the high water ramp is constructed within the Whitley Creek Recreation Area options of consolidating the primary ramp with the high water ramp will be investigated to reduce operation and maintenance costs.

Renovate primary boat launching ramp to accommodate courtesy dock so that four launching lanes can be utilized.

Area 9. Lithia Springs Recreation Area and Marina
This 194-acre site has been developed as a multipurpose area offering facilities to boaters, campers, and picnickers. Approximately, 69 acres of this area are leased to a marina concessionaire. Current marina lease period is 1 April 2015 to 31 March 2040. Corps facilities in this area include 1 two-lane boat launching ramp with courtesy dock, a two-lane high water boat ramp with courtesy dock, 112 campsites with electric hook-ups, 12 full hookup sites, 1 beach inside the campground, 1 outdoor beach shower, 1 shower building with laundry, 2 shower buildings, 6 waterborne comfort stations, 16 fountain/hydrants, 1 trailer dump station, 1 fish cleaning station, 1 playground, 1 fee booth, 3 information boards, 1 horseshoe pit, 3 lift stations, and one amphitheater. One of the three trilateration stations that are used to monitor movement of the dam is located in this area. Marina facilities in this area include 337 wet boat slips (325 permanent and 12 transient), 1 restaurant, gas and convenience store sales area, 1 office, boat sales and maintenance area, 3 waterborne comfort stations, 5 picnic sites, and 3 information boards. All facilities within this recreation area are shown on Plates 20 and 36.

Three types of visitors, day-users, campground users, and marina users, utilize the boat ramp facilities within Lithia Springs Recreation Area. The boat ramp facilities that are maintained by the Corps of Engineers within this area include a two-lane primary ramp, two-lane high water ramp, and a parking lot that has twenty-one individual vehicle spaces and forty-six vehicle towing trailer spaces. The Lithia Springs Marina facilities, which are maintained by a private concessionaire, are on both sides of the boat ramp.

Parking and boat launching congestion problems exist for both the Corps of Engineers and the marina because there are not enough parking spaces and launching lanes to accommodate the number and types of users. Due to lack of parking and other circumstances, day-users utilize the marina parking lots and marina slip renters utilize the day-use boat ramp parking lot.

Proposed Actions:
Replace day use area comfort station with a new pre-fabricated comfort station closer to the fish cleaning station.

Picnic shelter has been removed. Replace it with a shelter of historical design over the springs that are located within Lithia Springs Chautauqua Area.

Connect to the City of Shelbyville Force Main, which will eliminate the Land Treatment Plant in this area or turn facility over to City and eliminate the Corps of Engineers responsibility for maintaining and operating this facility.

Renovate and expand existing boat ramp and marina parking lots to separate users, alleviate congestion, and increase utilization.

Renovate primary boat launching ramp to accommodate courtesy dock so that two launching lanes can be utilized. This will alleviate delays in launching due to the small size and to both the marina and the public utilizing the ramp at the same time.

Widen high water ramp to accommodate courtesy dock to bring ramp up to Corps standard.

As customer demand and feasibility dictates, campground expansion can include additional campsites, replacing those removed from Opossum Creek and Lone Point Campgrounds due to erosion or poor location.

The Lithia Springs area may be available as a possible resort location. Land allocated for recreation in this area has not been fully developed. There is enough land and infrastructure available to potentially support resort-type development. A market and feasibility study will determine the viability of this project.

Area 10. Dam East Recreation Area
This 72-acre area has been developed as a day-use area. Project operation lands are also located in this area. Facilities in this area include the Administration/Visitor Center Complex, Maintenance Complex, 1 butterfly house and garden, 25 picnic sites, 1 playground, 1 waterborne comfort station, 1 picnic shelter, 5 fountains/hydrants, 1 lift station, 1 foot bridge, 4 information boards, 1 hiking/biking trail and 1 set of horseshoe pits. The facilities within this area are shown on Plate 21.

Proposed Actions:
It is estimated in the timeframe from 2018 to 2023 a portion of the maintenance complex access road, which also serves one of the three trilateration stations will be impacted due to the effects of shoreline erosion. As part of the Shoreline Erosion Management Plan provide shoreline revetment around maintenance area to protect access to the facility. If revetment is not possible an easement or purchase of private land will be necessary to ensure access to this area.

Area 11. Spillway Recreation Area
This 18-acre area was developed for day-use opportunities. Facilities within this area include 15 picnic sites, 2 picnic shelters, 1 playground, 1 fish cleaning station, 1 universal accessible fishing pier, 3 waterborne comfort stations (one is attached to a picnic shelter), 5 fountains/hydrants, 2 bench shelters, 2 lift stations, 1 minor boat launch area, 1 hiking/biking trail, and 4 information boards. Shoreline fishing opportunity is the primary attraction to this area. Facilities within this area are shown on Plate 21.

Proposed Actions:
Reconfigure the entire area. Consolidate or move the East side pavilion to a central location. Install new sidewalks to improve access. Install light poles along the spillway to provide better lighting for fishermen and improve security of the parking areas.

Area 12. Eagle Creek State Park
This 1,162-acre area is operated and managed by the Illinois Department of Natural Resources (IDNR). Existing facilities within this area include 151 Class A campsites, 26 non-electric tent sites, 3 group camp sites, 2 picnic sites, 4 picnic shelters, 29 water fountains and/or hydrants, 1 trailer dump station, 1 four-lane boat ramp with courtesy dock, 1 two-lane high water boat ramp with courtesy dock, 14 vault toilets, 5 hiking trails, 1 cross country ski trail, 1 fish cleaning station, 1 shower building, 6 lift stations, 1 fee booth, 9 foot bridges, 4 information boards, 1 observation platform, and 1 playground. A portion of the Chief Illini Trail is located in this area. Through a sublease agreement between the IDNR and a private developer, a major resort lodge with golf course has been constructed. Shoreline Erosion Management Plan work has been completed in this area and includes

protecting the facilities threatened by shoreline erosion in the resort area. Facilities within this area are shown on Plate 30.

Proposed Actions:
Conduct Eagle Creek Resort and Conference Center assessment.

Upgrade lift stations and replace sewer system – increase septic tank capacity at Eagle Creek Resort, increase capacity of two lift stations and install sewer line under Lake Shelbyville to Wolf Creek State Park.

Construct cabin complex. Each cabin could provide indoor living space and a covered porch. Project will also include associated access roads, parking, water, electricity and sewage disposal system. A wood burning stove may be provided for supplemental heating.

Enhance/develop five-acre wetland.

Area 13. Wolf Creek State Park
This 1,590-acre area is operated and managed by the Illinois Department of Natural Resources (IDNR). The only equestrian trail that exists at Lake Shelbyville is in this recreation area. Facilities within this area include 309 campsites, which includes 18 equestrian campsites and 34 tent sites, 10 group camp sites that will accommodate up to 300 campers, 5 picnic sites, 42 water fountains and/or water hydrants, 3 picnic shelters, 1 trailer dump station, 1 four-lane boat ramp, 1 two-lane high water boat ramp, 1 campground cabin, 40 vault toilets, 7 hiking trails, 1 equestrian / snowmobile trail, 2 shower houses, 1 fish cleaning station, 1 amphitheater, 3 playground sets, 1 horse riding stable facility, 1 swimming beach, 1 land treatment system, 3 lift stations, 1 campground fee booth, 7 foot bridges, 4 information boards, and 2 observation platforms. The Shoreline Erosion Management Plan work that has been completed in this area includes protecting the boat launch access road. Facilities within this area are shown on Plate 31.

Proposed Actions:
Sewer Line Replacement – replace sewer line under the lake from Eagle Creek State Park to Wolf Creek State Park.

Area 14. Findlay Marina
This 50-acre area is leased to a concessionaire who provides a full line of marina services. Current lease is 1 April 2015 to 31 March 2040. Facilities within this area includes 333 wet boat slips, 1 marine sales and service area, office, gas and convenience store sales area, 1 vault comfort station, 1 two-lane boat launching ramp (this primary ramp can also be used during high water), 1 information board, and 1 picnic shelter. Facilities within this area are shown on Plate 34.

Proposed Actions:
Connect waterborne facilities to Village of Findlay sewer system. The expansion of the marina is hindered and will remain hindered unless the wastewater treatment capabilities are increased. Wastewater storage tanks are currently being used and must be emptied frequently during the recreation season. The tanks may be inundated during some periods of high water and become potential environmental hazards.

Area 15. Sullivan Marina and Campground
This 72-acre area, under lease to the Sullivan Marina and Campground, is currently leased from 1 March 1995 to 28 February 2040. The lease area consists of a campground and marina concession. Facilities include 142 boat slips, 195 campsites, 1 swimming pool, 1 restaurant, 2 lodging units, 1 one-lane boat ramp, 1 trailer dump station, 1 playground, 1 shower, laundry, and office facility, 1 gas sales area, 1 sand volleyball court, 1 information board, 1 set of horseshoe pits, and 1 lift station that the Corps of Engineers maintains. A site plan of current operations is shown on Plate 35.

Proposed Actions:
Expand marina operations into Compartment 50 across State Highway 32.

TABLE 15
TABLE OF RECREATION FACILITIES

RECREATION FACILITY	Dam West Area 1	Opossum Creek Area 2	Coon Creek Area 3	Lone Point Area 4	Wilborn Creek Area 7	Bo Wood Area 8	Sullivan Beach Area 10	Okaw Bluff Area 10	Whitley Creek Area 11	Lithia Springs Area 13	Dam East Area 14	Spillway Area 15	Outlying Areas	Corps Total	Eagle Creek State Park Area 5	Wolf Creek State Park Area 12	Lake Shelbyville Wildlife Mgmt. Areas WM-1 & WM-2	State Total	Findlay Marina Area 6	Sullivan Marina & Campground Area 9	Lithia Springs Marina Area 13	Private concessionaire Total	Grand Total
Public Campsites																							
Sub Category – Campsite Type																							
Single		64	167	75	21	133				104				564	174	309		483		195		195	1242
Double		1	13			4				2				20				0				0	20
Total Public Campsites		65	180	75	21	137				106				584	174	309		483		195		195	1262
Sub Category – Campsite Services																							
Campsite Electric		52	155	70		83				90				450	148	275		423		53		53	926
Campsite (Electric, Water, and Sewer)		13	25	4		54				16				112				0		142		142	254
Campsite Non-electric				1	21									22	26	34		60					82
Total Public Campsites		65	180	75	21	137				106				584	174	309		483		195		195	1262
Total Administrative Campsites (Gate Attendant & Volunteer Sites)	3	5	4	4		7		1		4				28	3	4		7				0	35
Group Camp				1	1			2						4	3	10		13				0	17
Cabin House								2						2				0				0	2
Multi-purpose Group Shelter														0				0				0	0
Mini Shelter														0				0				0	0
Cabin														0		1		1				0	1
Picnic Units	48			2	24	7	15		2		25	15	2	140	2	5	4	11			5	5	156
Group Picnic Shelters	4			2		1	1				1	2	1	12	4	3		7	1			1	20
Bench Shelter	9											2		11				0				0	11
Comfort Station (Vault)													1	1	14	40		54	1			1	56
Comfort Station (Waterborne)	4	2	10	3	2	3			1	6	1	3		35				0			3	3	38
Comfort Station/Showers			3			2				2				7									7
Shower House	1	1	1	1	1	1	1			1				8	1	2		3		1		1	12
Laundry Facility			1			1				1				3				0		1		1	4
Land Treatment System		1								1				2		1		1				0	3
Lift Station	2	1	5	1	1	3	1	1	1	3	1	2		22	6	3		9				0	31
Fountain and/or Hydrant	6	6	29	7	5	11	2		9	16	5	5	1	102	29	42		71				0	173
Trailer Dump Station		1	1	1		2				1				6	1	1		2		1		1	9
Fish Cleaning Station	1	1	1	1	1	1			1	1		1		9	1	1		2				0	11
Fee Booth	1	1	1	1		1				1				6	1	1		2				0	8
Primary Boat Ramp Launch Lanes	4	4	2	2	4	4			4	2				26	4	4		8	2	1		3	37
Minor Boat Ramp Launch Area												1	5	6			5	5				0	11
High Water Boat Ramp Launch Lanes	2	2	2	2	2	2				2				14	2	2		4	2			2	20
Swimming Beach	1		1		1		1			1				5		1		1				0	6
Outdoor Beach Shower	1		1		1		1			1				5				0				0	5
Trail	1		1	1				1			1	1	4	10	5	7	1	13				0	23
Foot Bridge				1							1		20	22	9	7	5	21				0	43
Information Board	6	2	3	4	4	5	2	1	1	3	4	4	5	44	4	4	2	10	1	1	3	5	59
Overlook	1													1				0				0	1
Fishing Pier		1										1	1	3			1	1				0	4

TABLE 15 (cont'd)

RECREATION FACILITY	Dam West Area 1	Opossum Creek Area 2	Coon Creek Area 3	Lone Point Area 4	Wilborn Creek Area 7	Bo Wood Area 8	Sullivan Beach Area 10	Okaw Bluff Area 10	Whitley Creek Area 11	Lithia Springs Area 13	Dam East Area 14	Spillway Area 15	Outlying Areas	Corps Total	Eagle Creek State Park Area 5	Wolf Creek State Park Area 12	Lake Shelbyville Wildlife Mgmt. Areas WM-1 & WM-2	State Total	Findlay Marina Area 6	Sullivan Marina & Campground Area 9	Lithia Springs Marina Area 13	Private concessionaire Total	Grand Total
Fishing Pond	1	1											15	17			5	5					22
Observation Blinds								10						10			3	3				0	13
Observation Platform								1						1	1	2	3	6				0	7
Playground	2	1	1	1	1	1	1			1	1	1		11	1	3		4		1		1	16
Swing Set Area			1	1										2				0				0	2
Sand Volleyball Court	1		1											2				0		1		1	3
Horseshoe Pits		1	2	1	1	1		1		1	1			9				0		1		1	10
Ice Skating Rink														0				0				0	0
Amphitheater		1	1	1		1				1				5		1		1				0	6
Visitor Center											1			1				0				0	1
Marina														0				0	1	1	1	3	3
Boat Slips (Wet)														0				0	333	142	337	865	812
Restaurant														0				0		1	1	2	2
Swimming Pool														0				0		1		1	1
Lodge/Rental Room Facility														0				0		2		2	2
Golf Course														0	1			1				0	1
Warning Siren	1													1				0					1
Horse Riding Stable														0		1		1					1

Environmentally Sensitive Areas

TABLE 16
ENVIRONMENTALLY SENSITIVE AREAS

Area Name	Area No.	Acres	Plate	Environmental Stewardship	Recreation
Pogue Timber	ES-E-1	34	7	Intensive	Minimal
Lithia Springs Chautauqua	ES-C-2	314	7, 22	Intensive	Moderate
Okaw & Doctor's Island Historic Area	ES-C-3	16	7	Moderate	Minimal
West Okaw Biologically Significant Stream	ES-E-4	43	7, 32	Intensive	Minimal
Coneflower Hill Prairie	ES-E-5	5	7, 33	Intensive	Minimal
Capel Hill Prairie	ES-E-6	2	7, 31	Intensive	Minimal

Because of their historic, cultural or biologic significance lands classified as Environmentally Sensitive Areas are listed separately. The following areas with two sub categories are listed below:

ES-E: Environmentally Sensitive Area – Ecological

ES-C: Environmentally Sensitive Area – Cultural

ES-E-1. Pogue Timber Environmentally Sensitive Area (34 Acres)
The site, also known as Sullivan Woods, contains climax oak-hickory forest, with many trees in the mature size class (24-36" diameter). This is by far the finest stand of climax forest in the vicinity of Lake Shelbyville in Central Illinois. The IDNR has listed this area in the State's Illinois Natural Area Inventory (INAI). The protective designation is a statement of rarity on a statewide basis and on the need for preservation of those natural qualities for the enjoyment of future generations. A site plan of Pogue Timber can be found on Plate 7.

ES-C-2. Lithia Springs Chautauqua Environmental Sensitive Area (314 Acres)
This area generally consists of oak-hickory forest on the uplands with some open field areas on the ridge tops. The lowland areas near the bridge support only pioneer vegetation and are frequently flooded. Lithia Creek is located within the eastern section of the area. The historical area, which is a National Register of Historic Places eligible site, is also located in the eastern portion. This area was utilized as a "religious retreat" in the early 1900's and some remnants of the old buildings and structures are still evident. The terrain is generally rugged and autumn olive has taken over most open field borders adjacent to private land.

Lithia Bridge and Chautauqua hunter-fisherman parking lots are located in this area. A site plan of this area is provided on Plates 7 and 22.

Efforts will be made to have this area listed on the National Register of Historic Places.

Proposed Action:
Construct shelter of matching historical design of original shelter over the springs

ES-C-3. Okaw and Doctor's Island Historic Area (16 acres)
This area includes two islands that have historic significance. The northernmost island, Okaw Island, has had some significant purposes identified by the University of Illinois. Doctor's Island, the southernmost of the two islands, also has significant purposes. Because of the close proximity of the two sites and similarities discovered it is believed that there is a definite cultural association between the two islands. A site plan of this area is provided on Plate 7.

ES-E-4. West Okaw Biological Significant Stream (43 acres)
A portion of the West Okaw River in the Wildlife Management Area is classified as a Cat. VI biologically significant stream in the IDNR's INAI. *(Illinois Department of Natural Resources, 2015)* This category is characterized as having unusual concentrations of flora or fauna and high quality streams. The great diversity of plants and animals is a good indicator of the quality of the river in this area. A site plan is provided on Plates 7 and 32.

ES-E-5. Coneflower Hill Prairie (5 acres)
The Coneflower Hill Prairie, located at the south edge of the Kaskaskia Unit in the State managed wildlife area, is a high quality prairie remnant intensively managed by IDNR. Many of these hill prairies were overlooked as they were often too steep to farm. Coneflower Hill Prairie plan can be found on Plates 7 and 33.

ES-E-6. Capel Hill Prairie (2 acres)
This prairie, located within Wolf Creek State Park along the shoreline, is another remnant prairie in an area that was overlooked by farmers. This small prairie is a high quality natural community that is suffering from severe erosion. A plan showing Capel Hill Prairie is shown on Plates 7 and 31.

Proposed Action:
Protect the remaining portion of the prairie as this is a significant, high quality area listed in the INAI.

Multiple Resource Management Lands

The following areas have been classified as Multiple Resource Management Lands, and are managed for one or more of the following activities: Recreation – Low Density; Wildlife Management – General, Vegetative Management; and Environmental Sensitive. These areas are illustrated on Plate 8, and described below.

TABLE 17
MULTIPLE RESOURCE MANAGEMENT LANDS

Area Name	Area No.	Acres	Plate No.	Environmental Stewardship	Recreation
Arrowhead MRA	LD-1	278	8, 23	Moderate	Moderate
Chief Illini MRA	LD-2	648	8, 23	Moderate	Moderate
Camp Camfield MRA	LD-3	443	8, 24	Intensive	Moderate
Woods Lake MRA	LD-4	201	8, 25	Intensive	Moderate
Adams MRA	LD-5	196	8, 26	Moderate	Minimal
Big Red's Timber MRA	LD-6	250	8, 27	Moderate	Moderate
West Okaw WMA	WM-1	2,872	8, 32	Intensive	Moderate
Kaskaskia WMA	WM-2	3,414	8, 33	Intensive	Moderate
Johnson's Bluff MRA	VM-1	212	8, 28	Moderate	Minimal
Whitley Creek Bottoms MRA	VM-2	698	8, 29	Moderate	Minimal
All Other Undesignated	LD & VM	9,297	4	Intensive	Minimal

Low Density Recreation Areas

LD-1. Arrowhead Multiple Resource Area (278 acres)
This area consists of a narrow band of timbered land, interlaced with numerous coves and ravines protruding to the government fee line. Several large white oaks in the 12" to 16" DBH (Diameter at Breast Height) class are found near the top of the ravines. Most of the oak-hickory association found in the western half of the area is in the pole stage (6" DBH) to slightly smaller. Den trees appear to be

adequate and numerous leaf nests exist. Locust, hawthorn, coralberry and multiflora rose are the dominant ground species. An unimproved, secondary road extends to the government fee line near the center of the area, southward, to the lakeshore. Arrowhead Road hunter/fisherman parking lot and a portion of the Chief Illini backpacking trail exist in this area. The trail has been realigned away from the shoreline and ravine crossings reduced, making the trail safer for visitors. An Adirondack-style shelter is located along the trail in this area. This area is used for such things as hunting, hiking, and watchable wildlife program purposes. Arrowhead Multiple Resource Area can be found on Plates 8 and 23.

LD-2. Chief Illini Multiple Resource Area (648 Acres)
This area contains heavily forested land with a scattering of grass-covered openings. Controlled burning, limited forest management practices for resource improvement, and supplemental nesting boxes are techniques utilized by the Corps of Engineers in this area to improve habitat for forest wildlife species. A portion of the Chief Illini backpacking trail is located in this area. The trail has been realigned away from the shoreline reducing the need to cross ravines and reducing the overall slope of the trail to better accommodate lake visitors. Eagle Cove and Mahoney hunter/fisherman parking lots are located in this area. This area is used for such things as hunting, hiking, and watchable wildlife program purposes. This area is shown on Plates 8 and 23.

LD-3. Camp Camfield Multiple Resource Area (443 acres)
All of the area lying south of the township road in this area, approximately 226 acres of the 443 acres, has been designated as the Camp Camfield Environmental Study Area. The area is very diverse. A large demonstration prairie plot consisting of 11 acres is located within the study area. An oak-hickory timber association is present throughout the area, in various stages of succession. Lowe Pond is located in this area. This area also includes a trail system, 1 hunter/fisherman parking lot, 1 gravel entrance road, 1 vault comfort station, 1 picnic shelter with storage room attached, 1 picnic area, 1 stage area, 3 information boards, 3 foot bridges, and 2 fire rings. The Youth Conservation Corps (YCC) originally created the trail system in this area in 1978 and 1979, which is designated as a National Recreation Trail. Through a Challenge Partnership Agreement with the Corps of Engineers, the Central Illinois Mountain Bicycling Association (CIMBA) began converting the 7 miles of trails to multipurpose use in 2001. The portion of the area lying north of the township road is primarily timbered, with a ten-acre farm field at the extreme north end. This area is used for such things as hunting, hiking, fishing, bike riding, and watchable wildlife program purposes. The facilities in this area are shown on Plates 8 and 24.

Proposed Action:
Complete the approximately one mile ‘Black’ Trail

LD-4. Woods Lake Multiple Resource Area (201 acres)
The major feature of this area is a 30-acre man-made lake, known as Woods Lake. Surrounding the lake on the uplands is a mixture of old agricultural fields, pasture land, and a small amount of timber. An unimproved road extends from the Woods Lake East hunter/fisherman parking lot on Highway 32 across the dam of Woods Lake. A small fishing pier is located at the dam. Another unimproved road on the west side provides access to a hunter/fisherman parking lot and accessible fishing pier which was built in 2015. The Fin and Feathers Nursery Pond is located north of Woods Lake in this area. The fields are generally covered with brome grass, while the pasturelands have a grass cover under a sparse stand of oak and hickory. A dense hawthorn thicket is located on the south side of the lake. Firearm hunting is prohibited in this area. This area is used for fishing, hiking, archery only hunting, and watchable wildlife program purposes. Facilities can be found on Plates 8 and 25.

Proposed Actions:
A vault comfort station has been removed from Lithia Springs Recreation Area and will be replaced with a new pre-fabricated vault comfort station within the Woods Lake West area.

LD-5. Adams Multiple Resource Area (196 acres)
The area is predominantly wooded with a few old fields located on the outer boundaries. The Coal Shaft South hunter/fisherman parking lot and minor boat access is located in this area on the southwest side of the Coal Shaft Bridge. This area is used for hunting, fishing, boat access, and sightseeing purposes. The area is found on Plates 8 and 26.

LD-6. Big Red's Timber Multiple Resource Area (250 acres)
The area is composed primarily of invading brush and immature timber. One old farm field, eight acres in size, is present. Two large lake coves that extend from east to west break up the area. This area is used for hunting, hiking, biking, and watchable wildlife program purposes. The General Dacey Trail has an extensive trail system in this area. This area is found on Plates 8 and 27.

Wildlife Management Areas

Two areas are assigned this land-use classification. These areas are licensed to the IDNR for operation and management. A brief description follows.

WM-1. West Okaw Wildlife Management Area (2,872 acres)
This area is licensed to the IDNR for wildlife management purposes. Almost equally divided between crop fields and timbered acreage, most of the crop fields lie in the flood plain of the West Okaw River or one of the many feeder creeks supplying the area. Man-made levees have been constructed at three sites to impound shallow water on planted cereal and feed grains to attract waterfowl to

the area. A wide variety of forest game, upland game, non-game, and migratory bird species are found on this site at various times during the year. Four farm ponds and sixteen hunter/fisherman parking areas have been established in the area. The facilities within this area are shown on Plates 8 and 32.

Section 1135(b) of the Water Resource Development Act (WRDA) of 1986 allowed modification of completed projects to restore environmental benefits. A wetland restoration is being planned in Moultrie County at the northern end of Lake Shelbyville on the Kaskaskia and West Okaw Rivers in the West Okaw and Kaskaskia Wildlife Management Areas. The modification would restore 345.6-acres of wetlands habitat to modern historic conditions and improve the water level management capability allowing maximum capability. The complex is integral to the long-term restoration of wetlands at the Lake Shelbyville Project. The water control system and levees, coupled with vegetation management will allow for the restoration of more natural hydric and vegetative conditions. This 1135 Project is further described in Chapter 6.

The West Okaw River from Lovington south to 1 mile south of IL Route 121 is considered a Grade B stream and a category VI Natural Area according to the Illinois Natural Areas Inventory. Two miles of this stream is located within the West Okaw Management Area. The West Okaw Biologically Significant Stream has been added as an Environmental Sensitive Area outlined in that section. *(Illinois Department of Natural Resources, 2015)*

Proposed Actions:
Construct high water boat ramp at Bethany

WM-2. Kaskaskia Wildlife Management Area (3,414 acres)
This area is licensed to the IDNR for fish and wildlife management purposes. Fishing, hunting, and a variety of other day-use activities are permitted on the area by the state agency. The facilities within this area are shown on Plates 8 and 33.

The Section 1135 project described above in WM-1 also encompasses portions of this area and is further described in Chapter 6.

Vegetative Management Areas

VM-1. Johnson's Bluff Multiple Resource Area (212 acres)
The extreme north portion of this area supports a wide variety of vegetation. The terrain is quite varied. It is essentially composed of moderately steep slopes leading down to low areas in the creek bottom. These low areas are commonly flooded with only a two to three foot rise in the normal pool level. Due to this frequent flooding, most of the trees along the flood plain have been killed, and the bottomland supports a dense annual weed cover. The upland supports a mixture of annual and perennial weeds and grasses. Encroaching woody vegetation is

evident. The timber scattered throughout this northern portion is predominantly oak-hickory. Two large fields in the southeastern portion of this northern section are presently grain-cropped through the agricultural lease program. The remainder of this northern portion is composed of medium-aged oak-hickory forest sloping gently down to Wilborn Creek where predominantly lowland hardwoods are found. High water levels have killed many of the trees in the low-lying areas. The southeastern portion of this northern section is composed of large, mature, upland hardwoods, primarily oak and hickory. The shoreline here is very steep. The outstanding topographic feature of this portion is Johnson's Bluff, and extremely scenic overlook with steep slope leading down to the lake. The extreme southern section of this area is a long, relatively narrow strip of land with some open field areas and some timber. The open fields are in varying seral stages from annual weeds to relatively dense brush cover. Two small ponds are also located in this section. Immediately north of this narrow strip of land lies a wooded hillside strip bordering the lake. Johnson's Bluff minor boat access and hunter/fisherman parking lot are located in this area. This area is shown on Plates 8 and 28.

VM-2. Whitley Creek Bottoms Multiple Resource Area (698 acres)
Whitley Creek runs the full length of this area. There are several open bottomland fields lying on both sides of Whitley Creek. Those fields lying closest to the lake are subject to regular flooding in the spring with rises in the lake level. Several of the fields farther away from the lake are presently grain cropped through the agricultural lease program. The upland timbered areas are primarily second growth oak-hickory timber. The northern portion of this area has a large cove dividing the land into three separate areas. Most of the slopes and ridge tops are covered with the oak-hickory association typically found throughout the lake area. Several old farm fields are found scattered throughout this northern section. One small but uniform stand of oak-hickory is found at the extreme east end of this northern section. Bragg and Bruce Ponds, Hugh's Ridge, South Crooked Bridge, and North Crooked Bridge hunter-fisherman parking lots are located in this area. This area is shown on Plates 8 and 29.

Proposed New Actions:
Develop a 146-acre wetland and fish nursery pond. Whitley Creek has been identified by IEPA as one of the most impaired streams within the Kaskaskia Watershed due to significant sedimentation and nutrient loading from adjacent agriculture practices. Construction of a wetland and nursery pond within the Whitley Creek Bottoms will significantly reduce sediment loading into Lake Shelbyville and the Kaskaskia River, increase waterfowl and shorebird habitat, and will provide additional nursery pond acreages for supplemental fish rearing as identified by IDNR. The project will meet the goals of the North American Waterfowl Management Plan, IDNR and IEPA water quality standards. The total cost estimate for this project is $728,000. Funding will be sought through the Continuing Authorities Program, Challenge Partnership Agreements, and/or donations.

5.2. LAND AND WATER USE POLICIES

Forest Resources

All lands in government fee ownership are being managed to upgrade their forest resources for improvement of recreation, wildlife, and scenic values. The Land Classification Map, Plate 4, shows these lands as Recreation, Environmentally Sensitive, Low Density Recreation, Vegetative Management, and Wildlife Management. The OMP describes the general practices and techniques used to implement a program for developing the forest resources of Lake Shelbyville, such as tree planting and vegetation manipulation, to support management objectives. Timber will be harvested when required to achieve management objectives such as wildlife habitat improvement. Forest management is a secondary purpose for areas classified as intensive or low-density recreation.

Agricultural Use

Lake Shelbyville's OMP contains provisions for agriculture as a corollary use to provide food for wildlife and to prevent encroachment of undesirable vegetation. In addition, agricultural leasing demonstrates effective land management by deriving income for the federal treasury and local counties as well as providing resource benefits. As agricultural use of project land is not an authorized purpose, except as an interim or corollary use, no such areas have been allocated for this use.

Concession Development

A specific objective of the Master Plan is to encourage full usage of recreational opportunities. To meet public demand and in conjunction with the popularity of recreation vehicles, electric, water, and sewer hookups have been provided to many campsites. Roads have been widened and parking spaces increased to accommodate recreational vehicles. As the demand for more sophisticated facilities increases, an alternative to traditional camping must be considered.

Traditionally, overnight camping has taken precedence over resort type facilities. Resort facilities require less land, minimize the requirements for extending roads and utilities, and offer a complementary alternative to dispersing full service campsites over large areas. The Corps continues to work with IDNR to reopen Eagle Creek Resort, an effort which may take several more years. Areas west of Sullivan Marina and Campground and Findlay Marina are zoned for High Density Recreation Use and may be considered as future resort concessionaire sites. A decision to develop these potential resort concession sites will be based on the recommendation of a valid market potential and feasibility analysis study. All development plans will follow policy established by regulation, ER 1130-2-550, Change 5, dated 30 March 2009 and policy dated, 6 December 2005, Recreation Development Policy for Outgranted Corps Lands.

Shoreline Use Management Policy

The following is taken from the St. Louis District Policy on Lake Shoreline Private Use Facilities, 20 February 1975:

> *"It is the policy of the Chief of Engineers, U.S. Army Corps of Engineers, to manage and protect the shoreline of all lakes under its jurisdiction to properly establish and maintain acceptable fish and wildlife habitat, aesthetic quality and natural environmental conditions and to promote safe and healthful use of the shorelines for recreational purposes by all of the American people. It is the objective of the Corps to restrict private exclusive use of public property to the degree necessary to gain maximum benefits to the general public, and to provide for the restoration of shoreline where degradation has occurred. Such actions will consider all forms of benefits such as: recreation, aesthetics, and fish and wildlife."*

It is the policy that private exclusive use will not be permitted on new lakes or on lakes where no private facilities existed as of 13 December 1974, the date of the implementing regulation (ER 1130-2-406).

Other Policies

Preservation of the natural environment is essential to the proper maintenance and management of wildlife habitat, aesthetic quality of lake projects, and shoreline erosion control. Revocable lakeshore use permits of a temporary nature will continue to be issued as authorized by 36 CFR 327 for special event recreation programs such as water carnivals, boat regattas, ski jump exhibitions, etc.

Mowing permits are issued according to District policy. Mowing permits that have been issued at Lake Shelbyville are explained in the OMP.

Off-Road Vehicle Usage and seaplane landings are managed by policy explained in the OMP.

Prior to implementation of any future actions or major expansions, a feasibility analysis with a detailed design that complies with all environmental and fiscal laws, regulations and policies will be completed. Additional campsites will require further documentation of public demand, as well as policy, design, and cost analysis and inclusion in an approved master plan supplement prior to programming and funding.

LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED
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CHAPTER 6 – SPECIAL TOPICS/ISSUES/CONSIDERATIONS

6.1. NON-FEDERAL HYDROPOWER DEVELOPMENT

Shelbyville Hydro, LLC, a wholly-owned subsidiary of Symbiotics, LLC, has proposed the development of a hydropower facility in the spillway basin area. The basic design entails running a pipe from the west sluice gate through the stilling basin to a turbine house downstream of the stilling basin. The proposed hydropower facility will be operated as a run-of-the-river type operation. The annual average energy production is estimated to be 20.3 gigawatt-hours. Outflows will not be modified for hydropower purposes. The facility will only utilize the outflows that would normally occur.

References for this program include ER 1110-2-1454, 15 July 1983, Corps Responsibilities for Non-Federal Hydroelectric Power Development under the Federal Power Act and EM 1110-2-3001, 30 April 1995, Planning and Design of Hydroelectric Power Plant Structures.

The spillway area between the main dam and Illinois Highway 16 Bridge is a popular fishing spot. Some of this area will be lost. A safe distance downstream of the turbine will need to be determined, marked with signs and a safety cable across the river to restrict the area from boats getting too close. Warning devices that power generation is about to begin will need to be installed. A security barrier will need to be installed to prevent access to the facility from the land. A mitigation plan will be coordinated with the company to compensate for facility construction and adverse effects to recreation.

Coordination with all appropriate agencies including US Army Corps of Engineers, Federal Energy Regulatory Commission, and IDNR is required before the project progresses.

6.2. SECTION 1135 PROJECT

Section 1135 of the Water Resource Development Act (WRDA) of 1986 allowed modification of completed projects to restore environmental benefits. The 754.5-acre restoration project area is situated in Moultrie County at the northern end of Lake Shelbyville on the Kaskaskia and West Okaw Rivers in the West Okaw and Kaskaskia Wildlife Management Areas.

The project consists of a series of low levees forming 16 management compartments, a ditch drainage system, water control structures, additional watering and dewatering capability, overflow weirs, rocked roadways to pump sites, levee revetment on all critical areas, fish nursery areas, and natural tree regeneration. The start date for construction is dependent on funding, and has been shelved until funding can be secured by both IDNR and USACE.

The total estimated cost of constructing the proposed modification is $6.1million. The State of Illinois will provide the 25% non-federal cost-share for the project's planning, design, and construction. The projects O & M (estimated at $32,665 per year, with no additional FTE requirement) will be the responsibility of the State of Illinois.

The modification would restore 754.5-acres of habitat and improve the water level management capability to a maximum extent. The complex is integral to the long-term restoration of wetlands at the Lake Shelbyville Project. The water control system and levees, coupled with vegetation management will allow for the restoration of more natural hydric and vegetative conditions.

The draft Ecosystem Restoration Report with Environmental Assessment and Finding of No Significant Impact was completed and distributed for agency and public comment during September-October 2003. The final report is currently being reviewed by the Corps' Mississippi Valley Division.

6.3. PARTNERING

The Corps has control and oversight of stewardship activities on public lands and waters at Lake Shelbyville. Responsibility for recreation management is granted to the IDNR at Wolf Creek and Eagle Creek State Parks. The IDNR also manages the West Okaw and Kaskaskia Wildlife Management Areas.

Increasingly, competition for the use of these lands and waters and their natural resources can create conflicts and concerns among stakeholders. The need to coordinate a cooperative approach to protect and sustain these resources is compelling. Many opportunities exist to increase the effectiveness of federal programs through collaboration among agencies and to facilitate the process of partnering between government and non-government organizations.

To sustain healthy and productive public lands and waters with the most efficient approach requires that individuals and organizations recognize their unique ability to contribute to commonly held goals. The key to progress is building on the strengths of each sector, achieving goals collectively that could not be reasonably achieved individually. Partnering opportunities exist and can promote the leveraging of limited financial and human resources. Partnering aids the identification of innovative approaches to deliver justified levels of service, defuses polarization among interest groups, and leads to a common understanding and appreciation of individual roles, priorities and responsibilities.

To the extent practicable, this Master Plan and a proactive approach to partnering will position the Lake Shelbyville Project to aggressively leverage project financial and human resources in order to identify and satisfy customer expectations, protect and sustain natural and cultural resources and recreational infrastructure, and sustain Corps management efforts and outputs at a justified level of service.

The Lake Shelbyville Project continues to seek new partnerships and strengthen existing ones to accomplish project initiatives. There are several implementation methods or authorities currently available for partnering at Lake Shelbyville:

Traditional Cost Sharing. Funding for cost sharing may well become more difficult to secure than in the past. In addition to providing at least 50 percent of the development costs of a proposal up front, the cooperating local governmental entity must also agree to operate, maintain, and provide major replacements for the new development.

Development Solely by State or Local Interests under an Outgrant. As in the past, state and local government entities with all or part of a project in their jurisdiction, may obtain use, under a lease or license, of an area for approved recreational development. In such cases, all development costs are the sole responsibility of the local sponsor and operation, maintenance, and major replacements costs must also be borne by them also.

Development by Concessionaire. Another development and funding method that could be used involves the implementation of some of the plans proposed in this Master Plan by a concessionaire. Only activities for which there is a viable commercial market are generally eligible. For developments undertaken in this manner, the concessionaire also provides operation, maintenance, and major replacements.

Challenge Partnership Program. Section 225 of the Water Resources Development Act of 1992 authorized the Challenge Cost-Sharing Program (since renamed Challenge Partnership Program), and gave the Secretary of the Army authority to enter into cooperative agreements with non-Federal public and private entities to provide for operation and/or management and development of recreation facilities and natural resources at water resource development projects where such facilities are being maintained as full Federal expense.

Contributions Program. Contributions that provide for operation and management of recreation facilities and protection and restoration of natural resources at civil works water resource projects can be accepted and used, as provided by PL 102-580, Water Resources Development Act, 1992 (106 Stat. 4838, 33 United States Code (USC) 2328, Section 203). Contributions, which are within current authorities, consistent with the Corps mission, and are for work items contained in

an approved annual or five-year Operational Management Plan may be accepted. Donations are considered contributions.

Memorandum of Agreement (MOA) and Memorandum of Understanding (MOU). MOA and MOU are written agreements between the Corps of Engineers and another agency that provides for the transfer or performance of a technical mission or function. When the MOA or MOU doesn't address specific projects or funding, a Support Agreement will generally be prepared to supplement the MOA or MOU.

Volunteer Program. The Corps of Engineers may accept the services of volunteers and provide for their incidental expenses to carry out any activity of the Corps of Engineers except policy making or law/regulatory enforcement as authorized under PL 98-63. A volunteer is not an employee of the Corps of Engineers except for the purposes of Chapter 171 of Title 28 of the USC, relating to tort claims, and Chapter 81 of Title 5 of the USC, relating to compensation for work injuries. Voluntary service is official government business, having some value to the Corps of Engineers, conducted by volunteers under the direction of a paid Corps of Engineers employee. Volunteers provide diverse and significant contributions to many of the Lake Shelbyville Environmental Stewardship, Natural Resources, Recreation, and Interpretive Services programs. These contributions are worth thousands of dollars annually.

Cooperating Association. Cooperating associations are used to accomplish such broad goals as natural resource management, interpretive services, and visitor service activities on civil works water resource projects, fee-owned lands, and other areas for which the Corps of Engineers has administrative and management responsibilities. Associations aid the Corps of Engineers through a variety of activities.

Continuing Authorities Program (CAP). The Corps of Engineers undertakes studies of water and related resources problems and opportunities as directed or authorized by Congress. These Congressional authorizations are contained in public laws, and in resolutions of either the House Public Works and Transportation Committee or the Senate Environment and Public Works Committee. Study authorizations can be unique, study-specific authorities, or they can be standing program authorities, usually called continuing authorities, under which specific studies and projects may be done. These studies are done at the discretion of the Secretary of the Army of the Chief of Engineers and focus on whether a federal project responding to the problems and opportunities of concern should be recommended.

6.4. COOPERATING ASSOCIATIONS

Cooperating associations are used to accomplish such broad goals as natural resource management, interpretative services, and visitor service activities on civil works water resource projects, fee-owned lands, and other areas for which the Corps of Engineers

has administrative and management responsibilities. Associations aid the Corps of Engineers through a variety of activities, which may include the following:

•Supporting activities such as:
- Special events
- Interpretive, educational, or scientific activities
- Exhibits and programs
- Presentations and demonstrations that further public understanding and appreciation of the mission of the Corps of Engineers or a particular water resource development project.

•Supporting natural resource management through conservation and educational activities and special events; and also by providing scientific, logistical, maintenance, and other support.

•Acquiring display materials, historical objects, equipment, supplies, materials, goods or other items, or services appropriate for management, operation, interpretive, educational, and visitor service functions.

•Providing services to visitors through the sale, production, publication, and/or distribution of appropriate interpretive and educational items directly related to the recreation, scientific, interpretive and educational goals and mission of a project, a group of projects and/or the Corps of Engineers as a whole.

•Acting as a principal distribution medium for those educational and scientific publications of the government and trade that relate to the Corps of Engineers and/or project mission, mandate or management efforts and provide the public with inexpensive and technically accurate materials.

Lake Volunteers Association
In 2001, the Kaskia-Kaw Rivers Conservancy entered into a Cooperative Agreement with the Corps of Engineers. The group officially changed their name in 2013 to Lake Volunteers Association (LVA) and the Corps renewed the cooperative agreement with LVA 22 July 2013. The Corps of Engineers authorizes the Association to provide, and the Association agrees to provide interpretive and educational services and/or research and scientific services to the public. As part of the agreement, the Association may operate a sales area on a continuous or intermittent basis. Sales areas are located in the Lake Shelbyville Visitor Center and Carlyle Lake Visitor Center.

LVA manages the sales area in the Lake Shelbyville Visitor Center and assists in coordinating and presenting special events at Lake Shelbyville and surrounding communities that help build community and public relations. This agency also has a Real Estate License that allows them to provide vending machines within the recreation areas at Lake Shelbyville.

6.5. LOCAL DEVELOPMENT ON ADJACENT LANDS

The land acquisition policy and physical characteristics at Lake Shelbyville prevent private land ownership or development near or adjacent to the shores of the lake. However, the recreational attractiveness of the project has resulted in subdivision platting in the vicinity of the lake. Several of these subdivisions are located on land formerly used as agricultural fields. Problems could occur as urban sprawl continues into the rural areas around Lake Shelbyville. In some cases areas that are not platted subdivisions are still experiencing growth with landowners selling small acreages adjacent to Corps property. New owners are building homes close to government boundary lines, potentially increasing conflict with public lands users, particularly hunters. To protect the Lake Shelbyville watershed lands and waters, additional zoning regulations in both Shelby and Moultrie counties may need to occur.

6.6. EFFECTS OF FLOOD CONTROL

As indicated in the 1974 Lake Shelbyville Environmental Impact Statement, the operation of Lake Shelbyville is intended to achieve the greatest possible benefit for each project purpose over the long run. Compromises are an inherent part of the operations and some adverse impacts are inevitable.

Downstream – The degree of effects on the downstream landowners depends on the severity of the storm causing flooding, and the elevation to which the lake is raised above the top of the joint-use pool. When the level of the lake is below elevation 610 feet NGVD and a storm producing heavy runoff both above and below the dam occurs, the releases from the reservoir will be low until the tributaries and the Kaskaskia River downstream of Shelbyville Dam have crested and within-bank flows can be maintained. An adverse effect of this plan of regulation is that the duration of high flow is extended considerably. The prolonged high river stage raises the ground water level to a point where downstream landowners' fields, though not flooded by surface flow, are completely saturated and unworkable. When the lake rises above elevation 610 feet NGVD, the plan is to release between 1,800 and 4,500 cfs from the lake. The release will flood the lands downstream of the dam and could occur once every five years for a period of three weeks. In addition, it could adversely affect the planting, growing, and harvesting of crops.

Upstream - As the level of the lake rises, portions of land used for recreation are inundated, thereby restricting their use. The degree and length of restriction depends upon the severity of the flood. A flood of the magnitude that can be expected once every five years will have some detrimental effects upon recreation at the lake. All of the recreation areas will remain open; however, some swimming, picnic, camping, and boat launching facilities will be inundated. Side effects of the area being inundated include the destruction of grass turf, loss of trees, accumulation of driftwood, reduction of visitation, and loss of marina income. The soils are highly erodible and fluctuation of the water level plus wave action from wind and boats cause an eroded condition along the shoreline. Erosion also produces excessive turbidity along the water's edge. Vegetation destruction because of flooding increases possible erosion due to storm water runoff. Floods in

excess of a five-year frequency cause proportionately greater damages. The fish population could be adversely affected if spawning coincides with receding high water.

Moultrie County Roads and Bridges Periodically Inundated Due to High Lake Levels - The Corps of Engineers is working with the township road commissioners in Moultrie County to improve roads and bridges that become inundated during high lake levels to ensure that some areas remain accessible to the public. These include the roads in Moultrie County where the following bridges are located: Joe Pound Bridge (1275N, 1350E), Butts Bridge (1575N, 600E), and Gary Melvin Kaskaskia River Bridge (1125N, 1675E). Locations of these bridges are shown on Plates 1, 32 and 33.

6.7. LAKE FLUCTUATION IMPACTS ON FACILITIES

Lake fluctuation affects the recreational use of swimming beaches, boat launching ramps, recreation facilities, and marinas as well as impacting shoreline erosion and fish spawning environmentally.

Swimming beaches are developed so that they are functional with a fluctuating water level of plus or minus five feet. Water levels between five and ten feet above the normal summer pool cover the developed sand beach and reduce swimming activities (about 15 percent of the time). The swimming beach is closed once water levels are ten feet above normal summer pool (about 6 percent of the time). These higher water levels are generally occurring in May, June and July when visitation is the highest. The Corps has partnered with IDNR to provide a buoy system at Wolf Creek State Park that allows the beach there to stay open at higher water levels.

High water boat ramps become operational when water covers the main boat ramps. There are 10 high water ramps located around Lake Shelbyville. They are located at Dam West, Lithia Springs, Opossum Creek, Coon Creek, Lone Point, Bo Wood, and Wilborn Creek Recreation Areas, Wolf and Eagle Creek State Parks, and Findlay Marina. These ramps allow boaters uninterrupted access to the water. However, the high water boat launching ramps are designed as two lane ramps and become congested within the ramp parking lots and at the ramps themselves especially on weekends. To reduce this congestion existing ramps should be widened where it is feasible. For marina activity to continue temporary walkways have to be put in place and boat shuttles have to be provided so that the visitors can access the facility.

Management practices undertaken to reduce the effect of flooding on recreation activities include the planting of water-tolerant trees and shrub species to preserve vegetative cover on low-lying recreation land, raising low portions of access roads to assure access to campgrounds and picnic areas during times of moderate flooding, riprap protection of key recreation areas which are subject to erosion at high pool stages, protecting lift stations from flooding so that toilet facilities can be used during moderate flooding, and drawing the pool elevation down to winter pool each fall so that additional flood storage capacity is achieved. The drawdown allows flood waters to be contained within the joint-use pool first, utilizing the flood control pool only as necessary. The drawdown has the

adverse effect of exposing mud flats in shallow water, thereby restricting access to portions of the lake. Since recreation activities are at a low intensity during the programmed drawdown, there is little adverse effect on recreation. In drought years, however, seasonal pool cannot be reached by the first of May. The low water level does affect recreation as beaches are not fully usable, the bare strip around the lake is unsightly, and fewer boaters are on the lake.

Steps taken to counteract the effects of low water levels include the construction of boat channels from the launching ramps to deep water and excavation of underwater portions of launching ramps to accommodate boats during a moderate drawdown.

The Corps of Engineers will continue to work with the Illinois Department of Natural Resources during the spring to provide conditions suitable for a successful fish spawn. The two agencies will work together to create and place artificial fish habitat structures in Lake Shelbyville. Where possible, the lake level will be maintained at a constant or slowly rising elevation to assist in productive fish spawning, nesting, and rearing activities.

To reduce the effects of flooding the breakwaters at Findlay Marina and Lithia Springs Marina have been raised to 613 feet above sea level. The IDNR has plans to renovate the breakwater at Eagle Creek to reduce wave action and minimize shoreline erosion.

6.8. ACCESS

6.8.1. Access to Public Lands

There are several locations around the lake that are or may become inaccessible in the future. It is in the government's best interest to acquire easements to access these lands. The general locations of these proposed access easements are shown on Plate 1. Technical details, costs, and descriptive information will be provided in a supplement to the Real Estate Design Memorandum.

Ten parcels of project land, totaling approximately 1,550 acres, are inaccessible because they are not contiguous to any road, and can only be reached by crossing private land. Access to these lands by project management personnel and/or their agents is essential for the following reasons:

- Resource management through development of food plots, succession control, timber stand improvement, reforestation, archaeological survey, etc.
- Fire protection of project land and protection of adjacent private property from fires originating on public land.
- Cleanup and debris removal.
- Boundary and surveillance.
- Protection of the resource through enforcement of Title 36.

The proposed easements would be for use by the Government, its officers, agents, employees, and contractors, reserving to the landowners the right to cross over or under the right of way.

It is anticipated that a portion of the maintenance complex service road in the Dam East Recreation Area, if not protected, may wash out due to shoreline erosion. This will not only affect access to the maintenance complex, but also access to one of the trilateration towers used to monitor the dam. At that time an easement or purchase of private property would be necessary.

6.8.2. Office of Federal Lands Highway

The Federal Highway Administration (FHWA) and its predecessor agencies have been directly engaged in providing access to and within Federal facilities since 1905. The Agricultural Appropriation Acts of 1912 and 1913 provided funds that could be expended on construction of roads and trails serving the National Forest, and for the first time offered a sustained source of revenue for road improvement purposes in the public domain. The program has changed over the years with new programs and funding available for transportation planning, research, engineering and construction of highways, roads and parkways, or of transit facilities within Federal public lands. On December 4, 2015, the Fixing America's Surface Transportation Act of 2015 ("FAST Act" or "Highway Funding Act") was signed into law replacing MAP-21. The most up-to-date guidance can be found at https://www.transportation.gov/fastact. *(US DOT, Federal Highway Administration, Office of Federal Lands Highway, 2015)*

The Corps of Engineers will work with County and Township Road Commissioners to seek improvements through available programs.

6.9. WATER SUPPLY STORAGE DEMANDS

Currently Lake Shelbyville has 177,795 acre-feet joint-use storage volume of which 24,714 acre-feet (13.9% of joint-use volume) can be utilized for water supply. Yield estimated is 17 million gallons per day (mgd) after 40 years of sedimentation.

Currently Carlyle Lake has 230,227 acre-feet joint-use storage volume of which 32,692 acre-feet (14.2% of joint-use volume) can be utilized for water supply. Yield estimated is 24.5 mgd after 40 years of sedimentation.

The following is a listing of existing State water supply contracts for Lake Shelbyville and Carlyle Lake:

TABLE 18
SHELBYVILLE AND CARLYLE WATER SUPPLY ALLOCATIONS

	Requesting Entity	Allocation Acre-Feet	Allocation MGD	Supplier	Withdrawal
Lake Shelbyville	Timber Lake Golf Course	50	0.04	Shelbyville	Lake
	Eagle Creek Resort	480	0.43	Shelbyville	Lake
	Holland Regional RWS	5,605	5.00	Shelbyville	River Release
	Holland Energy*	5,941	5.30	Shelbyville	River Release
	40 Year Sedimentation	5,661	5.05	Shelbyville	
Carlyle Lake	Governor's Run Golf Course	190	0.17	Carlyle	Lake
	Gateway PWS	4,484	4.00	Carlyle	River Release
	Dynegy Baldwin	16,086	14.35	Carlyle	River Release
	40 Year Sedimentation	5,224	4.66	Carlyle	
Combined Allocation	Prairie State	14,965	13.35	Shelbyville & Carlyle	River Releases
	Unallocated	-1280	-1.15	Shelbyville & Carlyle	
	Totals	**57,406**	**51.2**		

* Holland Energy allocated a maximum of 8 mgd, but expects annual average usage of 5.3 mgd

Considerations are being made in an effort to satisfy all the requests with a provision for potential time-line allocation reductions based on contract reductions in State storage due to sedimentation and increased needs of public water supply systems. The initial water supply needs of Holland Regional and Gateway will be much less than the quantity being requested since their systems needs are based on phased development of water treatment facilities and service area growth.

A draft report conducted by the Illinois State Water Survey of the projected water supply demand from the lakes during an extreme drought conditions has been conducted. The report shows that if the current demands and lake conditions were in place during the 1953-1955 drought of record, some water supply storage in both reservoirs would remain unused.

6.10. KASKASKIA RIVER WATERSHED

Due to its overall size and its importance within the region, a better understanding of the history of the watershed and its present condition is necessary. The Kaskaskia River Basin Feasibility Study is currently underway in order to develop future plans to maintain the vitality of the watershed.

The health of Lake Shelbyville is directly related to the health of the Kaskaskia River watershed. The water quality of the streams that feed into the upper Kaskaskia basin has an effect on the watershed. Issues of water quality, sediment control, and incorporating good conservation practices on lands adjacent to Corps of Engineers property are supported and encouraged in the effort to reduce impacts of sedimentation and poor water quality on Federal lands.

Kaskaskia Watershed Association (KWA)

There is a diversity of interests, stakeholders, and partners within the watershed that are dedicated to improving the natural resources, the economy, and the quality of life for all residents within the region. Issues do exist and must be addressed, but the residents of the watershed are looking to a healthy natural resource, positive economic benefits, and better quality of life. There is agreement that the watershed is important and that a better, healthier, and more prosperous resource will be good for all.

The Kaskaskia Watershed Association (KWA) was created to represent the entire watershed while recognizing the uniqueness and diversity within the river. They started meeting together in 1996 and incorporated and received their non-for-profit status in 2002, with equal representation from each group. Their goal is to develop, enhance, and protect the ecological and socio-ecological values of the natural resources within the Kaskaskia River Watershed. Eight different coalition groups within the watershed are working together under the KWA umbrella to coordinate and invest resources to address watershed concerns, issues, and opportunities.
In combining the groups to form the KWA in a not-for-profit status from the headwaters of the Kaskaskia River at Champaign to the confluence of the Mississippi River, the

stakeholders realize the watershed is very diverse but their goals are the same: communication, erosion, siltation, recreation, fish and wildlife, flood damage reduction, water supply, water quality, industrial, navigation, economic development, and eco-systems. Working together the coalition is able to combine resources of people, past investments, and existing economics and programs to further their goals and objectives in enhancing and preserving the watershed. Key organizations by river reach are as follows.

Reach I – Champaign to Lake Shelbyville Dam
- •Lake Shelbyville Development Association (LSDA)
- •Upper Kaskaskia C2000 Ecosystem Partnership

Reach II – Lake Shelbyville Dam to Carlyle Lake Dam
- •Carlyle Lake Association (CLA)
- •Mid Kaskaskia Coalition
- •Carlyle Lake Watershed C2000 Ecosystem Partnership

Reach III – Carlyle Lake Dam to Fayetteville
- •Okaw River Basin Coalition (ORBC)
- •Original Kaskaskia Area Wilderness, Inc. (OKAW)
- •Kaskaskia River/Shoal Creek C2000 Ecosystem Partnership

Reach IV – Fayetteville to Confluence of Mississippi River
- •Lower Kaskaskia Stakeholders, Inc. (LKSI)
- •Lower Kaskaskia/Silver Creek Ecosystem C2000 Partnership
- •Sinkhole Plain C2000 Ecosystem Partnership

The existing base of natural resources in the Kaskaskia River Watershed is under pressure, but with proper planning and implementation, a restoration and protection project can yield good results with minimal public costs. Federal and state agencies, in collaboration with local interests, have worked together to develop local initiatives that will lead future protection and restoration efforts within the watershed.

The Kaskaskia River Watershed stakeholders are ready to move forward with planning, restoration, protection, improvement, and development efforts. They are committed to a holistic approach based upon the broad concerns within the watershed. Funding to pay for these projects will have to come from local sources with assistance from state and federal agencies and legislators. *(Southwestern, 2002)*

Upper Kaskaskia Ecosystem Partnership

The Upper Kaskaskia River Ecosystem Partnership evolved from an organized group of landowners representing the seven county Farm Bureaus and Soil and Water Conservation Districts in the watershed. Since 1995, the group has sought to promote nitrogen management, filter strips, no-till, and other best management practices.

The organization was designated as an Ecosystem Partnership of the Conservation 2000 Program in 1998 by the Illinois Department of Natural Resources' Office of Realty and Environmental Planning. This status has provided a mechanism, as well as funding, to bring interested stakeholders into a dialogue about the future of the watershed. The Partnership sponsored three public meetings in August of 1998 to identify resource concerns within the watershed and then appointed a Technical Advisory Committee to gather data regarding those concerns so that a plan could be developed to improve water quality, increase wildlife habitat, and address specific issues. This plan is updated periodically to meet current issues and is an appendix to Lake Shelbyville's OMP.

Goals of the Partnership.

The goals of the Upper Kaskaskia Ecosystem Partnership are to:

- Protect and enhance water quality in the Kaskaskia River Basin and Lake Shelbyville.

- Protect and enhance wildlife habitat in the Kaskaskia River Basin and Lake Shelbyville.

The Partnership is committed to pursuing these goals in ways that:

- Promote voluntary efforts of individual landowners and organizations.

- Maintain and improve the economy of the entire watershed.

6.11. BO WOOD LANDFILL

The St. Louis District performed a contamination evaluation of the former Harold Hays municipal landfill located in the Forrest W. "Bo" Wood Recreation Area at Lake Shelbyville, Illinois from 1989 - 1991. The landfill was in operation from 1904 until its closure as part of Lake Shelbyville Reservoir construction in 1968. At that time the seven-acre landfill was consolidated to its present location which covers about 2.6 acres. It is estimated that the landfill contains approximately 140,000 cubic yards of household, commercial, and industrial wastes. The lower portion of the clay-capped landfill is submerged under normal lake levels. This investigation was initiated when shoreline erosion threatened to expose areas of the former landfill.

This landfill is located just north of the picnic shelter in Bo Wood Recreation Area. Part of the Shoreline Erosion Management Plan work that has been completed included re-protecting this landfill.

The purpose of the study was to gather adequate background and field data to determine whether contamination of lake water, lake sediment, groundwater or site soils had occurred as a result of the landfill.

The results of the study indicate that although low levels of some contaminates are present in the groundwater and surface water at the site no contamination has been identified which could conclusively be attributed to the former landfill site.

In addition to the Bo Wood landfill site, other known community or private dumps existed in the reservoir area prior to the formation of Lake Shelbyville. These sites could be potential sources of lake water and ground water contamination.

6.12. GENERAL DACEY TRAIL

Walking and bicycling activities have become very popular. Trails are among the most popular and requested recreational amenity in any community and on all types of public land. *(Illinois Department of Natural Resources, 2015)* They represent some of the greatest users of public lands and facilities.

The General Dacey Trail Plan is a multi-partner regional initiative centered on Lake Shelbyville. Upon completion, the General Dacey Trail will provide almost 170 miles of recreational opportunities for bikers, hikers, skaters, and cross-country skiers. Providing an off-road link to Lake Shelbyville and the other nearby communities, the trail network promises to increase tourism and to spur trail-use related economic development. This project is being developed in phases as a Challenge Partnership Agreement. Several phases will be needed to construct the trail network through programs and authorities of numerous organizations and agencies. As organizations and agencies undertake respective trail development phases, they will use the trail master plan as the guiding document.

The project initially included both newly constructed and existing trails located on Corps of Engineers' property, as well as designating existing roadways in the lake area. Additional miles of trail from Sullivan to Camp Camfield and within the City of Shelbyville have been added. Whenever possible, it is recommended that additional right-of-way along roadways be acquired and a separate trail surface be constructed by non-federal partners. The General Dacey Trail Concept Plan can be found on Plate 37.

6.13. SHORELINE EROSION

Shoreline erosion at Lake Shelbyville is caused by a combination of factors: fluctuating lake level, waves created by wind and boat actions, and the soil surrounding Lake Shelbyville being predominately glacial sandy clay with little resistance to erosion. Some methods used to reduce or eliminate erosion problems project-wide include promoting woody and herbaceous vegetative growth, manipulation of water run-off, identifying and monitoring erosion problems on and adjacent to public lands, waters and lakeshore. In other cases, facilities required more immediate corrective action.

Currently, one area of immediate concern is the shoreline southeast of Bo Wood Recreation Area as it may be necessary to acquire additional land in Sections 23 and 26 of T13NR5E, Moultrie County, Illinois. The shoreline has eroded to within 100 feet of the

fee boundary in some locations. Three privately owned homes bordering government lands could eventually be affected as well.

The Final Letter Report, Lake Shelbyville Shoreline Erosion Management Plan, 29 January 1993, recommended facilities needing protection, consolidation, removal, or replacement because of predicted shoreline erosion over the next 30 years (baseline 1990). Much of the work has been completed. Erosion limits in some recreation areas based on the 1993 plan are shown on Plates 17, 18 and 20. Other plates will be revised with shoreline erosion limits as a Master Plan supplement at a later date. The plan is reviewed periodically to ensure efficiency and economy as issues with shoreline erosion will continue. Since the Shoreline Erosion Plan was implemented more than 20 years ago, it may be time to revisit and reevaluate the plan, outlining corrective action for the future.

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CHAPTER 7 – AGENCY AND PUBLIC COORDINATION

7.1. Agency and Public Coordination

Coordinating the update of this Master Plan with agency partners and the public was very important for identifying resources and determining public needs and desires. The public and agency partners were involved and informed through informal workshops, letters, the St. Louis District web page, and news releases.

Different methods were utilized to obtain public and agency input into the master planning process by the broadest means possible. These included:

•Web Page: The 2004 Lake Shelbyville Master Plan was posted on the lake's website as well as the St. Louis District website. A comment form was also posted, inviting comments using the online form.

•News Releases: News releases announcing public meetings were mailed to local and state newspapers, television, and radio stations in November 2015 in preparation for the public meeting.

•Focus Groups: Letters were mailed to stakeholders, partners, agencies, congressional representatives and local governments inviting participation in meetings and requesting comment.

•Visitor Center: A hard copy of the 2004 Lake Shelbyville Master Plan and comment cards were available at the Visitor Center to allow any visitor the opportunity to comment on the plan.

7.2. Workshops

Comments were received at the public workshops held on 17 and 18 November 2015, a partner/stakeholder meeting on 2 December, at a joint public workshop with Carlyle/Kaskaskia River Project on 8 December, and during a comment period following the workshops. The public was given an opportunity to ask questions and voice their concerns at all workshops.

Comments were received in person, by phone, through the mail and via email. The Lake Shelbyville and St. Louis District Corps of Engineers personnel provided responses to comments when appropriate.

A joint meeting between Carlyle and Shelbyville Corps employees and IDNR Lands Manager Mike Mason was held 14 January 2016 at Carlyle Lake. Proposed changes and concerns were discussed. The meeting was primarily an information meeting with no decisions reached on any issues.

7.3. Summary of Comments Received

All comments were taken into account for inclusion in the Draft Master Plan. The Environmental Assessment also considered and analyzed comments for potential impacts to the resource.

Public comments covered a range of topics including:

- Protection of the natural environment surrounding the lake. This the most frequently mentioned comment as lake users expressed their desire for organized, sustainable development that didn't negatively impact the natural beauty of the area or wildlife habitat.

- A request for a land classification change from Low Density Recreation to High Density Recreation to add a day use area under lease to the City of Shelbyville.

- Expansion of the General Dacey and Camp Camfield Trails.

- Reopening Eagle Creek Resort, closed since 2009.

- A request for a land classification change from Low Density Recreation to High Density Recreation west of Sullivan Marina & Campground to allow for either marina expansion or other concession development.

- Dredging Sullivan Marina & Campground harbor.

- A request to for land classification changes from Low Density Recreation to High Density Recreation east of Shelbyville and north of Dam West.

The Draft Master Plan was made available for 30-day review and comment in June 2016. The public again was given the opportunity to review the plan and comment on proposed changes.

Copies of letters, news releases, public comments, and responses are posted in Appendix B, Agency and Public Coordination.

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CHAPTER 8 – SUMMARY OF RECOMMENDATIONS

Since 1970, Lake Shelbyville has become an important regional destination. Many visitors view the lake and its quiet beauty as one of the last remaining truly public facilities in the area. This Master Plan presents an analysis of land use and population changes over the past 10 years and offers recommendations for Lake Shelbyville to proceed with an orderly, environmentally sustainable plan for development. It does not address water control, shoreline management, dam operations, or water quality.

The facilities and waters of Lake Shelbyville provide quality public recreation. All lake resources will be continually monitored to ensure these resources are maintained at a high level of quality.

8.1. LAND CLASSIFICATION CHANGES

The following land classification changes to the Master Plan are proposed:

•Reclassify an area west of Sullivan Marina & Campground from Low Density Recreation to High Density Recreation in anticipation of future development. Future development will be restricted to cabin and/or resort type facilities or transient camping. An Environmental Assessment (EA), attached in Appendix A, offers a Finding of No Significant Impact (FONSI) for these proposed changes.

•Reclassify the following lands to Environmentally Sensitive:
Capel Hill Prairie
Coneflower Hill Prairie
West Okaw Biologically Significant Stream

•Realign certain Multiple Resource Area classifications, between Vegetative Management and Low Density Recreation, to reflect current management practices

•All other classifications will remain the same.

8.2. TIMBER STAND IMPROVEMENT

Management of certain lands includes timber stand improvement measures over the next 10 years in order to improve timber health by controlling exotic and invasive plant species. The EA addresses these measures and concludes with a FONSI on these lands.

8.3. SHORELINE EROSION PLAN

The Shoreline Erosion Management Plan is close to 30 years old. The plan has been implemented as funds have allowed, but, since erosion is unpredictable, impacts may have shifted to facilities not previously included.

Recommend the Shoreline Erosion Plan be reviewed and updated to include impacts to facilities not covered in the original plan.

8.4. FACILITY IMPROVEMENTS

Some primary boat launching facilities don't meet current Corps standards set forth in EM 1110-1-400, a minimum of two launch lanes plus courtesy dock. Recommend upgrading these boat ramps to meet standard.

Most high water boat ramps are not wide enough to accommodate two launch lanes and a courtesy dock. This is reflected in long lines to launch during high water events. Recommend upgrading high water launch lanes to meet need and bring ramps up to Corps standard.

Dam West boat ramp is one of the most congested ramps on the lake. Recommend review of the traffic pattern and develop a plan to relieve congestion.

8.5. FISHERIES IMPROVEMENTS

The IDNR has recommended an increase in the number or size of nursery ponds around the lake to sustain the lake's fisheries. Recommend development of nursery ponds at the former Whitley Creek Land Treatment System pond, in Dam West Recreation Area and in the Whitley Bottoms Area.

8.6. ACCESS

It is in the government's best interest to acquire operational easements to access 10 parcels around the lake that currently can only be reached by crossing private land. Access is required for resource management and protection.

Recommend purchase of operational easement to access 10 parcels.
Additionally, it is proposed to review access to the maintenance compound through the Shoreline Erosion Management Plan. As the current plan defines erosion limits that would impact the access road, a plan must be developed to either protect the shoreline adjacent

to the access road or obtain an easement/purchase additional land to access the compound.

8.7. PARTNERSHIPS

Partnerships are vital to Lake Shelbyville's future success. The Project will use all available partnership opportunities to leverage limited financial and human resources in order to protect natural and cultural resources and infrastructure, meet customer needs, and provide a quality level of service.

8.8. SUMMARY

As pressure mounts from development of lands adjacent to Lake Shelbyville, the lake and its surroundings will become a more important natural asset. A revised Shoreline Erosion Management Plan is vital to the protection of these natural and man-made assets.

This Master Plan presents an analysis of past land use and population changes as well as projected development for Lake Shelbyville over the next 10 years. The plan considers impact on the resource and prospects for future growth. It also proposes positive enhancements to the lake's fisheries through nursery pond development and to wildlife habitat by specific Timber Stand Improvement measures.

A fully implemented Master Plan will provide for the protection of these resources while allowing organized development.

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CHAPTER 9 - BIBLIOGRAPHY

This report has been prepared in accordance with guidance contained in the following:

- ER 200-2-3 Environmental Compliance Policies (29 Oct 2010)
- EP 200-2-3 Environmental Compliance Guidance and Procedures (15 Dec 2001)
- ER 405-1-11 Real Estate Acquisition (28 Nov 2014)
- ER 405-1-12, Chapter 8 (Real Property Management) (chg 30, 30 Sep 1994)
- ER 1105-2-100 Planning Guidance Notebook (22 Apr 2000)
- EM 1110-1-400 Recreation Planning and Design Criteria (1 Nov 2004)
- ER 1110-2-400 Design of Recreation Sites, Areas, and Facilities (31 May 1988)
- ER 1120-2-404 Investigation, Planning and Development of Water Resources - Federal Participation in Recreational Development (1970)
  (This ER no longer exists)
- ER 1130-2-406 Shoreline Management at Civil Works Projects (original 31 Oct 1990, chg 2, 28 May 1999)
- ER 1130-2-500 Partners and Support (Work Management Policies) (original 27 Dec 1996, chg 3, 1 Jun 2006)
- ER 1130-2-540 Environmental Stewardship Operations and Maintenance Policies (original 15 Nov 1996, chg 3, 11 Aug 2008)
- EP 1130-2-540 Environmental Stewardship Operations and Maintenance Guidance and Procedures (original 15 Nov 1996, chg 3, 11 Aug 2008)
- ER 1130-2-550 Recreation Operations and Maintenance Policies (original 11 Nov 1996, chg 7, 30 Jan 2013)
- EP 1130-2-550 Recreation Operations and Maintenance Guidance and Procedures (original 15 Nov 1996, chg 5, 30 Jan 2013)
- ER 1165-2-400 Water Resource Policies and Authorities, Recreation Planning, Development, and Management Policies (31 May 1988)
- Environmental Impact Statement of Operation and Maintenance - Lake Shelbyville, Illinois (1975)
- Water Control Manual – Appendix A to Master Reservoir Regulation Manual (27 Oct 2008)

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APPENDIX A – ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL ASSESSMENT WITH DRAFT FINDING OF NO SIGNIFICANT IMPACT

Lake Shelbyville, Shelby and Moultrie Counties, Illinois, Timber Stand Improvement Management Strategies and Land-Use Classification Changes, Master Plan Update 2016

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Summary

The St. Louis District of the U.S. Army Corps of Engineers (Corps) is proposing to implement timber stand improvement management (TSI) strategies and a land-use classification changes at Lake Shelbyville, Shelby and Moultrie Counties, Illinois. These actions are proposed as part of the 2016 Lake Shelbyville Master Plan Update. The TSI work would be conducted over the next 20 years and would include approximately 8,900 acres spread over 50 compartments. The TSI is intended to insure the long range protection of the forest environment and support the practice of uneven aged forest management and diversification of species within the compartments, establishing a more stable biotic community. The lack of past management/manipulation has led to a degraded overall forest component in even-aged stands, diseased and dying trees, open forest habitats, loss of nesting habitat, loss of filtering capabilities and undesirable tree species regeneration. The fundamental timber management program goals are to improve the reservoir watershed habitats through best management practices that reduce erosion, regenerate and promote forest tree and shrub species that benefit wildlife. Land Classification changes, which include the change at Compartment 50 and addition of Environmentally Sensitive Areas (approximately 50 acres), are included in the Master Plan and this environmental assessment (EA). Land classification changes are considered major federal actions due to the fact that classifications allow or disallow various actions and/or activities. The District will use changes in land classifications to guide management decisions in order to strengthen resource protection. Many of the land classification designations aim to protect and improve land and water resources. Sensitive area classifications, and multiple habitat management, and continued coordination with Federal, State, and local agencies and municipalities will have positive impacts on natural resources on and around Lake Shelbyville.

The Corps has prepared this document in compliance with the National Environmental Policy Act and other relevant federal and state laws and regulations. This EA describes and analyzes the direct, indirect, and cumulative effects for the timber stand improvement and land use classification changes at the project. In addition to the Tentatively Selected Plan (Alternative 2), the Corps also evaluated a No Action alternative. Under the No Action alternative, current management strategies under the 2004 Lake Shelbyville Master Plan would continue to guide management of the project area. No further activities would be implemented to accomplish project goals.

This EA describes and summarizes the anticipated physical, biological, and social impacts of the proposed alternative management measures on the environment. Topics of discussion include, among others, (1) federally threatened and endangered species, (2) existing and anticipated impacts to vegetation, water, and wildlife resources, (3) cultural and socioeconomic components, (5) compliance with relevant laws and regulations, and (6) inter-agency coordination.

Table of Contents

Introduction

Document Structure

The St. Louis District of the U.S. Army Corps of Engineers (Corps) has prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This EA discloses the direct, indirect, and cumulative environmental impacts that would result from the No Action Alternative and the Tentatively Selected Plan. The document is organized into five chapters:

Chapter 1. Purpose and Need for Action:
The chapter includes information on the history of the project proposal, the purpose of and need for the project, and the Corps proposal for achieving that purpose and need. This section also details how the Corps informed the public of the proposal and how the public responded.

Chapter 2. Alternatives, including the Proposed Action:
This chapter provides a more detailed description of the Corps proposed action as well as the No Action alternative. These alternatives were developed based on issues raised by the interdisciplinary team, public and other agencies. This section also provides a summary table of the environmental consequences associated with each alternative.

Chapter 3. Affected Environment and Environmental Consequences:
This chapter describes the environmental effects of implementing the Tentatively Selected Plan and the No Action alternative. This analysis consists of biological, physical, and social resources.

Chapter 4. Consultation and Coordination:
This chapter provides a list of preparers and agencies consulted during the development of the environmental assessment.

Project Area/Location

Lake Shelbyville is located in Shelby and Moultrie Counties of east-central Illinois. The dam site is located on the Kaskaskia River about one-half mile east of Shelbyville, Illinois. The lake lies approximately 113 miles northeast of St. Louis, Missouri and 54 miles southeast of Springfield, Illinois. Highways providing direct access to the project area include: Illinois Route 16 running east-west on the south side of the project; Illinois Route 121 running generally east-west on the north side of the project; Illinois Route 128 running north-south on the west side of the project; and Illinois Route 32 running north-south on the east side of the project. The location of the lake and adjacent lands along with the regional highway network are presented in Figure 1.

The lake is confined by relatively abrupt slopes and has many timbered arms. The abrupt slopes and the erodible soils have resulted in a shoreline erosion problem impacting project facilities, although this is not impacting pool storage as this erosion was considered during the project design. The maximum relief at the dam site area is

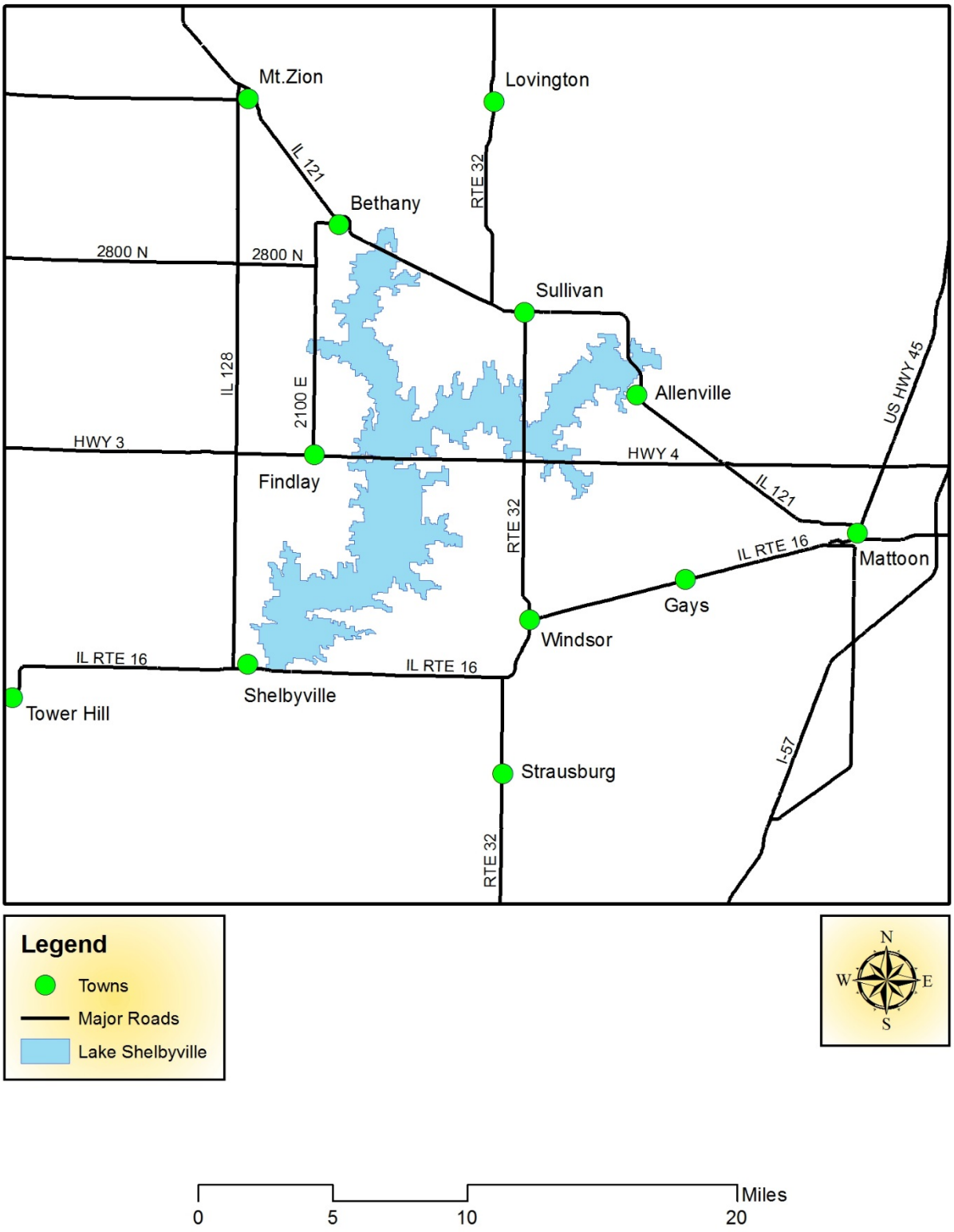

Figure 12. Major road network surrounding Lake Shelbyville

approximately 125 feet. The topography changes from a streambed elevation of about 535 feet National Geodetic vertical Datum (NGVD) to an elevation of 650 to 660 feet NGVD at the bordering uplands. Many small tributaries enter the river above the dam site, and the resulting ravines and valleys form a very irregular shoreline. Most of the valley slopes are covered with some virgin, but primarily second growth forest. The lake has a water surface area of 11,100 acres at joint-use pool elevation 599.7 feet NGVD. The pool at this elevation extends upstream from the dam approximately 20 miles and varies in width at this elevation from 0.25 to 1.0 mile. The depth of water from the valley floor at the dam to joint-use pool elevation is about 53 feet.

Two rivers, the West Okaw and the Kaskaskia, drain into Lake Shelbyville. The watershed is primarily agricultural. The Kaskaskia River begins its journey in Champaign County, while the West Okaw drains farmland from Piatt County.

Proposed Action

The Corps is proposing to implement land use classification changes (LUCC) and timber stand improvement (TSI) management strategies throughout the project area at Lake Shelbyville (Figures 2 and 3). The TSI work would be conducted over the next 20 years and would include approximately 8,900 acres in 50 separate compartments. The LUCC would take effect at the time the Master Plan is approved). This work is being proposed for the Lake Shelbyville 2016 Master Plan Update and is the Tentatively Selected Plan.

A land use classification change is proposed for Compartment 50 (Figure 3) In addition, three Environmentally Sensitive Areas (Figure 4) are proposed to be added to the Master Plan which are listed on the Illinois Department of Natural Resource's Illinois Natural Area Inventory (INAI). These sites are significant in their biological diversity with unusual concentrations of flora and fauna or being a high quality natural community. Natural areas in the inventory show us what the biological landscape looked like before settlement. These remnant snapshots in time reveal the diversity of the Illinois wilderness. The three areas are:

- Coneflower Hill Prairie - a five-acre parcel within Kaskaskia Unit, State Fish & Wildlife Management Area

- West Okaw Biologically Significant Stream - part of West Okaw River is located within West Okaw Unit, State Fish & Wildlife Management Area, and north of Rte. 121 to the wildlife area boundary.

- Capel Hill Prairie - a two-acre hill prairie patch within Wolf Creek State Park.

Purpose and Need

Master Plans are periodically updated to ensure focus on three primary components: regional and ecosystem needs, project resource capabilities and sustainability, and expressed public interests and desires. Management of the Lake Shelbyville forest is for

the purpose of protecting, conserving and otherwise improving forest land to be utilized as a recreation, wildlife, watershed, and scenic resource. Forest management techniques insure the long range protection of the forest environment and support the practice of uneven aged forest management and diversification of species within the compartments, establishing a more stable biotic community. Land use classification is for the purpose of revising land use policies based on changes in public use patterns, the need to identify Environmentally Sensitive Areas and other requests on recreational facilities on the project area. Through the implementation of updated Master Plans, project managers can provide responsible and timely protection, conservation, and enhancement of project resources. With the proposed Master Plan Update, this EA is being completed to evaluate existing conditions and potential impacts of proposed changes.

The fundamental timber management program goals are to improve the reservoir watershed habitats through best management practices (BMP's) that reduce erosion, regenerate and promote forest tree and shrub species that benefit wildlife. Special attention would be made to identify and protect cultural/historical resources, water quality, endangered species, sensitive areas, and removing invasive or undesirable species. Each stand would be managed according to a forest inventory, stand prescription and land classification. A 60-70% basal area component is targeted with removal and/or girdling of over-mature trees, inferior trees, and undesirable/off-site tree species. In most cases timber harvests are not feasible due to limited access to the stands and girdling with chainsaws would be utilized to kill the target trees in the canopy. These trees would be left standing.

The Lake Shelbyville Project has a variety of forest cover types ranging from upland hardwood forest to bottomland hardwood forest. These forests provide food and shelter for a variety of game and non-game species. Proper forest stocking, adequate understory growth and herbaceous plants provide excellent watershed filters. This filtering of silt and contaminants helps maintain water quality for fish and other aquatic life. Proper forest management techniques and ecosystem management principles would be used to improve forest and wildlife habitats while minimizing environmental damage. Management activities would be accomplished to meet the Corps objective of total ecosystem management by following specific forest and wildlife management prescriptions developed for individual stands within each compartment. Treatments and activities scheduled for Lake Shelbyville are found in the Project Operations Management Plan (USACE 2016).

Objectives

TSI

Forest management shall be administered to meet the following long-range objectives: To incorporate a total ecosystem management philosophy.

- To provide for optimum watershed and erosion protection.
- To maintain and improve the native wildlife habitat and healthy indigenous trees for forest cover necessary for the recreational resources.

- To keep the forest in a healthy, vigorous growing condition, free from large outbreaks of insects and diseases.
- To avoid deterioration of the forest resource.
- To assure fully adequate and dependable future resources of readily available timber through sustained yield programs, reforestation, and accepted conservation practices, and to increase the value of such areas for conservation, recreation, and wildlife diversity.
- To provide habitat for the Indiana bat.

LUCC

The proposed land-use classification changes have as their primary objectives:

- To provide a quality outdoor recreation experience which includes an accessible, safe and healthful environment for a diverse population,
- To identify and protect environmentally significant areas on Lake Shelbyville for future generations,
- To provide outdoor recreation opportunities on Corps administered land and water on a sustained basis, and
- To optimize the use of leveraged resources to maintain and provide quality public experiences at Corps water resources projects.

Scoping and Issues

Scoping is an early and open process for identifying the significant issues related to a proposed action. An initial scoping letter was sent to agencies and other stakeholders (see Appendix B of the Master Plan) on 5 November 2015 to invite comment on changes to the Lake Shelbyville Master Plan. In addition, public meetings were held on 17 November 2015 in Sullivan, IL, 18 November at the Lake Shelbyville Visitor Center, and 8 December 2015 at the Americas Best Value Inn, Vandalia, IL. Two additional agencies participated in scoping NEPA requirements for this project including the Illinois Department of Natural Resources (IDNR) and the Natural Resources Conservation Service (NRCS).

As a result, this EA analyzes and summarizes the physical, biological, and social impacts of the proposed TSI management measures and land-use classifications on the environment. In accordance with laws and regulations, relevant resources potentially impacted by the action are addressed.

Issue 1. Forest Management.
Issue 2. Land-Use Classification Change.
Issue 2. Indiana Bat Habitat.
Issue 3. Wildlife Habitat Quality.
Issue 4. Fuel Loading.

Alternatives Including the Proposed Action

This chapter describes the No Action alternative and one action alternative, or Tentatively Selected Plan, for achieving the project's purpose and need, and compares the alternatives in term of their environmental impacts and their achievement of objectives.

Alternatives dropped from further consideration

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Two alternatives that were analyzed but not carried forward was the City of Shelbyville's request to develop an approximate 2 acre parcel of property for a Recreation Day Use Area. The City of Shelbyville also submitted a request to change the land use classification from low density to high density recreation. There is no public access currently. The Corps utilized five criteria to evaluate these requests.

(a) **Comply with Headquarters, Division and District policies/regulations** - Phases 2 and 3 of the City's proposal included additional slips for overnight moorage, suggesting private, exclusive use for an adjacent proposed subdivision. This project does not comply with current authority (ER 1130-2-406 SHORELINE MANAGEMENT AT CIVIL WORKS PROJECTS), the St. Louis District Shoreline Management Policy – dated 12 July 1990, and the Mississippi Valley Division Regional Plan.

(b) **Consistent with project purpose** - The planned pier is inconsistent with the Corps definition of a day use area in a high density recreation area, which states the area as "providing recreation facilities for more than one day use activity." As there is a lack of suitable land for other day use activities, it appears there would be only one day use activity, a courtesy dock for transient boater access. The City's proposal includes future plans for overnight moorage, which is inconsistent with a day use area definition.

(c) **The topography in the proposed area is steep**. Access to the shoreline is not ADA compliant.

(d) **Access to the proposed day use area would be through private property.** There is no parking lot or potential for a lot on Corps owned lands in this area.

(e) **Reasonable connection to the project's natural and other resources** – The development does not provide a reasonable connection to the project's natural and other resources. The topography has ¼ acre of flat ground at the water's edge leading to a steep grass and wooded incline susceptible to erosion from high water. There is not enough land for amenities required for a day use area.

(f) **Consistent with land use classification** - The proposed area is not compatible as a high density recreation area as previously mentioned. The overall plans do not meet the definition of a day use area, nor is there room to provide those facilities in the future.

(g) **Demonstrate public interest** - There is no public demand for an additional day use area on Lake Shelbyville. There are three boat ramps within 10 minutes of the area, high density recreation areas, and established marinas under Corps lease that have available slips. Many public comments expressed a desire for the lake to preserve the natural shoreline as much as possible.

To summarize, the proposal does not meet criteria to become a day use area under City of Shelbyville lease. Environmental features including steep topography, small land base, lack of public access, and a narrow cove preclude the area from being suitable. Other factors against the proposal include access not being ADA compliant, close proximity of three other boat access points, public opposition and not complying with Division and District shoreline management policy. In addition, a requirement to determining whether or not the property is available for lease is a "finding that the grant will not interfere with...activities as shown in an approved Master Plan..." (ER405-1-12 paragraph 8-69.b). Because there are currently three marina facilities in operation on the lake, all operating at a capacity of less than 100%, leasing additional property which will eventually provide direct competition to existing facilities, directly contradicts regulation. Therefore, at this time approving another dock facility at the lake is not feasible.

Public scoping and agency coordination did not result in any additional changes to the Master Plan other than the LUCC at Compartment 50, the LUCC of Environmentally Sensitive Areas, and designation of the TSI work proposed across the project area (the Tentatively Selected Plan). Additional changes to the Master Plan did not rise to the level necessary to be in this EA, that is, they are categorically excluded (ER 200-2-2 [9a], dated March 1988). Therefore, only the No Action and Tentatively Selected Plan are considered further.

Alternative 1: No Action

NEPA requires that in analyzing alternatives to a proposed action a federal agency consider an alternative of "No Action." This alternative provides a baseline or reference against which to describe environmental effects of the action alternative. Routine maintenance of the existing roads/trails and open land management would continue. Selection of this alternative would not exclude the option for future management in this area.

TSI

No TSI would be conducted on the forested lands of Lake Shelbyville. The No Action alternative would continue to support a degrading forest ecosystem and further diminish watershed filtering capabilities that a more diverse uneven-aged ecosystem would provide. Under this alternative some of the consequences would include: 1) persistence

of undesirable even-aged stands; 2) increased potential for insect and disease infestation in adjacent woodland; 3) continued undesirable tree species regeneration; 4) increased numbers of diseased and dying timber; 5) loss of economic value of salvageable wood products; 5) continued closed-canopy and non-vegetated forest floor; 6) continued lack of diverse wildlife habitat, including browsing and nesting areas.

A No Action alternative decreases overall forest health and habitat quality. Failure to allow sunlight to the forest floor extinguishes the ability for desired tree regeneration and decreases diversity of early succession vegetation that is extremely important for watershed protection. Open forest floors allow for increased runoff by disallowing a roughness factor that removes impurities, accelerates erosion, minimizes nutrient uptake, and increases the speed at which water enters tributaries.

LUCC

Under the No Action alternative, Compartment 50 would remain classified as a Low Density Recreation area and the Environmentally Sensitive Areas would not be protected from various actions and/or activities such as easement requests or future development, nor the conservation of these resources. These lands have minimal development or infrastructure that support passive public recreational use (e.g., fishing, hunting, trails, wildlife viewing, etc.). No future developmental plans for the area would be considered and no timber clearing would be permitted.

Alternative 2: Full Implementation of Proposed Master Plan Update

With full implementation of the proposed Master Plan Update, two primary actions would be incorporated: 1) project wide Timber Stand Improvements, and 2) Land-Use Classification Changes.

Timber Stand Improvement

TSI in administratively designated natural areas is authorized within the Lake Shelbyville Master Plan, Section 7, Environmental Stewardship and section 8-02, Forest Resources. As described above, the work would be conducted over the next 20 years and would include approximately 8,900 acres in 50 compartments consisting of numerous separate stands (see Figure 2 of this EA for compartment locations).

Implementing TSI is imperative to moving a degraded forest system to a healthy and sustainable system. Present forest conditions and failure to implement management strategies would result in loss of habitat and economic value as listed in the aforementioned no action alternative. TSI activities within this option would 1) increase air flow and light to ground contact for pollination and forest regeneration; 2) create multi-aged or uneven aged timber stands for overall wildlife habitat while increasing watershed protection through enhancement of annual, perennial and woody growth; and 3) create early succession patchwork openings for nesting, escape and thermal cover. More specifically, TSI activities would be conducted using the following guidelines to determine management techniques and treatments within or among stands:

(a) Forest inventories would be updated to collect data and include stand delineation, species composition, diameter and age class distribution, slope, aspect, current wildlife habitat conditions and presence of unique habitat types.

(b) Stand Prescriptions would detail specific treatments within each stand to improve habitat conditions including TSI, snag creation, edge feathering, prescribed fire and other habitat manipulation activities. In some cases, due to young stands, old fields, high exotic component in the understory, etc., the prescription may be to take no action at this time. All forested acres in these 50 compartments are covered but it is unlikely that all 8,900 acres would receive TSI.

(c) Best Management Practices would consist of accepted and designed government and private forest management practices. In the case a timber harvest is warranted, the harvest would be conducted between October 31 and April 1 to avoid any conflict with Indiana bats. These would include directional skidding, using existing road systems to reduce erosion, creation of water bars, and seeding of all haul roads and landings. Skid trails and stream management zones would be delineated prior to logging activities to buffer harvest from drainages, streams, and wetlands. Harvesting would be limited to dry weather and/or frozen conditions only and no digging, excavation, or other subsurface soil alteration would be required or permitted.

(d) Monitoring regeneration through species dominance would be conducted annually. Desired tree species release practices would be implemented where overstocking of undesirable species occurs. All harvesting activities would be monitored and recorded by Lake Shelbyville Project personnel.

(e) Emerald Ash Borer (EAB) an invasive forest pest, is currently known in at least 60 counties in IL and include Shelby and Moultrie counties. In 2015, Illinois lifted its quarantine on the movement of cut non-coniferous wood within the state due to the high rate of infestation across the state. No further efforts to monitor and control the pest would be implemented.

(f) Indiana Bat and Northern Long-Eared Bat Habitat Enhancement would be an integral part of the Tentatively Selected Plan. The use of TSI would improve foraging and roosting habitat and is considered by the U.S. Fish and Wildlife Service (FWS) to be an acceptable practice for improving Indiana bat habitat. Thinning activities would increase travel and allow sunlight to potential roost trees. All wolf trees, dead trees, split trees, trees that have cavities, and trees with exfoliating bark would be favored for retention. If areas are found that have roosts, the areas would be delineated and avoided.

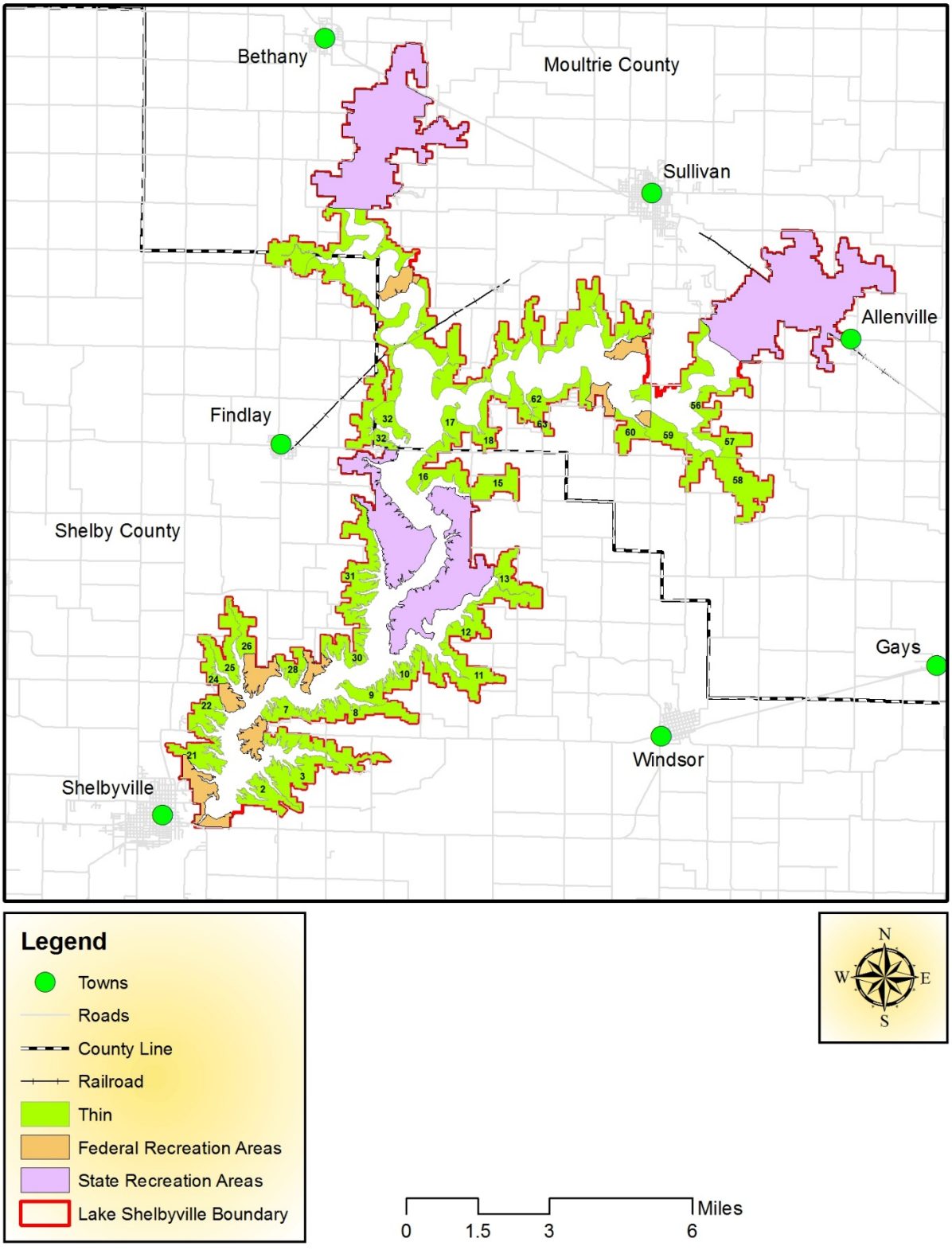

Figure 13. Compartments to be thinned.

Table 19. Compartment treatment schedule by stand.

FY	Compartment	Acres	Prescription
17	2,3	448	Basal Area Reduction
18	7,8	471	Basal Area Reduction
19	9,10,12	402	Basal Area Reduction
20	11	401	Basal Area Reduction
21	5,13	404	Basal Area Reduction
22	15,16	428	Basal Area Reduction
23	17,19,25	478	Basal Area Reduction
24	18,21	466	Basal Area Reduction
25	24,26,28	423	Basal Area Reduction
26	30,32	450	Basal Area Reduction
27	31	583	Basal Area Reduction
28	33,35	442	Basal Area Reduction
29	34,36,37	444	Basal Area Reduction
30	38,40,42,44	473	Basal Area Reduction
31	43,47,48,50	451	Basal Area Reduction
32	45,52	469	Basal Area Reduction
33	46,56	440	Basal Area Reduction
34	4,55,59	451	Basal Area Reduction
35	22,57,58,60	415	Basal Area Reduction
36	61,62,63	298	Basal Area Reduction
Total		**8,837**	

*Note: all basal area reduction would be evaluated for TSI practices after 10 years.

General Management Techniques

The following management techniques are proposed for the project area:

(a) All forests would be managed on an uneven-aged, multiple-use, sustained yield and ecosystem management system. Treatments would be based on specific requirements for improvement of forest and wildlife habitats.

(b) Single Tree Selection is the selective removal of low quality, cull, diseased, over-mature or undesirable trees from a stand to achieve target stocking and wildlife habitat objectives. This technique is a tool used in uneven-aged management to encourage wider distribution of tree diameters, dominant species, age class and enhancement of forest reproduction. Because single tree selection promotes denser stands, frequent re-assessments or inventories are required. These re-assessments allow managers the ability to closely monitor compartments, therefore maintaining healthy forest and wildlife habitats.

(c) Group selection is a silvicultural technique requiring removal of large groups of trees to enhance regeneration and provide openings for wildlife. Generally, group selections range in size from one-fourth acre to five acres. Group selections on

Lake Shelbyville would not exceed three acres unless adequate justification is provided.

(d) Stand composition would be based on site-species relationships. Most of the upland forests on Lake Shelbyville contain an oak/hickory component; therefore, these species would be targeted for propagation. Efforts would be made to prevent monocultures, or single species stands.

(e) Prescribed burning would be used as a tool to help re-establish natural vegetative communities, including open oak/hickory woodlands and accomplish and maintain wildlife habitat. Prescribed fire would also be utilized for vegetation modification and control where these benefits would promote diversity for wildlife habitats. Burn frequency would be dependent on the requirements of the wildlife species, successional stage and fuel loads.

(f) When wildfire, disease, insects, floods or storms damage extensive acres of quality hardwoods, every attempt would be made to remove these trees by salvage sale. Salvage operations would be performed as soon as practicable after the event to prevent deterioration of wood quality.

Treatments

Specific treatments for each stand within a compartment would be addressed in a prescription. It is essential to note that treatment and its extent would depend on each particular stand and its intended use. Other governing factors include: accessibility, influence zones, economics, weather, development timetable, etc. However, the following priorities generally apply:

(a) Establishment of suitable forest cover on recreation areas. There is a need for vegetative cover to serve as shade, screening, buffers, erosion control, and wildlife cover. Stands would be thinned as needed to maintain vigor and encourage the propagation of suitable wildlife species.

(b) Select open areas for reforestation and plant with desirable species.

(c) Protect steep banks from erosion.

(d) Develop and maintain populations of desirable wildlife.

(e) Protect heavy-use areas from degradation.

(f) Re-establish suitable vegetative cover on areas denuded by overuse and high water.

All treatment of vegetative cover on public land must be guided by the Land Use Classification for each compartment. An understanding of the requirements of a plant community and the limitations set upon it by the soil, water, insects, disease, and

people are essential to any successful change or manipulation. All treatments are to be naturally feasible and not forced through continued maintenance. Potential effects of the TSI are summarized in Table 2.

Table 20. Summary of effects of the proposed TSI by alternative.

Resource	No Action	Tentatively Selected Plan - TSP
Threatened and Endangered Species	Some suitable bat habitat. Would fulfill obligation to USFWS	Improved Indiana and northern long-eared bat habitats. Fulfills obligation to USFWS.
Vegetation	Persistent even-aged stands. Undesirable species composition and non-vegetated forest floor.	Diverse multi-age forest with improved nesting and filtering capabilities.
Water Resources	Continued run-off/sedimentation	Improved filtering, stabilization and roughness characteristics
Wildlife	Low habitat diversity in even-aged stand.	Increased forest diversity would lead to wildlife benefits
Invasive Species Management	Spread of invasive forest pests.	Control spread of invasive forest pests.
Recreation	Safety concerns, increased presence of dead snags.	Improve habitat for quality outdoor experiences.
Soils	Unstable soils creating erosion.	Root mass regeneration promotes soil stabilization.
Noise and Air Quality	No impacts.	Temporary impacts during TSI/harvest and prescribed burns and exotic treatments.
Socioeconomic	Impacts due to loss of important resource.	Stimulation through managed use of renewable resources.

Land Use Classification Changes

Compartment 50 (Figure 3) - is currently classified as “Low Density Recreation,” which is defined as, “Lands with minimal development or infrastructure that support passive public recreational use (e.g. fishing, hunting, trails, wildlife viewing, etc.). The proposed re-classification of Compartment 50 as “High Density Recreation” is defined as, “Lands developed for intensive recreational activities for the visiting public including day use areas and/or campgrounds. These could include areas for commercial concessions (marinas, comprehensive resorts, etc.), and quasi-public development. Currently, the

northern 24 acres of Compartment 50 is high quality and has been tagged as a potential candidate for inclusion into IDNR's Illinois Natural Area Inventory. The western portion of the compartment and south of the northeast running draw were farmed/pastured in the past and are highly degraded. Any development that takes place in this compartment would be encouraged in these already degraded areas. However, presently there are no plans or proposals for any type of development in Compartment 50, therefore, effects of the classification change on the environment cannot be quantified at this time. If warranted, any future development in Compartment 50 would elicit the need for a supplemental environmental assessment.

Coneflower Hill Prairie and West Okaw Biologically Significant Stream are currently classified as Multiple Resource Management Area/Wildlife Management areas. Capel Hill Prairie is currently classified as High Density Recreation. As mentioned above, these sites are significant in their biological diversity with unusual concentrations of flora and fauna, or being a high quality natural community, which emphasizes the need for re-designation as Environmentally Sensitive Areas. These LUCC are considered major federal actions because land classifications in the project area allow or disallow various actions and/or activities such as easement requests or future development. Many land classification designations aim to improve land and water resources. Further, these new classified areas would be targeted specifically for protection, conservation and preservation.

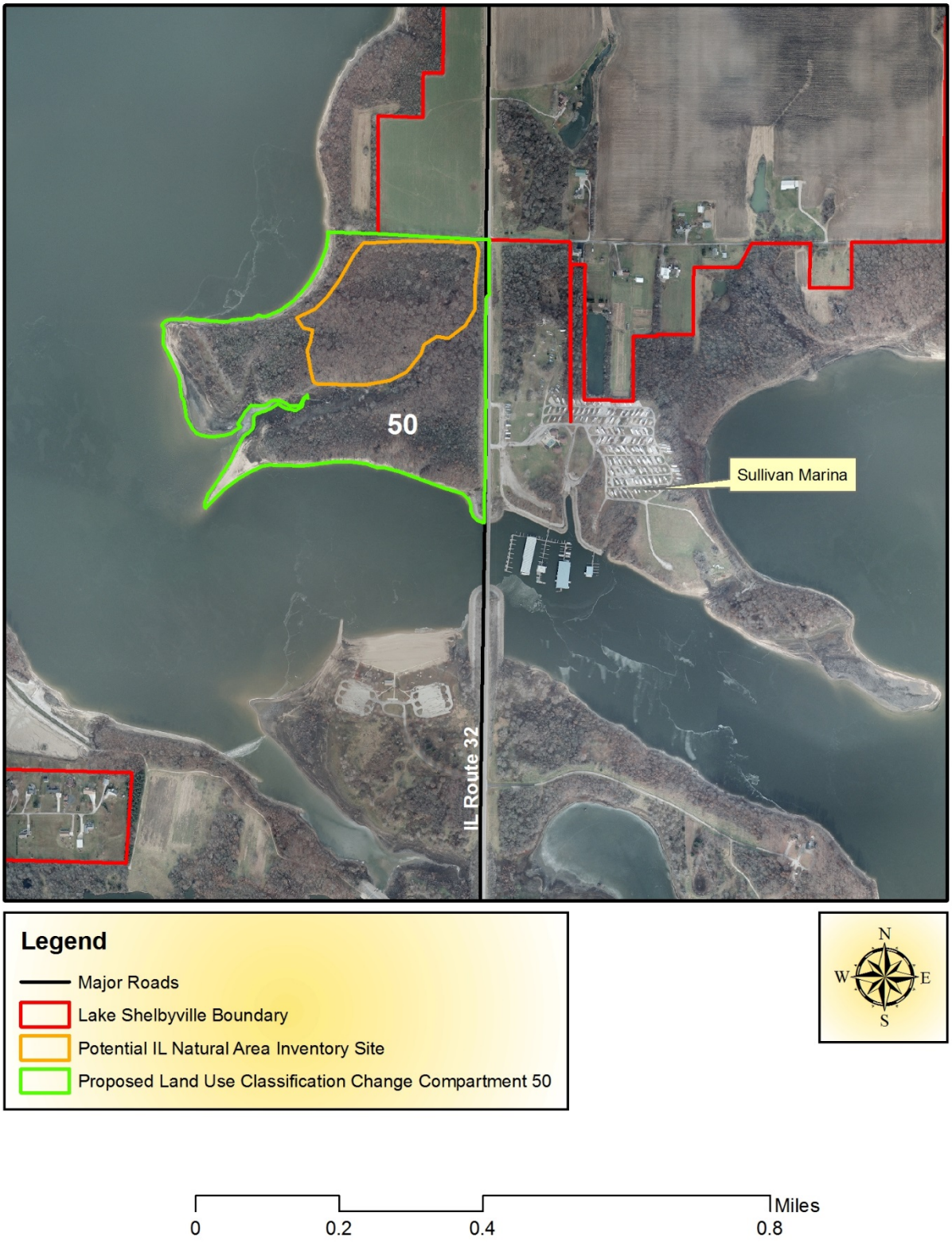

Figure 14. Location of Compartment 50.

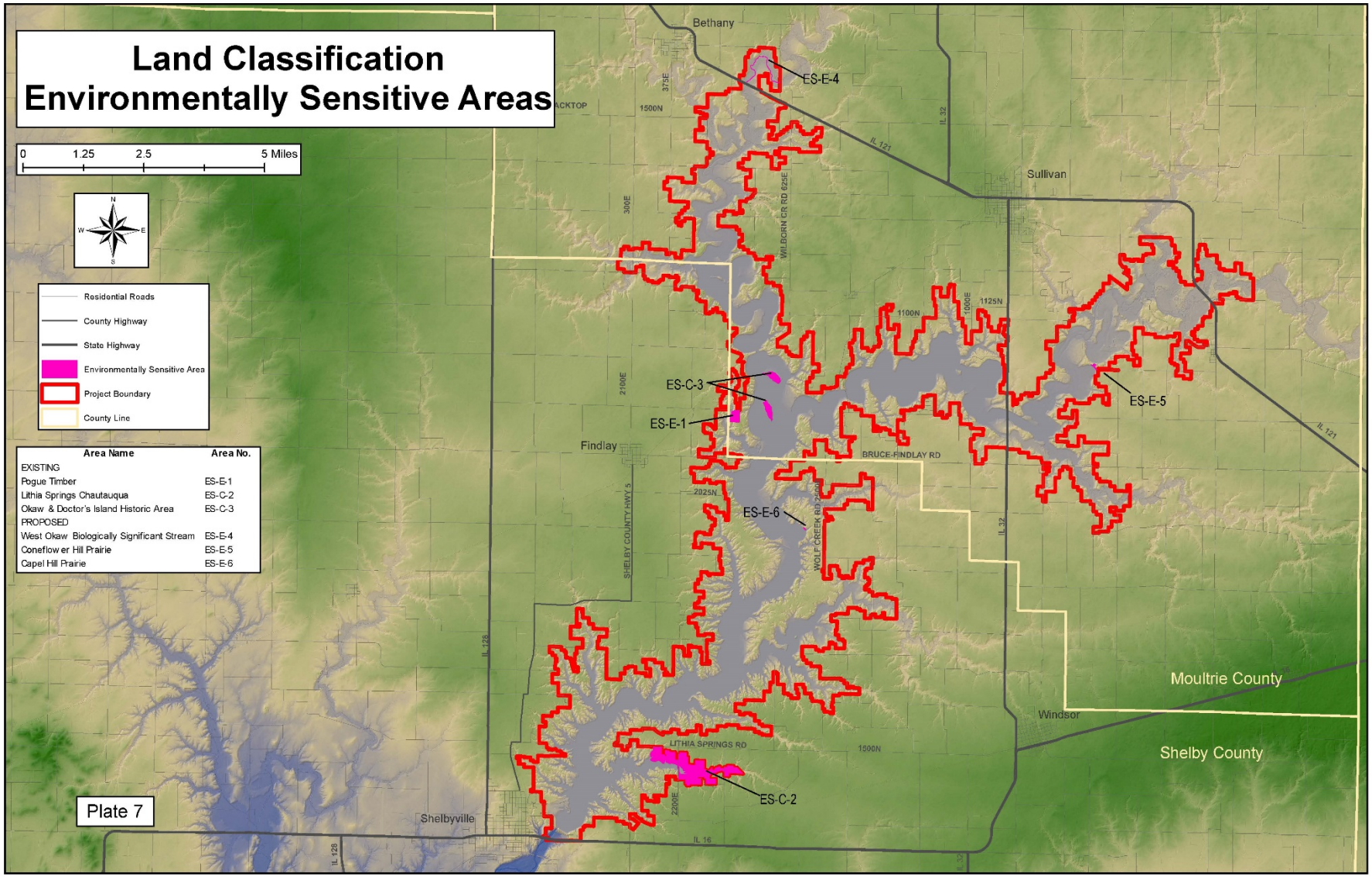
Land Classification
Environmentally Sensitive Areas
0 1.25 2.5 5 Miles
N
W
E
S
Residential Roads
County Highway
State Highway
Environmentally Sensitive Area
Project Boundary
County Line
Area Name | Area No.
EXISTING
Pogue Timber | ES-E-1
Lithia Springs Chautauqua | ES-C-2
Okaw & Doctor's Island Historic Area | ES-C-3
PROPOSED
West Okaw Biologically Significant Stream | ES-E-4
Coneflower Hill Prairie | ES-E-5
Capel Hill Prairie | ES-E-6
Plate 7
Bethany
Sullivan
Findlay
Shelbyville
Windsor
Moultrie County
Shelby County
ES-E-4
ES-E-5
ES-E-1
ES-C-3
ES-E-6
ES-C-2
IL 121
IL 32
IL 128
IL 16
BRUCE-FINDLAY RD
LITHIA SPRINGS RD
WILBORN CR RD 625E
WOLF CREEK RD 2200E
SHELBY COUNTY HWY 5
1500N
1100N
1125N
2025N
300E
375E
1000E
2100E
2200E

Figure 15. Proposed Environmentally Sensitive Areas

Affected Environment and Environmental Consequences

This chapter summarizes the biological, physical, and social environments of the affected project area relative to the alternatives under consideration. Relevant resources are addressed in terms of their present condition, their projected condition under the No Action alternative and the expected effects of the Tentatively Selected Plan.

General

The forests of Lake Shelbyville are typical of unmanaged woodlands in central Illinois. In the higher quality sites, species composition consists primarily of closed canopy native oak/hickory overstory, sugar maple midstory and a general lack of herbaceous layer or desirable regeneration in the understory with the occasional non-native Amur honeysuckle. Old agricultural fields and/or pastures species composition consists of native shingle oak, honey locust, ash species and black walnut with a typically heavy non-native autumn olive and/or Amur honeysuckle component. Bottomlands consist primarily of native oak species and black walnut on the lower slopes, and American sycamore, cottonwood and willow in the bottoms with limited regeneration due to frequent flooding with long periods of inundation. The frequent flooding keeps these areas relatively Amur honeysuckle free, however, non-native garlic mustard is an issue in most stands. Bottomlands that are inundated for long periods are primarily limited to the odd cottonwood, common buttonbush and willows.

Many benefits are obtainable from the forest at Lake Shelbyville. Among these products are forested watersheds, erosion control, wildlife recreational opportunities, aesthetic beauty, and timber stands. The production of timber is not the ultimate objective at Lake Shelbyville, and as a result, very little timber has been harvested. Personal conversations with prior managers indicate only two firewood sales have taken place since the inception of the lake.

The Forest Cover Act (PL 86-717) approved 6 September 1960, declared it to be the policy of the United States to provide that reservoir areas of projects for flood control, navigation, hydroelectric power development, and other related purposes, owned in fee and under the jurisdiction of the Secretary of the Army and the Chief of Engineers, shall be developed and maintained so as to encourage, promote and assure fully adequate and dependable future resources of readily available timber through sustained yield programs, reforestation, and accepted conservation practices, and to increase the value of such areas for conservation, recreation and other beneficial uses; provided, that such development and management shall be accomplished to the extent practicable and compatible with other uses of the project. The law further provides that in order to carry out the above national policy, the Chief of Engineers, under the supervision of the Secretary of the Army, shall provide for the protection and development of forest or other vegetative cover and the establishment and maintenance of other conservation measures on reservoir areas under the Chief of Engineers' jurisdiction, so as to yield the maximum benefit and otherwise improve such areas.

Threatened and Endangered Species

This section considers any possible effects of TSI activities and LUCC on federally threatened and endangered species.

Existing

In compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, USACE Environmental Compliance Section personnel consulted the U.S. Fish and Wildlife listing of federally threatened or endangered species, currently classified or proposed for classification that may occur in the vicinity of the proposed project (Shelby and Moultrie counties, IL). This list of species was acquired from USFWS website on 1 June 2016 http://www.fws.gov/midwest/endangered/lists/illinois-spp.html There is no federally designated critical habitat in the proposed project area. The Biological Assessment (BA) below addresses the federally listed species specific to this proposed project.

Table 21. Federally threatened, endangered, candidate, or proposed species potentially occurring in the Lake Shelbyville project area, Shelby and Moultrie counties, Illinois.

Species	Status	General Habitat
Indiana bat ***(Myotis sodalis)***	Endangered	Roost in trees with loose bark; Hibernacula in caves and mines; Maternity and foraging habitat = small stream corridors with well-developed riparian woods; upland forests
Northern long-eared bat ***(Myotis septentrionalis)***	Threatened	Hibernates in caves and mines – swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests and woods.
Piping plover ***(Charadrius melodus)***	Endangered	May be present in Moultrie County during migration.
Eastern prairie fringed orchid ***(Platanthera leucophaea)***	Threatened	Mesic to wet prairies

Indiana bat - Indiana bats roost in living, injured (e.g., split trunks and broken limbs from lightning strikes or wind), dead or dying trees. Maintaining quality maternity colony roost trees (those trees used by female Indiana bats and their young) is essential to reproductive success and long term recovery goals for this endangered species. Indiana bat roost trees tend to be greater than 3 inches diameter at breast height (DBH; optimally greater than 20 inches DBH) with loose or exfoliating bark. Most important are structural characteristics that provide adequate space for bats to roost. Preferred roost sites are located in forest openings, at the forest edge, or where the overstory canopy allows some sunlight exposure to the roost tree, which is usually within 0.6 miles of water. Indiana bats forage for flying insects (particularly moths) in and around the tree canopy of floodplain, riparian, and upland forests.

Indiana bats are known to use forested and riparian areas for foraging and roosting. Summer habitat requirements for the species are not well defined but the following are considered important: 1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas; 2) live trees (such as shagbark hickory and oaks) that have exfoliating bark; 3) stream corridors, riparian areas, and upland woodlots which provide foraging habitat.

Because Indiana bats tend to prefer canopy and mid- and under-stories that are relatively open, forest management practices, such as thinning, are being incorporated into habitat restoration plans for Indiana bats. These more typical forestry practices can be combined with habitat manipulations that are specific to Indiana bats and beneficial to other forest wildlife, such as selection of preferred roost tree species, retention/creation of snags, creation of foraging corridors, and goals for basal area that are more conducive to foraging and increase sun exposure to potential roost trees. Compartment stand prescriptions could easily be tailored to include Indiana bat specific measures.

Northern long-eared bat - The northern long-eared bat is federally listed as a threatened species with a 4(d) rule as of May 2, 2015 (Federal Register/Vol. 81, No. 9/Thursday, January 14, 2016/Rules and Regulations, pgs. 1900-1922). This bat is found across much of the eastern and north central United States, and all Canadian provinces from the Atlantic Ocean west to the southern Yukon Territory and eastern British Columbia. Northern long-eared bats spend winter hibernating in large caves and mines. During summer, this species roosts singly or in colonies underneath bark, in cavities and in crevices of both live and dead trees. Northern long-eared bats seem to be flexible in selecting roosts with bark remaining, cavities, or crevices. Foraging occurs in the interior understory of forests. Forest fragmentation, logging and forest conversion are major threats to the species. One of the primary threats to the northern long-eared bat is the fungal disease, white-nose syndrome, which has killed an estimated 5.5 million cave-hibernating bats in the Northeast, Southeast, Midwest and Canada.

Piping plover - The female lays four eggs in its small, shallow nest lined with pebbles or broken shells. Both parents care for the eggs and chicks. When the chicks hatch, they are able to run about and feed themselves within hours. Piping plovers are migratory birds and occasionally are seen on Illinois shorelines or wetlands. In the spring and summer they breed in northern United States and Canada. There are three locations where piping plovers nest in North America: the shorelines of the Great Lakes, the shores of rivers and lakes in the Northern Great Plains and along the Atlantic Coast. In the fall, plovers migrate south and winter along the coast of the Gulf of Mexico or other southern locations. Piping plovers are listed as endangered due to habitat loss or degradation, nest disturbance, and predation.

Eastern prairie fringed orchid - The eastern prairie fringed orchid occurs in a wide variety of habitats, from mesic prairie to wetlands such as sedge meadows, marsh edges, and even bogs. It requires full sun for optimum growth and flowering and a grassy habitat with little or no woody encroachment. A symbiotic relationship between

the seed and soil fungi, called mycorrhizae, is necessary for seedlings to become established. This fungi helps the seeds assimilate nutrients in the soil.

Blossoms of the orchid often rise just above the height of the surrounding grasses and sedges. The more exposed flower clusters are more likely to be visited by the hawk moth pollinators, though they are also at greater risk of being eaten by white-tailed deer. Seed capsules mature over the growing season and are dispersed by the wind from late August through September. Early decline was due to the loss of habitat, mainly conversion of natural habitats to cropland and pasture. Current decline is mainly due to the loss of habitat from the drainage and development of wetlands. Other reasons for the current decline include succession to woody vegetation, competition from non-native species and over-collection.

Alternative 1: No Action
Many parts of the areas would remain as unsuitable bat habitat. No additional foraging corridors would be created and canopies would remain closed, diminishing restoration of suitable habitat. None of the species are known to occur in the proposed TSI or Environmentally Sensitive Areas.

Alternative 2: Tentatively Selected Plan

Indiana bat –TSI management actions would provide habitat improvements for the Indiana bat. Indiana bat habitat enhancement would be favored where possible through timber thinning (girdling) to create open canopy for travel and bugging areas for a diversity of bat species. Thinning activities would increase travel and allow sunlight to reach potential roost trees. All wolf trees, dead trees, split trees, trees that have cavities and trees with exfoliating bark would be favored for retention. Snags would be created as dictated by habitat type conditions to protect/provide a specific habitat for Indiana bats. Any TSI activities that would occur outside the winter timeframe would utilize chainsaws to girdle the overstory trees in potential Indiana bat habitats to avoid any adverse impacts to bats that may be roosting in the target trees. Currently, no known roosts are located in the Lake Shelbyville area, however, any future areas that are found would be delineated and avoided. Reclassification of sites to Environmentally Sensitive Areas would have no adverse effects on the Indiana bat. Because no trees will be cleared (felled) under the Tentatively Selected Plan, the St. Louis District has determined that the proposed project "*may affect, but is not likely to adversely affect the Indiana bat*".

Northern long-eared bat - TSI improvements would likely benefit the northern long-eared bat as well. TSI activities would incorporate appropriate avoidance measures, as described above for the Indiana bat. The proposed project would not affect any caves. Reclassification of sites to Environmentally Sensitive Areas would not adversely affect the northern long-eared bat. Thus, the St. Louis District has determined that the proposed project "*may affect, but is not likely to adversely affect the northern long-eared bat*".

Piping plover and the prairie fringed orchid - The St. Louis District has determined the proposed project would have "*no effect*" on the piping plover or the prairie fringed orchid since neither species are known to occur in the proposed TSI areas or areas proposed to be reclassified as Environmentally Sensitive Areas.

Vegetation

Existing

Prior to construction, the lower elevations of the basin, generally the portion inundated to form the lake, were dominated by an overstory of pin oak, cottonwood, sycamore and soft maple. The understory was composed of a variety of shrubs and minor associations of grasses.

Remnants of this vegetative association can still be found along uncleared stream channels in the upper reaches of the lake, along the sub-impoundments, and on some lower elevation shoreline slopes. The upland sites are predominately a mixed oak-hickory forest cover type. Typical dominant species found in the overstory are white oak, black oak, northern red oak, post oak, and hickory species. Other species occurring in the overstory are white ash, black walnut, black cherry and sugar maple. The understory is comprised of sugar maple, elm and the occasional flowering dogwood.

Generally, the forests on upland sites are in fair condition. The stands vary in rotational maturity and range from fully to over-stocked with sawtimber size trees.

(a) The upper slopes of the hillsides above the lake have an oak/hickory association. White oak, northern red oak, black oak, post oak, pignut hickory, shagbark hickory, white ash, and elm are the major species present in the overstory. The understory consists primarily of sugar maple and hickory seedlings and saplings with minor occurrences of shrubs and grasses where sufficient light is available through canopy openings. Oak seedlings are almost nonexistent in these closed canopy stands.

(b) Numerous old field sites occur along the perimeter of Corps fee lands and on high points of land existing between tributary streams feeding into the lake. These old fields are in various stages of succession. Plant associations vary from weedy growth of grasses and forbs to early successional tree growth of elms, ash, black walnut, Osage-orange, shingle oak, and honey locust on open areas with later successional species of oaks and hickories encroaching from the forested edges. Vegetative management practices vary from tree planting in recreation areas and some old field sites to succession control of other sites by mowing or burning to create wildlife openings. The objective of the wildlife management activities is to achieve and maintain as natural a setting as possible through minimal cultural practices on existing woodlands and by planting tree and shrub species which are beneficial in promoting wildlife populations and encouraging recreational activities

Alternative 1: No Action

TSI

Under the No Action alternative, no TSI activities would take place in the project compartments; thus, there would be no adverse impacts associated with new management activities. However, consequences of no action include, among others, 1) persistence of undesirable even-aged stands; 2) increased potential and vulnerability for insect and disease infestation in adjacent woodland; 3) continued undesirable tree species regeneration; 4) increased numbers of diseased and dying timber; 5) loss of economic value of salvageable wood products, and 6) continued negative local public perceptions about Corps land management practices

LUCC

Under the No Action alternative, no development would take place in Compartment 50 or the newly classified Environmentally Sensitive Areas; potentially, these areas could be affected from easements or development, impacting the existing vegetation.

Alternative 2: Tentatively Selected Plan

TSI

The principal objective in conducting TSI activities is to move treated stands toward the desired condition and maintain in a healthy, vigorous condition to meet resource management objectives. Timber harvests shall be performed when feasible to promote accepted wildlife and forest management goals and objectives. As mentioned, harvesting of forest products would not be the normal practice due to access issues over much of the lake. Any harvesting activities would be performed in a manner that minimizes damage to residual trees, reproduction, and soils and would require restrictions on equipment and the time of year harvesting would be scheduled. Typical TSI would utilize chainsaws for midstory control and girdling of undesirable overstory trees. These girdled trees would be left standing and allowed to deteriorate over time further providing snags for use by wildlife. Because TSI is targeted to change forest dynamics, frequent re-assessments or inventories are required. These re-assessments allow managers the ability to closely monitor compartments, therefore maintaining healthy forest and wildlife habitats. Potential negative impacts to the forest from TSI activities are anticipated to be short-term and negligible.

With the proposed activities, wood fiber would be utilized in some instances, forest health/pathogen outbreak potential would be of minimal concern, and hazardous fuels would be diminished over time through the use of prescribed fire. The proposed post treatment activities would create young and vigorous stands capable of long term sustainability. Over time, the proposed activities would also contribute to a mosaic of varied age stands across the landscape.

In addition, the tentatively selected plan would implement management practices that increase watershed protection and flood damage reduction with multi-aged forest and ground cover through regeneration. As communities within the Lake Shelbyville watershed expand in industry and housing, previously wooded areas have been cleared, flattened and replaced with hard surfaces that provide no filtering, retention or

roughness characteristics that slow the speed at which water enters the Kaskaskia River and its tributaries. This expansion and accelerated water movement makes a healthy sustainable forest crucial to watershed management. Regeneration and multi-aged forest increase stocking rates and roughness that diminishes soil erosion and slows the flow of water, minimizing flooding and allowing uptake and nutrient displacement. Though oak-hickory regeneration is targeted through TSI activities; byproducts of exposing the forest floor to sunlight is growth of forbs and other herbaceous species. This habitat is particularly important for browsing, nesting and escape cover for a variety of wildlife species.

LUCC

The principle objective of changing the LUCC is to encourage people to experience the outdoors in some areas that remain relatively undisturbed since human settlement. By potentially developing a portion of Compartment 50 with self-guided trails, only minimal adverse effects are anticipated on the existing vegetation. Further, if development were restricted to the southeast portion of this compartment, there would be little negative impact on the vegetation since the area has been highly disturbed from agricultural use. The northern portion could be restricted in its development of trails to minimize impacts. Environmentally Sensitive Areas would not be developed and protection measures would be put in place to minimize impacts to the existing vegetation.

Invasive/Undesirable Species Management

Existing

Insects

Oak stands are vulnerable to insect and disease attacks. Dying and damaged trees, for example, are susceptible for infestation by red oak borers. The red oak borer is a forest insect pest species that permanently damages the wood of living oak trees, such as black oaks. The loss in grade can amount to 40 percent of the current tree value for factory grade lumber in terms of reduced quality caused by larval tunnels (Hay 1972).

Most oaks in eastern North America are attacked by the borer. The common hosts are northern red oak, black oak, and Scarlet oak. Wood-inhabiting insects such as carpenter worms, timber worms, and carpenter ants use red oak borer tunnels to gain entry into oak trees. These and other pests extend and increase the damage begun by the red oak borer. Decay organisms also gain entry into oak heartwood through borer tunnels.

Woodpeckers are the most important recognized natural control agents of the red oak borer. Predation by formicid ants also provides some degree of natural control. However, the effectiveness of these natural predators is limited at best (Hay 1972). Research has shown that control of the red oak borer is best achieved by removing infested trees from timber stands by salvage harvest. Population reductions of 95 percent of red oak borer were achieved over a 5-year period using this approach. Salvage harvest treatments reduce the chances of subsequent borer attack in residual trees (Donley 1974).

Emerald Ash borer (EAB) is a small, metallic-green beetle native to Asia. As an adult it eats the leaves of ash trees and causes little damage to the trees. However, the EAB larvae burrow into the ash trees to feed on the inner bark (phloem), leaving meandering tunnels that disrupt the transport of water and nutrients and usually causes mortality of the tree within 3-4 years. The EAB was discovered in Illinois in 2002 and has since spread to over 60 counties.

Non-Native Invasive Plants

The spread of non-native invasive plant (NNIP) species directly threatens the health of native ecosystems. These plants have characteristics that permit them to rapidly invade and dominate in new areas, often out-competing native plants for light, moisture, and nutrients. Some NNIP in the project area include isolated areas with tree of heaven, and numerous areas with Amur honeysuckle in the woodland edges and old fields. *Sericea lespedeza* (Chinese bushclover) is found along the shoreline and road sides and in old fields as is autumn olive. Garlic mustard is becoming prevalent in the wetter areas of the project.

Alternative 1: No Action

TSI

Past projects to control invasive insects and plants on the forest have been authorized as small portions of larger vegetation management projects. Those limited actions have not been able to keep pace with the extent in which several invasive species spread and encroach into new areas. No action would further allow these plants to colonize.

LUCC

While high quality timber is present on the north-northeast half of Compartment 50 (Figure 3), the remaining south-southwest woodlands are severely degraded with offsite species and NNIP such as autumn olive, garlic mustard and Amur Honeysuckle. No action would allow these NNIP to increase in density.

Alternative 2: Tentatively Selected Plan

TSI

One of the purposes of this project is to protect and restore naturally-functioning native ecosystems on the Forest by controlling current and future threats of insect and NNIP infestations to the project area managed by the Corps of Engineers. Control means, as appropriate include, eradicating, suppressing, reducing, or managing insect and NNIP populations, preventing spread of insect and NNIP from areas where they are present, and taking steps such as restoration of native species and habitats to reduce the effects of invasive species and to prevent further invasions (Executive Order 13112 invasive species).

Infested areas in any of these locations would be selectively treated with an approved herbicide and/or prescribed fire to control non-native competing plant species, such as fescue, *Sericea lespedeza*, multiflora rose, Amur honeysuckle, autumn olive and garlic mustard as funding allows. Herbicide application would be at or below the manufacturer's recommended application rate.

Contract provisions would be used as a guide for any timber sale purchasers to prevent the possible introduction and spread of invasive species during timber sale activities. This provision is part of a larger forest-wide program to identify areas of invasive species on sale area maps and require cleaning of equipment if it is being moved from a known area of infestation, or if the prior location of equipment cannot be identified, it would be assumed to be infested with seeds of invasive species of concern.

LUCC

NNIP control would be initiated to control unwanted plants. Additionally, by adding trails and increasing utilization of the area, interpretive opportunities would be there to teach the visiting public about the dangers of introducing NNIP to an area.

Water Resources

The major source of ground water in the area is within the sand and gravel deposits of the alluvial valleys and the sand bodies contained in the glacial drift. Alluvial aquifers are primarily limited to areas within the flood plain of the Kaskaskia River. The glacial drift aquifers fill buried bedrock valleys created by the advances and retreats of the Pleistocene ice sheets. The City of Shelbyville withdraws its water supply from wells in the Kaskaskia River alluvium. These wells produce from 200 to over 500 gallons per minute (gpm). The City of Sullivan, near Bo Wood Recreation Area, draws its water from wells that tap sands and gravels of the glacially deposited Glasford Formation. These wells individually produce from 150 to over 600 gpm.

EROSION

Existing

Stream banks of tributaries to the Kaskaskia and Okaw Rivers currently have excessive erosion, although protection of the stream banks is variable by stream. Streams throughout the project area have adequate riparian corridors that were established when the property was purchased for flood control. Streams outside Corps administered lands have differing levels of protection; some are forested while others have been channelized and manipulated or have unlimited access from livestock. These areas are experiencing accelerated erosion.

Due to increased frequencies of high water events, much of the shoreline around Lake Shelbyville is seriously degraded. The highly erodible clay soils become saturated during high water events and the weight of the saturated soil sloughs off large portions as the water recedes. Also, many forest floors are non-vegetated and have limited erosion diminishing characteristics further adding to the erosion. Limited early succession vegetation allows accelerated runoff and increases the speed at which water enters tributaries.

Alternative 1: No Action

TSI

Forest floors would remain open without filtering and soil stabilizing functions. This would increase overall erosion, adding sediment to tributaries and streams. Continued sedimentation added to streambeds would adversely impact most aquatic resources including fish, invertebrates, and plants; especially in terms of certain life history requirements.

LUCC

No changes to current erosion levels would be anticipated.

Alternative 2: Tentatively Selected Plan

TSI

Mature tree and midstory removal of sugar maple would allow sunlight to the forest floor allowing regeneration of oak/hickory forest along with many other types of vegetation which would increase "total stems per acre" or vegetative density. Increased stems equal increased ground stabilization and roughness, slowing water movement thus slowing erosion. TSI conducted utilizing chainsaws to girdle overstory trees and drop midstory trees would decrease erosion almost immediately by increasing sunlight to the forest floor and stimulating plant growth in the understory. In any case where a harvest could be utilized, forestry BMP's – especially pre- and post-construction of access roads - would be in place prior to any timber harvesting to protect the chemical, physical and biological characteristics of streams in the project area. Native vegetation would be re-established as soon as possible on any stream banks and riparian corridors denuded of vegetation. Harvesting would be limited to single tree selection in stream management zones.

The Tentatively Selected Plan implements management practices that increase watershed protection and flood damage reduction with multi-aged forest and ground cover through regeneration. Regeneration and multi-aged forest increase stocking rates and roughness that diminishes soil erosion and slows the flow of water, minimizing flooding and allowing uptake and nutrient displacement.

LUCC

Along with TSI practices, LUCC would complement management practices to control soil erosion.

QUALITY

Existing

A water quality monitoring program is conducted (when funding is available) three times during the months of March through October. Samples are collected at three lake sites, two tributary sites and one downstream site in the outlet channel in accordance with Engineering Regulation 1110-2-8154 Water Quality & Environmental Management for Corps Civil Works Projects, and Engineer Technical Letter 1110-2-362 Environmental Engineering Initiatives for Water Management. This would include updating the water quality management priorities for the district's projects to ensure water quality meets the

state and federal regulations for protection of human health and the environment, and for the safety and economic welfare of those at Corps projects. Ongoing goals include ensuring that downstream water quality meets all state and federal regulations, that the water is suitable for aquatic and human life, and continuing to evaluate trend analysis in relation to baseline conditions at all projects.

The Illinois Environmental Protection Agency in Title 35, Subtitle, C, classifies water quality criteria based on end usage. Subpart B contains regulations for general use water, while subparts C and D delineate those for public and food processing water and secondary contact and indigenous aquatic life standards, respectively. These standards are used to determine the water quality of the lake. The water quality sampling conducted reflects the minimal parameters needed to indicate if the water is able to sustain adequate plant and animal growth and to ensure safety for human recreation. The combination of sampling sites effectively represents the incoming contaminants and their effects on the lake. Monitoring includes parameters such as pH, dissolved oxygen, Redox, temperature, and conductivity taken at 1 meter intervals at all the lake sites. Analytical samples are taken at all sites and near the bottom at the site in front of the dam and are analyzed for the following parameters: total organic carbon (TOC), iron, manganese, ammonia-nitrogen, nitrate-nitrogen, ortho-phosphate, total phosphate, total suspended solids (TSS), total volatile suspended solids (TVSS), and E. coli bacteria. Trend analysis of this data is performed every five years.

During the summer months, lakes can experience abnormal layers of dissolved oxygen levels that causes anoxic conditions below the main dam during periods of low releases. Monitoring equipment was installed to allow lake personnel, water control personnel, and water quality personnel, to remotely monitor oxygen and temperature levels below the dam to avoid fish kills. This monitoring equipment is monitored on a daily basis.

In addition to water samples, sediment samples are taken once every 5 years or when funds are available. This data provides supplemental information as to the relative amounts of contaminants transported by sediments versus contaminants dissolved in the water column. The parameters analyzed include: fourteen priority pollutant metals, total phosphate (TPO4), Kjeldahl nitrogen, nitrate -N(NO3), total solids, total organic carbon (TOC), chlorinated pesticides and PCBs.

Continued monitoring of the lake and its tributaries is vital in assisting the future assessment of the lake's possible impairments. The water quality monitoring program represents the single metric that encompasses the overall health of the watershed as it is a direct measure of how well the environmental stewardship programs are working. A water quality status report is provided to the lake each year.

Alternative 1: No Action

TSI

Water quality would likely remain the same with potential increases in sediment due to lack of filtering capabilities expressed in mature timber stands.

LUCC
No changes in current water quality would be expected.

Alternative 2: Tentatively Selected Plan
TSI
Once TSI activities have been implemented, increased understory growth would occur - stabilizing soils.

LUCC
For Compartment 50, the effects of any development and associated runoff would be offset by placement of well-placed storm drains and through the armoring of any slopes that were in danger of sloughing off into the lake. Environmentally Sensitive Areas would continue to provide natural filtering of precipitation and run-off, thereby improving water quality in the watershed.

Fish and Wildlife

HABITAT
Existing
As described above, there is an overall lack of timber age class diversity within the project. Various species of wildlife need different age classed timber to support sustainable populations.

Located within the Lake Shelbyville Area are numerous species of wildlife native to this area of Illinois, including numerous types of rodents, small game birds and mammals, waterfowl, shore birds, song birds, furbearers, white-tailed deer, wild turkey, and predatory mammals and birds. Wildlife management procedures on the lake lands have benefited the species present. The flooded timber area provides nest trees for woodpeckers and wood ducks. In addition, the number and diversity of shore birds and waterfowl using this area has steadily increased. Water management complements utilization by waterfowl and other species of wildlife. Except during a period when water level is critical for flooding, it is a fish management goal to maintain a consistent lake level between 15 May and 15 June. This lake level management technique creates a more productive environment for the spring fish spawning period. The lake project office relays fish spawning information to the pertinent agencies. While not always possible to maintain a constant level, it is strived for every year.

Non-recreation areas are being managed to provide quality wildlife habitat. Vegetation, including trees and native prairies, are being planted to provide cover and a certain amount of food. These plantings are in contrast to the "clean farm" agricultural practices on adjacent lands and are planned to maintain existing edge. Together, the private farms and public wildlife areas provide a more balanced relationship of food and cover for wildlife over much of the project.

Agricultural subleases are managed to provide the same relationship in addition to furnishing a food supply for wildlife as well as waterfowl in sub-impoundment areas.

Alternative 1: No Action

TSI

Timber resources and habitat diversity is expected to decline as shade tolerant trees such as sugar maple replace hard mast producing trees. Browsing, nesting and escape cover habitats would not be restored and erosion would continue to increase. It is anticipated that wildlife species diversity would remain low, or below its biotic potential.

LUCC

Without designation of the Environmentally Sensitive Areas, wildlife diversity could potentially decline because of impacts from development or other stressors.

Alternative 2: Tentatively Selected Plan

TSI

Where conditions are favorable, TSI activities would transition mature forests to more uneven aged forest that offer a diverse ecosystem that is conducive to a wide variety of wildlife species and increases overall forest health for sustainability. For example, utilizing overstory girdling and midstory removal to achieve healthy forests and a range of vegetative age classes meets certain wildlife habitat objectives for the forest. A good way to produce more grassland wildlife habitat in forestland is to create temporary forest openings. Though oak-hickory regeneration is targeted through TSI activities; byproducts of exposing the forest floor to sunlight is essential for growth of forbs and other herbaceous species. This habitat is particularly important for browsing, nesting and escape cover for a variety of wildlife species.

In addition, where possible, TSI activities would be implemented to produce edge effect that is lacking in present landscape. Edge habitat is an important component to many ground nesting birds as well as small mammals. Where quality edge habitat exists on project lands, there are increases in wildlife sightings. Plant and animal communities established in mature timber or rare occurrences of unique habitat would be delineated during stand inventories and avoided. In order to provide a mature forest component for aesthetics and specific habitat, Sullivan Woods (known as Pogue Timber locally) located northeast of the Village of Findlay, would be managed as an old growth forest without TSI treatments.

In general, the management of lands would be oriented toward the improvement of the habitat. The forest is managed to supply the habitat diversity required by forest and edge wildlife species. The key to successful forest and wildlife management is to keep a healthy, vigorous, balanced forest.

LUCC

Development on a limited scale in parts of Compartment 50, while having an adverse impact on wildlife directly in the footprint, could benefit wildlife through public outreach programs and education – the outdoor experience. Environmentally Sensitive Areas would continue to provide “quality” habitat for native wildlife species.

Recreation

Existing

The fluctuations of Lake Shelbyville, particularly during the intensive recreation season, June through September, are favorable for recreational use.

The recreational developments at Lake Shelbyville are varied. Major activities of the visiting public consist of sightseeing, fishing, boating, water skiing, camping, picnicking, swimming, hiking, and hunting. Park and recreation areas have been developed which provide both extended-use and day-use opportunities. Included in these recreation areas are campsites, picnic sites, boat launching ramps, beaches, interpretive facilities, and hiking and nature trails. In addition, lands have been allocated for wildlife management. These wildlife areas are available for non-consumptive as well as consumptive recreational use.

Alternative 1: No Action

TSI

Lack of TSI management would affect recreation through the loss of aesthetics in diseased and dying timber, low quality wildlife habitat for viewing and consumptive purposes, and loss of valuable resources to the economy. Diseased and dying timber alongside trails pose overhead threats in falling limbs and windblown timber closes trails and interior access to visitors.

LUCC

It is anticipated that recreational use of the project area would remain the same.

Alternative 2: Tentatively Selected Plan

TSI

Management guidelines for forest lands provide the general procedures for treatments necessary to increase the value of lands for present and future outdoor recreational use. All management must be objectively planned in order to obtain optimum public benefits that insure the conservation and improvement of all resources. These resources would be treated as an integrated whole with continuing concern for environmental quality. All treatments must be coordinated with other areas of reservoir management. Management requirements of public lands are unique as compared to other forest lands of the area, because of intensive recreation use and the quality level of watershed protection. Due to increased water quality and wildlife populations realized through sound woodland management, recreation for hunters, fishers and non-consumptive uses like bird watching would likely increase.

LUCC

It is anticipated that there would be an increase in visitation to parts of Compartment 50 if hiking trails were developed. Currently, Compartment 50 receives very little visitation; however, the area could be tied into the General Dacey Trail, becoming a part of the trail system that will ultimately circumnavigate the lake. Environmentally Sensitive Areas would be guarded from overuse by visitors by implementing protective management strategies that conserve the natural heritage of the areas.

Soils

Existing

The surficial soils in the immediate project area consist of alluvial deposits in the valleys and floodplains of the major streams and Wisconsinan age glacial tills in the uplands. Sandy and gravelly clay tills are the predominant soil types in the uplands and silt and lean clays in the bottomlands.

Bedrock in the area consists of Pennsylvanian age strata that occur in sequences of sandstones and shale. Mineral resources consist of oil, coal, sand, and gravel. There are a few oil wells in the vicinity of Lake Shelbyville.

The local coal workings extracted the Shelbyville Coal, a 2-foot thick coal seam that was mined by the room and pillar method. Access to the coal was obtained through vertical shafts or through stopes driven in the valley walls. The abandoned mine workings located in the dam and spillway foundations were thoroughly explored and sealed by cement grouting. Since these and the surrounding coal workings were already old and abandoned at the time of dam construction, the extent of the mines in the reservoir area is not known. Although abandoned, the existence of these workings underlying areas of reservoir lands creates the potential for future ground subsidence.

Alternative 1: No Action

TSI

No new management activities would take place, nor any activities associated with the Tentatively Selected Plan. Therefore, no management-related appreciable changes in productivity of the land would occur. Soils would be impacted by regular maintenance and use of roads as well as any other planned and ongoing natural resource management activities. In the absence of wildfire, current runoff and erosion pattern would be maintained with no appreciable increases expected. This alternative is considered to have no effect on the soil resources in the area, since no activities are proposed with this alternative.

In general, forest areas would remain normally functioning, and soils would remain in good condition unless they are disturbed in areas where the terrain is hilly or steep. Mostly natural conditions would continue. Organic matter would continue to increase, with expected dead, beetle-killed, and blown-down trees contributing to the overall organic matter collecting on the ground.

LUCC

In general, Compartment 50 and the proposed Environmentally Sensitive Areas soil conditions and trends would remain as they are.

Alternative 2: Tentatively Selected Plan

TSI

This alternative has the potential to impact soil resources as a result of any harvest activities. The effects of these activities on soil resources in the project area can be described in terms of short and long term effects on the productivity of the soils. Short

term effects are those considered lasting three years or less and are associated with the recovery period in which disturbed soils become reestablished with vegetative cover. In contrast, long term effects are associated with activities which displace the upper portions of the soil profile (topsoil). Many years are needed for the soil to recover its original productivity when the surface layers are removed. Severe compaction associated with rutting (created by heavy equipment operating when soils are too wet) is considered a long term impact. Wet soils would be avoided in project planning, and rutting would be smoothed during timber sale closure to reduce impacts from rutting. In conventional harvesting operations, the impacts of unbladed primary skid trails and unbladed log landings are considered to be short term impacts to soil productivity.

Important factors considered in evaluating effects to soil resources from this project are: the extent of the activity area and the extent of the activity area where long term soil productivity has been reduced. Effects to the soils from this project are considered not significant when 85 percent of the activity area retains its original long term soil productivity (Forest Service Handbook, R9, 2509.18, Soil Quality Monitoring).

General timber harvest areas are expected to recover quickly. Research has shown that the upper few inches of soil recovers quickly from compaction. This is primarily due to organic matter additions from logging debris, soil biota activity, freezing and thawing and plant root growth from existing and new vegetation. Recovery from compaction is slower in the 8 to 12 inch depth zone, but compaction is not expected at these depths unless equipment operates in wet conditions, which would not be allowed.

Soil compaction would occur on the log landings and primary skid trails as a result of heavy equipment use with Alternative 2. Areas of concentrated use, such as log landings are most affected. This compaction would increase the bulk density and result in decreased pore space, infiltration rate, and water holding capacity. These effects are considered detrimental to plant growth. The degree and depth of compaction depends on the number of passes made by the equipment, and the moisture content of the soil at the time the passes are made. Changes in pore space do not normally occur on well drained soils, such as those that occur over most of the project area, until three or more passes have occurred. Compacted areas would be ripped and seeded to help mitigate the effects of compaction and promote re-vegetation.

Rutting would occur if equipment operates on wet soils as well; therefore wet soils would be avoided in logging plans. Seasonal soil wetness is difficult to predict, but when soils are prone to high seasonal water tables, dry season or logging on frozen soils is preferred. When rutting occurs in the general harvest area, it is considered a long term effect. Literature shows that the effects of the severe compaction that rutting produces can reduce plant growth for many decades. Soil movement (erosion) can occur on long unimpeded slopes, where mineral soil material is exposed to raindrop impact and overland water flow. Soils on upper slopes can lose productive topsoil as it moves down slope with water. Soil erosion may occur where bare soil is exposed on a slope as a result of equipment tracking difficulties (spinning wheels), bladed skid roads and landings, or where logs are dragged across the soil repeatedly. The placement of the

landings on gentle topography prevents long unimpeded runs. The presence of vegetative soil cover, and logging debris; which is commonly found on harvested areas, would prevent long unimpeded runs.

LUCC
Soils in parts of Compartment 50 would experience short-term impacts if trails are constructed. Soils in the Environmentally Sensitive Areas would be unaffected by the Tentatively Selected Plan since no development would occur in these areas.

Air Quality

Existing
Consistent with the intent of the Environmental Protection Act of the State of Illinois, Illinois has adopted ambient air quality and episode standards that specify maximum permissible short-term and long-term concentrations of various contaminants in the atmosphere. Ambient air quality and episode standards are limits on atmospheric concentrations of air contaminants established for the purpose of protecting the public health and welfare. The Shelbyville Lake region (Shelby and Moultrie counties, IL) is currently designated as in compliance with the six criteria pollutants (those for which air quality standards have been developed - particulate matter (PM10 and PM2.5), ozone (1-hour and 8-hour), sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead) (https://www3.epa.gov/airquality/greenbk/ancl.html accessed 8 June 2016).

No Action
TSI
Under this alternative large, possibly uncontrollable wildland fires could occur since there would be no management treatment to reduce growing fuel accumulations. Many years of fire suppression actions have reduced the amount of acres burned naturally, thus increasing the amount of available fuels for a wildland fire.

Smoke from uncontrolled wildfires has potential to affect an area for several days. This situation may occur during multiple events (i.e. more than one uncontrolled wildland fire). An uncontrolled wildland fire also has potential to spread from or into areas outside of the project area. Under this alternative, only after a wildland fire is reported and determined that the associated smoke is or may cause health and/or safety concerns, can Standards and Guidelines and other mitigation measures be identified and implemented. The severity of these potential air quality impacts resulting from wildfires can be mitigated through the resource management activities (i.e., thinning and prescribed burning) proposed in the Tentatively Selected Plan.

LUCC
As above, under the Tentatively Selected Plan, wildland fires may occur that would temporarily affect local air quality. Also, campfires, gas powered vehicle emissions from lawn mowers, personal vehicles, etc. could have localized negative impact on air quality but are likely negligible in scope.

Tentatively Selected Plan

TSI

The following effects are likely to occur over short periods of time (less than a ½ day following the treatment):

(a) Increased localized particulate matter and carbon monoxide concentrations for short periods of time (< a half day)
(b) Eye, nose and throat irritations
(c) Decreased visibility along travel ways
(d) Odor/nuisance of smoke
(e) Slash created from thinning activities may increase smoke intensities if the first burns are conducted shortly after treatment has occurred. After the first post-treatment burn, most fine fuels created from the downed midstory or slash would be consumed. Medium to large diameter fuels (greater than ¼") may take several burns to reduce.

General potential air quality impacts that may be associated with TSI in the project area are anticipated to be short-term and temporary. TSI activities would cause dust and exhaust fumes from harvesting operations or minimal exhaust fumes if chainsaws are utilized for girdling. These impacts are considered short term. Equipment operation, activities, or processes performed by the contractor shall be in accordance with all federal and state air emission and performance laws and standards. The contractor shall keep construction activities under surveillance, management and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by the contractor in accomplishing the specified harvest activities shall be in strict accordance with the laws of the State in which the work is being performed and all federal emission and performance laws and standards. In the event that air pollution occurs due to harvest activities, the contractor shall take all necessary steps to rectify the situation to the satisfaction of the contracting officer. Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to federal, state, and/or local allowable limits at all times.

LUCC

As above, under the Tentatively Selected Plan, wildland fires may occur that would temporarily affect local air quality. Campfires, gas powered vehicle emissions from lawn mowers, personal vehicles, etc. could have a negative impact on air quality but are likely negligible in scope. Fuel accumulation management strategies would be developed for Compartment 50 and the proposed Environmentally Sensitive Areas.

Socio-economic

Shelby and Moultrie Counties are rural and have struggled in the past with employment losses in the manufacturing and services sectors. While there is a small timber industry, most of the timber resources on the lake are inaccessible without the consent of an adjacent landowner to provide access, which is unlikely in most cases. TSI contracts may supply a contractor with a few hundred acres to girdle a year but would not be a strong economic driver in the community. However, the improvement of the forest habitats would encourage consumptive users of wildlife, such as hunters, trappers,

fishermen; as well as non-consumptive users such as bird watching, camping, hiking, cycling to utilize the project. These users would infuse capital into local communities through the sale of fuel, motels, camping fees, sales taxes, dining, and groceries.

Hazardous, Toxic, and Radioactive Waste

TSI and LUCC

An Environmental Condition of Property is not required in accordance with ER200-2-3 for this action.

Cultural

TSI and LUCC

A review of existing records indicate that many of the areas have not been formally surveyed as provided for in the National Historic Preservation Act of 1966, as amended (NHPA). Any stands that would be commercially harvested would be required to have an archaeological survey completed to determine if any cultural resources exist prior to any harvest activities. If any exist, each resource would require evaluation as an historic property as defined by the NHPA. Based upon the identification and evaluation of each resource, the USACE would establish buffers around historic properties to prohibit disturbance of the properties. Illinois State Historic Preservation Office (ILSHPO) would be consulted throughout this process and any determinations of significance and eligibility for nomination to the National Register of Historic Places would be fully coordinated with ILSHPO through the execution of a Memorandum of Agreement stipulating the specific procedures to be followed. The identification and evaluation process would be conducted on an annual basis as each stand is scheduled for cutting. In the event that a cultural resource is discovered during the actual timber girdling operation, work in the immediate area would be stopped until consultation with ILSHPO and evaluation of the resource is completed. In all cases, avoiding disturbance to cultural resources would be the primary means of preserving historic properties. At this time, TSI utilizing chainsaws for simply girdling the overstory trees would not require archaeological surveys as there would be no ground disturbing activities involved.

There are two recorded sites on the shoreline of Compartment 50, 11MT88 and 11MT105. Both of these sites require testing to determine if they are eligible for the National Register of Historic Places. Additionally, only the shoreline of Compartment 50 has been previously surveyed. An intensive pedestrian survey would be required before any developments within the Compartment are approved. If any archaeological sites are identified they must be considered in the planning process so as not to adversely impact the site(s).

Cumulative Effects

Cumulative impacts to the environment result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts may result from individually minor but collectively significant actions taking place over a period of time 40 CFR Part 1508. Cumulative

impacts are studied to enable the public, decision-makers, and project proponents to consider the "big picture" effects of a project on the community and the environment. In a broad sense, all impacts on affected resources are probably cumulative; however, the role of the analyst is to narrow the focus of the cumulative effects analysis to important issues of national, regional, or local significance (CEQ, 1997).

The Council on Environmental Quality (CEQ) issued a manual entitled Considering Cumulative Effects Under the National Environmental Policy Act (1997). This manual presents an 11 step procedure for addressing cumulative impact analysis. The cumulative effects analysis for the Proposed Action followed these 11 steps, shown in Table 11. The following subsections address scoping, the affected environment, and environmental consequences for the Proposed Action.

Table 122
CEQ's 11-Step Approach for Assessing Cumulative Impacts

Component	Steps
Scoping	1. Identify resources
	2. Define the study area for each
	3. Define time frame for analysis
	4. Identify other actions affecting the
Describing the Affected Environment	5. Characterize resource in terms of its
	6. Characterize stresses in relation to
	7. Define baseline conditions
Determining the Environmental Consequences	8. Identify cause-and-effect relationships
	9. Determine magnitude and significance
	10. Assess the need for mitigation of
	11. Monitor and adapt management

1. Scoping

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impacts of activities in and around Lake Shelbyville. Past actions include the construction and operation of the reservoir, the recreation sites surrounding the reservoir, as well as residential, commercial, agricultural, and industrial facilities throughout the region. All of these developments have had varying levels of adverse impacts on the physical and natural resources in the region. Many of these developments, however, have had beneficial impacts on the region's socioeconomic resources. In addition, many of the historic impacts have been offset throughout the years by the resource stewardship efforts of the Corps, Illinois DNR, and other management partners.

The most significant past action was the construction and development of the Lake Shelbyville Reservoir. This change created new natural and physical conditions, which, through careful management by the Corps, Illinois DNR, and other management partners, have created new and successful habitats and other natural resource conditions. The construction of the project also had an impact on cultural resources.

Impacts to cultural resources were coordinated with the Illinois SHPO. In addition, the Corps and the other management partners have also brought a wide variety of high-quality recreational opportunities to the reservoir.

Describing the Affected Environment

Existing and future actions also contribute to the cumulative impacts in and around the reservoir. Existing and future actions include the operation of project facilities, upgrades and maintenance of recreation sites, as well as residential, commercial, agricultural, and industrial development throughout the region that benefit from the lake project. Continued project operations would result in the sustained maintenance and development of recreational facilities. These facilities would enhance the recreational offerings made by the Corps and other management partners. Such improvements would result in varying levels of impacts to the surrounding resources. Similarly, surrounding residential, commercial, agricultural, and industrial development could result in varying levels of adverse impacts to many resources.

Determining the Environmental Consequences

Within the project boundary, adverse impacts would be offset through resource stewardship efforts. The programmatic approach to project management included in this EA would allow for future development plans and mitigation responses to be adapted to address many adverse actions. This would allow the Corps and other management partners at Lake Shelbyville to continue to reduce the contribution of its activities to regional detrimental cumulative impacts to the environment through proactive actions and adaptive resource management strategies.

Relevant Laws and Regulations, Compliance

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations)

Executive Order 12898 requires “to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report of the National Performance Review, each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its program, policies and activities on minority population and low-income populations…” This project would not have any adverse impacts on minority and low-income populations.

Also included with environmental justice are concerns pursuant to EO 13045, Protection of Children from Environmental Health Risks and Safety Risks. This EO directs federal agencies to identify and assess environmental health and safety risks that may disproportionately affect children under the age of 18. These risks are defined as “risks to health or to safety that are attributable to products or substances that the child is likely to come into contact with or ingest.” This work has been reviewed for compliance with these orders and it has been determined that the proposed action would not adversely affect or have significant impacts on the health or environment of children.

Bald and Golden Eagle Protection Act of 1940
On August 9, 2007 the bald eagle was removed from the federal list of threatened and endangered species. It remains protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The Bald and Golden Eagle Protection Act prohibits unregulated take of bald eagles. The Fish and Wildlife Service recently finalized a rule defining "take" that includes "disturb." "Disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (USFWS 2007).

Three bald eagle nests are known to exist on Lake Shelbyville (compartments 16, 36, 61). These nests are monitored by Corps personnel annually to determine activity. The period January 1 to March 1 is important for initiating nesting activity and March 1 to May 15 is the most critical time for incubation and rearing of young. The USFWS has recommended that to fully assess the potential impacts of the project on bald eagles, refer to the National Bald Eagle Management Guidelines: (http://www.fws.gov/pacific/eagle/NationalBaldEagleManagementGuidelines.pdf), which include recommendations to avoid effects to eagles. Project construction timing and activities would be consistent with the recommendations outlined in the guidelines.

Clean Water Act (Sections 401 and 404)
No jurisdictional wetlands, waterways or other Waters of the United States would be affected by the proposed access, repair, and construction methods associated with this proposed project. As such, the St. Louis District, Regulatory Branch determined that no Section 404 Clean Water Acts permits would be required to complete the project as proposed.

Environmental Regulatory Constraints

The EA is subject to compliance review with all applicable environmental regulations and guidelines. The National Environmental Policy Act is considered in partial compliance until a NEPA decision document is signed. The National Historic Preservation Act would be considered in partial compliance until there is concurrence from the State Historic Preservation Officer on the District's EA conclusions.

Federal Policies	Compliance
Clean Air Act, 42 USC 7401-7542	Full
Clean Water Act, 33 USC 1251-1375	Full
Comprehensive Environmental Response, Compensation, and Liability Act, 42 USC 9601-9675	Full
Endangered Species Act, 16 USC 1531-1543	Partial 1
Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds	Full
Executive Order 11990, as amended (Protection of Wetlands)	Full
Farmland Protection Policy Act, 7 USC 4201-4208	Full
Fish and Wildlife Coordination Act, 16 USC 661-666c	Partial 1
Food Security Act of 1985, 16 USC 3801	Full
Migratory Bird Treaty Act of 1918, 16 USC 703, et seq.	Full
Land and Water Conservation Fund Act of 1965, 16 USC 4604601-4, et seq.	Full
National Environmental Policy Act, 42 USC 4321- 4347	Partial 2
National Historic Preservation Act, 54 USC 300101, et seq.	Partial 3
Noise Control Act of 1972, 42 USC 4901, et seq.	Full
Resource, Conservation, and Rehabilitation Act, 42 USC 6901-6987	Full
Rivers and Harbors Appropriation Act of 1899, 33 USC 401-413	Full
Floodplain Management (EO 11988 as amended)	Full
Prevention, Control, and Abatement of Air and Water Pollution at Federal Facilities (EO 11282 as amended by EO's 11288 and 11507)	Full
Protection and Enhancement of Environmental Quality (EO 11991)	Full
Protection and Enhancement of the Cultural Environment (EO 11593)	Full
Protection of Wetlands (EO 11990 as amended)	Full

Full compliance: having met all requirements of the statute for the current stage of planning

[1]Full compliance will be attained upon completion of coordination with the U.S. Fish and Wildlife Service

[2] Full compliance will be attained upon completion and signing of NEPA documents.

[3] Full compliance will be achieved completion of coordination with the State Historic Preservation Officer.

Relationship between Short-Term Use and Long-Term Productivity

The local short-term impacts of the recommended action and the use of resources for it are consistent with the maintenance and enhancement of long-term productivity for the local area, region, and nation. Implementation of the project would support growth and development of employment and population in the region.

Coordination

Cooperation with state and federal agencies presently exists in several aspects of forest management. Portions of project boundary adjoin lands leased or licensed to the state of Illinois. Therefore, continued coordination and cooperation is imperative in such areas as fire control, forest insects and disease detection, encroachments, etc. Also, an exchange of information is highly beneficial. Cooperating agencies include: U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, Natural Resources Conservation Service, Illinois Environmental Protection Agency, Illinois Department of Natural Resources, Illinois Department of Agriculture, University of Illinois, Southern Illinois University and University of Illinois Springfield.

ENVIRONMENTAL ASSESSMENT PREPARERS

Name	Role
Lee Mitchell	Natural Resources Specialist, Lake Shelbyville
Ken Cook	Biologist, St. Louis District Corps
Lara Anderson	Archaeologist, St. Louis District Corps
Rick Archeski	Hazardous, Toxic, Radioactive Waste Specialist, St. Louis District Corps
Matt Mangan	US Fish and Wildlife Service, Carterville, IL

References

Donley, D. E. 1974. Wood borer losses in Appalachian oak, Southern Limberman 8(1974), pp. 115-118.

Hay, C. J. 1972. Woodpecker predation on red oak borer in black, scarlet and northern red oak. Annals Entomological Society of America 5(6):1421-1423.

USACE (U.S. Army Corps of Engineers). 2016. Lake Shelbyville Master Plan, Design Memorandum No. 504, May 2000.

US EPA. 2001. National Air Quality and Emissions Trends Report, 1999. EPA 454/ R-01-004, USEPA, Office of Air Quality Planning and Standards. March.

USFWS (U.S. Fish and Wildlife Service). 2007. Protection of Eagles; Definition of ‘‘Disturb’’. Federal Register 72(107): 31132- 31139.

FINDING OF NO SIGNIFICANT IMPACT
Lake Shelbyville, Shelby and Moultrie counties, Illinois, Timber Stand Improvement Management Strategies And Land-Use Classification Changes

I. I have reviewed and evaluated this document concerning the proposed implementation of timber stand improvement (TSI) management strategies and land use re-classification of Compartment 50 and three Environmentally Sensitive Areas at Lake Shelbyville, Shelby and Moultrie counties, Illinois as part of the 2016 update of the Lake Shelbyville Master Plan. The timber stand improvement work would be conducted over the next 20 years and would include approximately 8,900 acres spread over 50 compartments. The Corps has prepared this document in compliance with the National Environmental Policy Act and other relevant federal and state laws and regulations. This Environmental Assessment describes and analyzes the direct, indirect, and cumulative effects for the timber stand improvement and land use classification change to Compartment 50.

II. As part of this evaluation, I have considered:
   (a) Existing Resources and Future without the Authorized Plan - (No Action) Alternative.
   (b) Impacts to Existing and Future Resources under the Tentatively Selected Plan.

III. These alternatives have been studied for physical, biological, cultural, social and economic effects. Issues evaluated as part of my review included the impacts of the TSI activities and re-classification of Compartment 50 on quality forest management, Indiana bat, fish and wildlife habitat quality, and fuel loading. No significant impacts were identified. In addition:
   (a) Federally listed endangered and threatened species will not be adversely impacted.
   (b) There would be no appreciable degradation to the physical environment (e.g., soils, air quality, and water quality).
   (c) There would be no significant impacts to the biological components of the project (e.g., vegetation, wildlife, aquatic organisms).
   (d) No significant impacts from invasive/undesirably species management or fuels management are anticipated.
   (e) No adverse impacts to historic properties are anticipated.
   (f) The "no action" alternative was evaluated and determined to be unacceptable because it did not address the purpose and need for updated management issues at Lake Shelbyville.
   (g) No significant cumulative impacts are anticipated.

IV. Based on the disclosure of the Tentatively Selected Plan's impacts contained within the Environmental Assessment, no significant impacts to the environment are anticipated. The proposed action has been coordinated with the appropriate

resource agencies, and there are no significant unresolved issues. Therefore, an Environmental Impact Statement will not be prepared prior to proceeding with the proposed changes to the Lake Shelbyville Master Plan as identified in the Environmental Assessment.

Date _____

_____
Anthony P. Mitchell
Colonel, U.S. Army
District Engineer

LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED
SHELBYVILLE ILLLINOIS

APPENDIX B – AGENCY AND PUBLIC COORDINATION

The following pages identify partner and stakeholder letters, news releases, and public comments on the Master Plan. All comments have been addressed.

News Release Email Contacts

Newspapers
Alton Telegraph – Alton IL
Beardstown Newspaper – Beardstown IL
Beecher City Journal – Beecher City IL
Bloomington Pantagraph – Bloomington IL
Champaign News Gazette – Champaign IL
Dewitt County Constitution - Farmer City IL
Effingham Daily News – Effingham IL
Greenup Press – Greenup IL
Herald & Review – Decatur IL
Herald Enterprise – Golconda IL
Macoupin County Enquirer – Carlinville IL
Neoga News – Neoga IL
News Progress – Sullivan IL
Pana News – Pana IL
Peoria Journal Star – Peoria IL
Ramsey News Journal – Ramsey IL
Shelbyville Daily Union – Shelbyville IL
Taylorville Daily News – Taylorville IL
Toledo Democrat – Toledo IL

Magazines
Heartland Outdoors
Midwest Outdoors

Radio Stations
97.3 Radio – Taylorville IL
KMOX Radio-St. Louis MO
WCRC-Radio Effingham IL
WEJT- Radio Effingham IL
WGN Radio – Chicago IL
WLKL- Lakeland – Mattoon IL
WPMB/WKRV Radio - Vandalia IL
WSMI Radio – Litchfield IL
WSOY Radio – Decatur IL
WMCI Radio - Mattoon IL
WXEF/WKJT Radio – Effingham IL

Online News
Shelby Co. News

TV Stations
ABC News Channel 15 – Springfield IL WAND-TV. Decatur IL
WCIA-TV- Champaign IL
WEIU – Charleston IL

Other Interested Parties
Chips Marine
Ed Baumgarten
Jim Deer – City of Pana
Shelby Historic House & Inn
Shelbyville Works – Brian Tucker
Kathy Kniksic – Lake Volunteers Association

Congressional Contacts
The Honorable Chapin Rose, State Senator
M-103F State House
Springfield, IL 62706
(217)558-1006
(217)782-9586 FAX

The Honorable Richard Durbin, US Senator
525 S. 8th Street
Springfield, IL 62703

The Honorable Mark Kirk, US Senator
607 East Adams
Suite 1520
Springfield, IL 62701

The Honorable John Shimkus, US Congressman
101 North 4th St.
Suite 303
Effingham, IL 62401

The Honorable Adam Brown, State Representative
Illinois House of Representatives
314 Capitol Building
Springfield, IL 62706

Partners
Eric Maxey
Lake Volunteers Association
P.O. Box 23
Shelbyville, IL 62565

Nancy Cruitt
Lithia Springs Marina
611 N 6th Street
Shelbyville, IL 62565

Dan Mohr
Findlay Marina
536 Cr 800N
Findlay, IL 62534

Jon Fayhee
Sullivan Marina & Campground
925 IL-32
Sullivan, IL 61951

Jerry Yockey, Chairman
General Dacey Trail Committee
1501 West Main Street
Shelbyville, IL 62565

Eric Harris
CIMBA
212 Elm Springs Dr.
Sullivan, IL 61951

CIOSA (Central Illinois Sportsmen for Outdoor Accessibility)
Attn: Bob Kerans
3045 S. Franklin St. Rd.
Decatur, IL 62521

CISOA
Attn: Bob Hill
9095 Texas Church Road
Clinton, IL 61727

Agencies
Kathy Reiser, County Extension Director University of Illinois Extension
1125 WN 2nd Street
Shelbyville, IL 62565

Robert Amling, Chairman
Shelby County Office of Economic & Community Development .
669 N 825 East Rd
Tower Hill IL 62571

Dave McCabe, Chairman
Moultrie County Board
10 S. Main St.
Sullivan, IL 61951

David Cruitt, President
Shelby County Board
P.O. Box 230
Shelbyville, IL 62565

Freddie Fry, Director
Shelby County Tourism/Lake Shelbyville Area CVB
315 E. Main Street
Shelbyville, IL 62565

Greg Reynolds, Chairman
Shelbyville Chamber of Commerce
143 Morgan Street
Shelbyville, IL 62565

Vonda McConnell
Shelbyville Chamber of Commerce
143 Morgan Street
Shelbyville, IL 62565

Jared Rowcliffe
Shelby County Emergency Mgt
315 E. Main St.
Shelbyville, IL 62565

Stepheny McMahon
Sullivan Chamber and Economic Development
112 West Harrison
Sullivan IL 61951

Other Contacts
Cultural
Rachel Leibowitz
Deputy State Historic Preservation Officer
Preservation Services Division
Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, Illinois 62701-1507

EPA
Kenneth A. Westlake
US EPA, Region 5
77 West Jackson Blvd E19J
Chicago, Illinois 60604-3590

Bruce Yurdin
Illinois Environmental Protection Agency
Bureau of Water: Watershed Management Section
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

USFWS
Matt Mangan
Fish and Wildlife Biologist
Ecological Services
Marion Illinois Sub-Office
8588 Route 148
Marion, IL 62959

USDA
Doug Peters
USDA-NRCS
111 N. Cedar Street
Shelbyville, IL 62565

Local City Leaders
Bill Ashley, Mayor
Village of Bethany
P.O. Box 352
Bethany, IL 61914

John Diss, Mayor Village of Findlay
P.O. Box 199
Findlay, IL 62534

Jeff Johnson, Mayor City of Shelbyville
170 E. Main Street
Shelbyville, IL 62565

Ann Short, Mayor City of Sullivan
Sullivan City Building
2 West Harrison
Sullivan, IL 61951

Terry Kuhl, Mayor
City of Windsor
1016 Maine Street
Windsor, Illinois 61957

Non-Governmental Contacts

Ted Horn
Sierra Club Belleville Group
30 S. 87th St.
Belleville, IL 62223

The Nature Conservancy
PO Box 440400
St. Louis, MO 63144

Robert D. Shepherd
Izaak Walton League of America
16 Juliet Ave
Romeoville, IL 60446

Kathy Andria
American Bottoms Conservancy
P.O. Box 4242
Fairview Heights, IL 62208

IDNR

Illinois Department of Natural Resources
Office of Water Resources
One Natural Resources Way, 2nd Floor
Springfield, Illinois 62702-1271

Mike Mounce
Fisheries Biologist
1660 W. Polk Ave.
Charleston, IL 61920

Richard Glazebrook
IDNR Superintendent,
Eagle Creek and Wolf Creek State Parks
R.R. 1 Box 16
Findlay, IL 62534

Stan Duzan, Superintendent
IL Department of Natural Resources
West Okaw and Kaskaskia Rivers WMA
562 State Hwy 121
Bethany, IL 61914

Dave Wahl
Kaskaskia Biological Station
RR 1, Box 157
Sullivan, IL 61951

Wes Cattoor, P.E., CFM
Water Supply Engineer
IDNR - Water Resources
1 Natural Resources Way
Springfield, IL 62702

Illinois Department of Agriculture
Terry Savko
Illinois Department of Agriculture
Bureau of Land and Water Resources
P.O. Box 19281 State Fairgrounds
Springfield, IL 62794-9281

Other Partners
Bruce Condill
Board of Directors
Upper Kaskaskia Watershed/KWA
1749 Co Rd 1900 N
Arthur, IL 61911

Tom Colclasure
Executive Director
Shelby County Community Services
1810 W. South 3rd Street I P.O. Box 650
Shelbyville, IL 62565

Steve Jurgens
Upper Kaskaskia Watershed/KWA Board Member
206 Taylor Lane
Arthur, IL 61911-1680

Dr. Gerald A. Snyder MD Board Member
Lake Shelbyville Development Association/KWA
1960 Highlawn Road
Decatur, IL 62521

Jonathon Manuel CPESC-IT
Resource Conservationist - Champaign County Soil & Water Conservation Dist. 2110 W. Park Ct.
Champaign, IL 61821

Christopher Ware
U.S. Coast Guard Auxiliary
621 West Leander
Clinton, IL 61727

Penny Clay
Coast Guard Auxiliary
1107 Jefferson Ave.
Charleston, IL 61920

Don Koonce, Sheriff
Shelby County Sheriff Dept.
151 N Morgan St.
Shelbyville, IL 62565

Chris Simms, Sheriff
Moultrie County Sheriff s Dept.
1505 West Hagerman
Sullivan, IL 61951

Clay Brush, Commander
Moultrie County Dive Team
PO Box 380
Bethany, IL 61914

Glenda Plunkett
Marketing/ Volunteer Coordinator Shelby Memorial Hospital
200 S. Cedar Street
Shelbyville, IL 62565

Sullivan Ambucs
Attn: Jim Bales
#15 Kas-Villa Acres
Sullivan, IL 61951

David Tallman, Police Chief
City of Shelbyville
100 W Main St.
Shelbyville, IL 62565

Tim Miller
Spores-N-More Committee
1025 N. Wood St.
Shelbyville, IL 62565

Steve Buchtel, Executive Director Trails for Illinois
1639 Burr Oak Road
Homewood, IL 60430

Austin Pritchard, Commander
Shelby County Dive Team
1903 E 750 North Road
Shelbyville, IL 62565

Gene Davis, Secretary/Treasurer Heartland of Illinois RC&D
111 North Cedar, Suite 3
Shelbyville, IL 62565

Linda Voris
Spores-N-More Committee
29 Ritchie Dr.
Windsor, IL 61957

Shelby Electric Cooperative
P.O. Box 560
Shelbyville, IL 62565
Attn: Kevin Bernson
Attn: Josh Shallenberger

CPO Brian McReynolds Wolf Creek SP
1837 N. Wolf Creek Road
Windsor, IL 61957

Louis Yockey, General Dacey Trail Committee
1 Natural Resources Way
Springfield, IL 62702

Shelby Co. HWY Dept.
Attn: Alan Spesard
1590 St. HWY 16
Shelbyville, IL 62565

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

REPLY TO
ATTENTION OF:

Operations, Readiness and
Regulatory Division

NOV 05 2015

Honorable Mark Kirk
607 East Adams
Springfield, IL 62701

Dear Senator Kirk,

The St. Louis District U.S. Army Corps of Engineers is updating the Carlyle Lake, Lake Shelbyville, and Kaskaskia River Project Master Plans. The purpose for updating these plans is to bring them into compliance with current USACE policies and regulations, update visitor use trends, and obtain public input to ensure future activities are accomplished in an environmentally sustainable manner.

These Master Plans address outdoor recreation and environmental stewardship activities occurring on lands owned and easement lands managed by the Corps of Engineers at the above mentioned Civil Works Projects. These Master Plans do not address shoreline management, water control or water quality, since these activities are included in other Corps of Engineers operating plans.

We are coordinating this effort with appropriate Federal, State, and local government agencies as well as non-government organizations, stakeholders, and members of the public. We will be conducting workshops to obtain input from members of the public according to the following schedule:

- Sullivan, IL: November 17, 2015, 6-8 pm at the VFW, 1132 State Highway 32
- Shelbyville, IL: November 18, 2015, 6-8 pm at the Lake Shelbyville Visitor Center, 1989 State Highway 16
- Carlyle, IL: December 3, 2015, 2:30-5:30 pm at the Mariners Village Resort Conference Center, 1 Resort Drive
- Vandalia, IL: December 8, 2015, 5-7 pm at the Americas Best Value Inn, 1920 N. Kennedy Blvd.
- Germantown, IL: January 12, 2016, 5-7 pm at the Germantown American Legion, 1105 Sycamore St.
- Red Bud, IL: January 13, 2016, 5-7 pm at the Kaskaskia Regional Port District Office, 336 N. Main St.

- Chester, IL: January 14, 2016, 5-7pm at the Chester Public Library, 733 State St.

I would like to extend a personal invitation for you and/or your representative to participate in any or all of these public workshops. Should you have any questions, and to confirm your attendance, please contact Julie Ziino at (314) 331-8016 or via email at Julie.Ziino@usace.army.mil. Thank you for your continued support.

Sincerely,

for Anthony P. Mitchell
Colonel, U. S. Army
District Commander

DEPARTMENT OF THE ARMY
LAKE SHELBYVILLE MANAGEMENT OFFICE
RURAL ROUTE 4, BOX 128B
SHELBYVILLE, IL 62565-9804

REPLY TO
ATTENTION OF:

November 5, 2015

Dave Wahl
Kaskaskia Biological Station
RR 1, Box 157
Sullivan, IL 61951

Dear Dave:

The St. Louis District U.S. Army Corps of Engineers is updating the Carlyle Lake, Lake Shelbyville and Kaskaskia River Project Master Plans. The purpose for updating these plans is to bring them into compliance with current USACE policies and regulations, update visitor use trends and obtain public input to ensure future activities are accomplished in an environmentally sustainable manner.

These Master Plans will guide the management activities on government-owned and leased lands located at the above mentioned Civil Works Projects. Decisions about land use classifications at these projects may affect future management of natural resources and outdoor recreation opportunities. Input from your organization and the general public will help define the revisions to our currently outdated Master Plans.

Because our organizations work so closely together, your input is extremely valuable to the update process. The Corps of Engineers will hold two public workshops around Lake Shelbyville. They will be held at the following times and locations:

November 17 - Sullivan VFW, 1132 State Highway 32, 5 – 7 pm

November 18 - Lake Shelbyville Visitor Center, 1989 State Highway 16, 5 – 7 pm

In addition to the public workshops, a separate workshop has been set up just for our partners and stakeholders. This workshop will be held December 2, 3 – 6 pm at the Lake Shelbyville Visitor Center.

I would like to extend a personal invitation for you and/or a representative to attend any of the Lake Shelbyville workshops. Please feel free to contact Maria Shafer at 217-774-3951 if you have any questions concerning the Lake Shelbyville Master Plan process.

Sincerely,

Jon Summers
Assistant Operations Manager

US Army Corps of Engineers®
St. Louis District

NEWS RELEASE

For Immediate Release:
9 November 2015
Release No.: 16-06

Contact:
Phil Manhart (217) 774-3951 ext 7010
Phil.J.Manhart@usace.army.mil

Lake Shelbyville Master Plan Update Public Workshop

Lake Shelbyville – The US Army Corps of Engineers at Lake Shelbyville is currently in the process of updating its Master Plan. Lake Shelbyville, along with Carlyle Lake and Kaskaskia River Project, are updating their plans simultaneously. The Master Plan addresses outdoor recreation and environmental stewardship activities at each project. The updated Master Plan will provide a current inventory and assessment of land and water resources and physical improvements, any changes to resource use objectives and an evaluation of current and future needs required to protect the natural and cultural features of the lake. Emphasis will be placed on increasing efficiency of operations through consolidation, repair and rehabilitation. The Corps of Engineers will be holding two public workshops around Lake Shelbyville. They will be held at the following times and locations:

November 17 - Sullivan VFW, 1132 State Highway 32, 5 – 7 pm

November 18 - Lake Shelbyville Visitor Center, 1989 State Highway 16, 5 – 7 pm

A joint public workshop will be held with Carlyle Lake at a future date, as will other public workshops concerning Carlyle Lake and Kaskaskia River Project. Those times and locations will be announced later.

The workshop is informal. No formal presentation will be made. Maps of the lake will be posted in each location to show current facilities. Comment cards will be available for comments and suggestions. For further information, contact the Lake Shelbyville Project Office, 217-774-3951.

-30-

U.S. ARMY CORPS OF ENGINEERS – ST LOUIS DISTRICT – LAKE SHELBYVILLE
1989 State Hwy 16, Shelbyville, IL 62565
http://www.mvs.usace.army.mil/Missions/Recreation/LakeShelbyville.aspx

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EDITOR'S PICK

Corps seeks input for Lake Shelbyville plan

By SHARON BARRICKLOW For the Herald & Review Nov 22, 2015 0

SHELBYVILLE – The U.S. Army Corps of Engineers is asking area residents for ideas and suggestions to improve tourism, ecosystem protection, wildlife management, recreation and flood control at Lake Shelbyville.

The corps hosted two public meetings, one in Sullivan and one in Shelbyville, last week to seek public input on the lake's master plan, an every 10-year document that sets the goals and direction for lake management.

Surrounded by GIS maps of the lake, corps employees asked visitors to share their ideas for improving the lake and the Corps relationships with Moultrie and Shelby counties.

"Providing the public with the experience they want is important to our mission," park ranger Phil Manhart said.

Manhart said the corps would take feedback from the two public meetings along with information gathered at meetings with other stakeholders in the area to put together a comprehensive 10-year plan. The Lake Shelbyville plan will mesh with a similar plan being developed for Lake Carlyle. He said the corps depends on feedback and assistance from the public.

"Over the years, we've had to figure out ways to do more with less," he said. "That's why it is important that we focus on the things the public really want and care about."

At the Shelbyville meeting, members of Shelby Partners, an economic development group of area communities, were adding their ideas to the list.

"We're especially interested in adding additional signs," said David Young, a Shelby Partners board member.

"We'd like to find a way to add more highway signs directing visitors not only to Lake Shelbyville in general, but also to specific places at the lake."

Young said another item on the group's wish list is Wi-Fi hot spots at Lake Shelbyville campgrounds. With more than 1,500 campsites, he said it was unrealistic to expect visitors to go without Internet service.

"We have visitors from the Chicago area who think they've gone to the end of the earth," he said. "They want to get away, but they also want to stay connected while they vacation."

US Army Corps of Engineers

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2016 Lake Shelbyville Master Plan Update

The Lake Shelbyville Master Plan update process began this fall with the first public meeting on November 17, 2015. The Master Plan was last updated in 2004.

The 2016 Master Plan update will incorporate a Watershed Approach among the three Corps projects located on the Kaskaskia River: Lake Shelbyville, Carlyle Lake and the Kaskaskia River Project. All three project Master Plans are being updated in FY 16 and will include a common approach to addressing issues.

Below is a definition of what the Master Plan (MP) encompasses:

> *A Project Master Plan is defined by the U.S. Army Corps of Engineers as the strategic land use management document that guides the comprehensive management and development of all project recreational, natural, and cultural resources throughout the life of a Corps water resources development project. In general, it defines "how" the resources will be managed for public use and resource conservation. The MP does not address the specifics of regional water quality, shoreline management, or water level management. Additionally, the operation and management of associated prime facilities (dam, gates, powerhouses, spillways, etc.) is not included.*

A draft update will be produced and is expected to be available for comment and review by late April 2016. After a 30 day comment period, the final draft will be completed with approval anticipated near the end of the September 2016.

As information and notices become available they will be posted to this page. Sections of the 2004 Master Plan are available for viewing and download through the links below. The full version of the plan is available on the document bars to the right. Please be aware, the full version of the Master Plan document is large and may take a long time to open/download.

Lake Shelbyville Master Plan Public Meetings Schedule

1st Public Meeting 5:00 – 7:00 p.m.	Nov. 17, 2015	Sullivan VFW – Sullivan IL
2nd Public Meeting 5:00 – 7:00 p.m.	Nov. 18, 2015	Lake Shelbyville Visitor Center
3rd Public Meeting 5:00 – 7:00 p.m.	Dec. 8, 2015	Americas Best Value Inn – Vandalia

Master Plan Schedule

Public Comment Submission Deadline	Dec. 31, 2015
Draft Available for Comment	Late May 2016
30 Day Comment Period Ends	Late June 2016
Final Draft Completion	Late July 2016
Master Plan Update Approval	Late Sept. 2016

2004 Lake Shelbyville Master Plan

- Main Document
- Appendices

Master Plan Comment Form

Lake Shelbyville Master Plan

Carlyle Lake Master Plan Update

Kaskaskia River Project Master Plan Update

Announcements

Draft Available for Comment

Where: Lake Shelbyville Project Office
1999 State Highway 16
Shelbyville IL 62565

When: TBD

Who: Anyone interested in the 2016 Lake Shelbyville Master Plan Update

Contact

Mailing Address:
U.S. Army Corps of Engineers
Lake Shelbyville Project Office
Attn: Master Plan
1999 State Highway 16
Shelbyville IL 62565

Telephone:
Phone: (217) 774-3951
Fax: (217) 774-2014

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Lake Shelbyville Master Plan update public workshop scheduled Page 1 of 2

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Lake Shelbyville Master Plan update public workshop scheduled

Date: • Tuesday, Nov 10, 2015

The U.S. Army Corps of Engineers at Lake Shelbyville is currently in the process of updating its Master Plan. Lake Shelbyville, along with Carlyle Lake and Kaskaskia River Project, are updating their plans simultaneously.

The Master Plan addresses outdoor recreation and environmental stewardship activities at each project.

The updated Master Plan will provide a current inventory and assessment of land and water resources and physical improvements, any changes to resource use objectives and an evaluation of current and future needs required to protect the natural and cultural features of the lake.

Emphasis will be placed on increasing efficiency of operations through consolidation, repair and rehabilitation.

The Corps of Engineers will be holding two public workshops around Lake Shelbyville. They will be held at the following times and locations:

-Nov. 17 - Sullivan VFW, 1132 State Highway 32, 5 - 7 p.m.

-Nov. 18 - Lake Shelbyville Visitor Center, 1989 State Highway 16, 5 - 7 p.m.

A joint public workshop will be held with Carlyle Lake at a future date, as will other public workshops concerning Carlyle Lake and Kaskaskia River Project. Those times and locations will be announced later.

The workshop is informal. No formal presentation will be made. Maps of the lake will be posted in each location to show current facilities. Comment cards will be available for comments and suggestions.

For further information, contact the Lake Shelbyville Project Office, 217-774-3951.

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- By Dennis Corley

Community Calendar UPCOMING EVENTS... (Click event for details)

Habitat for Humanity in Shelby County Board of Directors meeting
Thu, May 12, 2016 at 7:00pm

Shelbyville City Council Meeting
Mon, May 16, 2016 at 6:00pm

Windsor City Council Meeting
Mon, May 16, 2016 from 7:00pm - 9:00pm

Shelbyville City Council Meeting
Mon, Jun 6, 2016 at 6:00pm

Windsor City Council Meeting
Mon, Jun 6, 2016 from 7:00pm - 9:00pm

Herrick Village Board Meeting
Tue, Jun 7, 2016 at 6:30pm

Habitat for Humanity in Shelby County Board of Directors meeting
Thu, Jun 9, 2016 at 7:00pm

Shelbyville City Council Meeting
Mon, Jun 20, 2016 at 6:00pm

Windsor City Council Meeting
Mon, Jun 20, 2016 from 7:00pm - 9:00pm

Shelbyville City Council Meeting
Mon, Jul 4, 2016 at 6:00pm

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New subdivision plans revealed

New subdivision plans revealed

Date: • Tuesday, Dec 08, 2015

The former Shelbyville Country Club could be the centerpiece of a new subdivision of single family homes, condominiums and townhomes, the Shelbyville City Council learned Monday night.

Dave Rifestack, a Chicago area businessman, told the council he had been coming to Lake Shelbyville as a visitor since he was a young teen.

"There are people who really love coming to the lake and would like to come more than once a year for a weekend or week," he said.

The land for the proposed "Lake Trails" subdivision is already in the city limits and Rifestack said all roads in the development would be city streets with public access.

He asked the city to support a request to the U. S. Army Corps of Engineers to build a boat dock with public lake access at the site. In addition, he said a new large pond would be built on the property to allow some of the possible 210 housing units to have 'waterfront' access.

The plan also includes an expansion of the General Dacey Trail to the proposed lake access site.

Rifestack said the development could be part of a larger growth on the city's north side. He said plans include bicycle rentals and a restaurant and he hoped to partner with one of the existing lake marinas to provide services at the boat dock.

"I have no, zero interest in running a dock," he said.

Council member Gib Smart said getting the Corps to approve lake access at the site had been tried before.

"SCCS Ventures wanted to do it," he said. "If Dick Gloede couldn't get it done I don't know how it would be approved this time."

Rifestack said the previous plan had kept the road private.

"The Corps is interested in our plan because any lake access would be open to all, not only off a private road," he said. "Three weeks ago we met with Congressman (John) Shimkus and he has helped us explain to the Corps that this project is not only important for the Lake Shelbyville area but for the state of Illinois. In this case, the city would be the lease holder on the waterfront access."

Shelby County Board Chairman David Cruitt said while he supported the idea of a subdivision he was against a new lake access point.

"I think you're opening a can of worms because what is done for one will have to be done again. People come to this lake because there aren't buildings and docks jutting out all over the place," he said. "Lake Sara, Lake Decatur, they all have that. We don't and it makes Lake Shelbyville appealing."

Rifestack said the new development would provide the area with up to $1.9 million in annual property taxes and up to $200,000 in sales tax. He said the subdivision was a good fit for the area.

"I wanted to come here and put to rest a lot of rumors," he said. "All the roads will be public access, the pier would be public access and it's not going to be a trailer park or campground."

The council voted unanimously to support the plan with the Corps of Engineers including asking for the water access.

"It would be good for the city," council member Bill Shoaff said.

Mayor Jeff Johnson said the city needed to be involved in the development process.

New subdivision plans revealed

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"This will affect future growth, "he said. "We need to be involved."

Johnson said the city will also be asking the Corps to make plans for a future resort in the Shelbyville area.

In other business Monday, the council:
-Approved the annual tax levy that was presented last month.

-Approved purchase of the county's former Animal Control facility for $1. The building is located on city property and the two governmental bodies have shared expenses over the years.

-Heard from Smart that the downtown "Rock Creations" building would be expensive to demolish. Police Chief David Tallman said possibly business district or TIF funds could be used to pay for the tear down but the remaining lot, closed in on three sides by other property, would have no resale value.

Tallman also said he had sent a letter to property owners about their burned-out home, giving them until February 20 to remove the debris.

"It's a dangerous situation," he said. "I tried to mediate a sale of the property to a neighbor but it didn't happen. It's about $15,000 to have it torn down on a piece of property that is essentially worthless. It's a shallow lot and not a good neighborhood for new construction."

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Mon, Jul 4, 2016 from 7:00pm - 9:00pm

Herrick Village Board Meeting
Tue, Jul 5, 2016 at 6:30pm

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EDITOR'S PICK

Lake Shelbyville development gets council's support

SHELBYVILLE – The Shelbyville City Council voted unanimously Monday night to encourage the U. S. Army Corps of Engineers to approve a Chicago area developer's plans for a housing development near Lake Shelbyville.

Dave Rifestack told the council he purchased the site of the former Shelbyville Country Club in December 2013 to develop a subdivision with homes and condominiums for year-round and vacation homes.

Rifestack is asking the Corps to provide lake access for boat docking at the site and was seeking the city's support.

He said the Lake Trails project could include up to 210 housing units and provide up to $1.9 million in annual property taxes.

"All of the roads would be public and the lake access would be public lake access," he said.

His plans for a pond to provide some waterfront building sites adjoining Corps property already have been approved and Rifestack said other amenities would include kayak and canoe access, bike rentals and expansion of the General Dacey recreational trail. A restaurant also would be part of the development.

"There have been a lot of rumors," he said. "I wanted to clarify that all of the roads will be public access, the pier would be public access and it's not going to be a trailer park or a campground," Rifestack said

Shelby County Board Chairman David Cruitt said increased boat docks were not a good idea.

"I've been around since the beginning and the Corps plan was three marinas and Eagle Creek (resort) and that's that," Cruitt said. "If you open the door to this you're going to have something that's going to snowball."

Cruitt said Lake Shelbyville visitors like the natural views on the lake.

"They're not wanting to see buildings and docks coming out," he said "I'm not against the subdivision but allowing access to the lake is a can of worms you don't want to open."

The Corps is taking public comments on future plans for Lake Shelbyville until Dec. 31.

"We have significant interest in the property," Mayor Jeff Johnson said. "It's part of the city and could affect future growth. We need to be involved."

Master Plan Comment Cards

The following have been grouped according to comment. The response is placed at the end of each group.

1. Request for land use classification change from Low Density Recreation to High Density Recreation with the creation of a day use area under lease to the City of Shelbyville

1a. Do not allow any boat docks at the old country club or anywhere else on the lake. This takes away from the natural look of the lake. This will hurt tourism plus there are 3 marinas on the lake with slips available.

1b. I believe that a day use area and docking area should be located in the "LD-16 Big Red Multiple Resource Area"

1c. The Lake Shelbyville Project and surrounding wildlife areas have continued to provide critical habitat and refuge for many wildlife species in an area of the country where habitat is limited. It provides access to the public for a large number of outdoor activities that would not be available otherwise. I believe conserving the natural boundary to the lake and continuing to manage these areas for wildlife and fisheries should be a main priority in the new master plan. Housing developments and lakeside recreation are plentiful at other reservoirs in Illinois where natural buffers are not. Please continue protecting the natural shoreline of the lake.

1d. I was concerned about the proposal to add a boat dock in the Shelbyville Country Club area. That seems to me to be a benefit to only one entity and would open the door for more "private" docks. The lake would lose the thing that makes it unique – its natural look. Bad.

1e. We need to get Eagle Creek Resort opened up again to attract the tourism that we have lost. We also do not want to allow any further encroachments on the lake such as boat docks and piers.

1f. I understand that the Corps of Engineers is updating the Master Plan for Lake Shelbyville and is considering a request from a developer (who has recently purchased the old County Club property and has plans to sell lots for high-end summer homes and condos) to change that property into a high dense use area and allow for the construction of a boat dock and slips in the cove. Please be informed that I prefer that Lake Shelbyville remains as is with a public greenbelt around it.

1g. In reference to a proposed boat dock being built adjacent to the proposed Lake Trails subdivision.

The developer says that there will be a public access road to the dock via a restaurant and bicycle rental business. But he has no desire to run either business or boat dock.

This is just a smoke screen for what will be essentially a private dock for the residents of the subdivision.

This will allow the developer to have a selling point for his property with the question who will maintain this boat dock and access to it not clear.

I do not think it is in the best interest of Lake Shelbyville to allow this. It will set a precedence for this type of development around the lake and will mitigate the green belt effect which makes this lake appealing.
The area is highly erodible and with the lake being a flood control lake the placing of a dock at this location will be a problem.

1h. I would like to voice my support of the Lake Trails subdivision project on Lake Shelbyville. Including boat docks for the subdivision is a great idea.

Thank you to all Corps officers that keep our lake beautiful.

1i. I read the article in the paper on the housing project and wondered how long has this been public; I had just heard about it when I seen it in the paper. It sounds like the deal was done before the public new (sp) about it. I agree with the Board Chairman David Cruitt, I think once this is approved, you will open it up to the world to develop housing projects all over the lake and you as well as I do that it will happen. There are no other lakes in the state as unique as this. Please don't let this happen, we will all regret it, except the developers, more greed. I have been coming here since the lake was built with my family and then moved here in late 1999. All access to this lake should be Corps property or state run as is today. I just can't believe this is being considered. It sounds like it's a done deal and we don't have any say in the matter. At least this decision should be held off until all area people get to speak.

1j. My husband and I just learned that a developer is asking the Corps to allow the placement of private docks on Lake Shelbyville. I also understand that as you prepare the lakes Master Plan that you can choose to include those docks. We are asking that the corps not do that. We enjoy the lake for its recreation...boating and fishing. And especially for fishing the docks are not good.

My husband has fished lakes that have those docks and it takes away fishing area for the fishermen and it they take away from the beauty of the lake and its surrounds. Please say no to docks on the lake.

The following comments were taken via phone conversation.

1k. Spoke with a gentleman on December 5th 2015. He is an avid user of the lake to include hunting, fishing, boating, and camping. He is very opposed to the Corps allowing any future docks on Lake Shelbyville. He said there is plenty of opportunity between the three marinas and the state park.

1l. Spoke with a lady on December 10th 2015. She is very opposed to the Corps allowing any future docks on Lake Shelbyville. She said there are not many places you can go and enjoy the outdoors and experience what Lake Shelbyville has to offer. Allowing more docks would be detrimental to the lake.

1m. Spoke with a gentleman on December 15th 2015. He is very opposed to the Corps allowing any future docks on Lake Shelbyville. He is handicap and participates in the events at Lake Shelbyville that cater to the handicap folks. He said allowing more docks would ruin the lake. He said we already have enough docks between the three marinas.

1n. Spoke with an individual that wanted to remain anonymous on December 15th. The individual is originally from Chicago. Now lives adjacent to the lake and owns 17 acres. This individual said there is no place in Illinois like Lake Shelbyville. Opening up for more docks would ruin the Lake and what it has to offer. You can come to Lake Shelbyville and feel like you have left home and all the hustle and bustle and have an enjoyable vacation. Allowing more docks would ruin the experience. The individual also stated there are plenty of empty slips in the current marinas.

1o. Spoke with a gentleman on December 15th. He is very much opposed to future develop on Corps land adjacent to the “old Country Club”. He said it would open a whole can of worms, to where everyone would want a dock. He said there is not enough land to actually develop into an actual recreation area other than a boat dock. Plus that is a steep wooded hillside and that would just add to more environmental issues, in which there is already plenty of erosion.

1p. Spoke with a gentleman on 7 January 2016 concerning Lake Trails subdivision. He is not in favor of allowing docks in that area. The land is too steep and he believes the erosion caused by trails will be harmful to the lake. He thinks that if one developer is allowed to put docks in, this will open the door to others building on the lake. He also believes that if the developer wanting to put the subdivision in is interested in the lake, he should take over Eagle Creek Resort and build that back up.

1q. I saw recently in the Shelbyville (IL) Daily Union article that a development was proposed (and approved) by the City of Shelbyville City Council for the Shelby Country Club area bordering Federally-owned property managed by THE US Army Corps at Lake Shelbyville. The proposed development included housing, a "Five Star Restaurant" and a boat dock to service the area, particularly the restaurant. There was discussion of the City of Shelbyville providing utilities to the area with the anticipated tax revenue of between 1.2 and 1.9 million dollars. After observing the failure of the Eagle Creek Resort at Eagle Creek State Park approximately half-way up the lake, such an extensive development seems ill-advised. The resort has not operated at all for many years and I doubt that it ever operated in the black or it would still be operating. I also doubt that the resort ever produced the tax revenue to the Village of Findlay or Shelby County that the original developers projected. The Eagle Creek Resort development included boat docks, an expensive restaurant and a golf course. It is also my understanding that the State of Illinois provided some degree of financial support and incentives to the resort's developer. Even that combination could not prevent its failure. I'm also sure that whatever jobs the original developer promised are no longer there if they ever were.

While the latest proposed development differs from that at Eagle Creek Resort in some respects, considering the failure of the resort, it seems unlikely that the recent proposed development will be able to deliver what is being promised - although anything, I suppose, is possible. In addition, there are other land areas designated in the current Lake Shelbyville Master Plan as available for development. There is no need to designate an additional Federal land area for development.

The portion of the land proposed for development includes a very small area, approximately two acres, that is Federally-owned. Currently, it is my understanding that this area is designated as "Low Density Recreation" in the Current Master Plan. Re-designating this as "High Density Recreation" is unreasonable not only due to its small size, but also due to the steepness of the shoreline in the area. The area cannot sustain high density recreation use without adding to the already severe shoreline erosion continuing to be experienced at many areas around Lake Shelbyville's shoreline. Under consideration is construction of a boat dock in this area. What is the purpose of the dock? To service a "Five Star Restaurant"? At best the dock's use would be seasonal if it is even used at all. The docks at the Eagle Creek Resort certainly weren't used year-round and didn't keep the resort from failing. If such an ambitious proposed restaurant actually did survive, the patrons would come from the land side, not from the water side.

Or could the proposed dock be intended in the long run for use by the folks living in the proposed housing units? If that is the case, permitting such use would get a foot in the door for other subdivisions and other adjacent landowners to make an argument that they, too, should get their own boat docks. One of the unique features of Lake Shelbyville is its pristine, undeveloped shoreline. If you don't think allowing "one tiny

little dock" - leading to many other docks along the shore - would cause Lake Shelbyville to become an eyesore, take a look at Corps of Engineers lakes such as Table Rock, Barclay, Bull Shoals, Lake Lanier and others who have permitted large numbers of boat docks, both public and private. Does the general public using the lake really want that to happen? In addition, when Lake Shelbyville was built, leases were awarded to three marina operators who were to provide docking and other marine services to the public. If other docks are permitted on the lake, not only is the shoreline's beauty ruined, we will have failed to protect our long-term partners, i.e. Lithia Springs Marina, Findlay Marina and Sullivan Marina.

In addition, Lake Shelbyville has Flood Control as a primary project purpose. The lake's operation frequently leads to extreme water level rises and falls. This would wreak havoc on a dock permanently placed at the restaurant, or any other location, without provision for removal or adjustment during high and low water conditions. The proposed docking area is not conducive to removal due to the steep shoreline at the area. In any event, low water during the winter months coupled with ice formation during most winters make placing a dock there unfeasible. If there is any question as to the adverse effect of high water, low water and ice surrounding docks, talk to the three Lake Shelbyville marinas about the gyrations they have to go through as water and weather conditions change.

Although the City of Shelbyville has approved the proposal, it is interesting to note that the Chairmen of both the Shelby County Board and the Moultrie County Board have both come out against the proposal according to the Shelby Daily Union news article. Why is that? Who will benefit the most from the proposed development: The general public or only those who can afford to buy housing in the proposed area and afford to eat at a "Five Star Restaurant"?

In short, I am not in favor of designating the small portion of Federal land in the proposed development area as "High Density Recreation", or any other designation that would allow a boat dock to be built there. I am also not in favor of building a dock there under any circumstances. Considering the policy that directed the purchase of the land for Lake Shelbyville (which, it is my understanding, was a different policy from that used to purchase the land for Carlyle Lake) it seems clear that there was never the intent to extensively develop Lake Shelbyville's shoreline. I would also imagine that a document search would reveal laws, policies and regulations currently in place that limit such shoreline development.

1r. Our family has had a boat at Lake Shelbyville for many, many years. We very much appreciate the natural beauty of the lake. We would, however, enjoy the opportunity to visit a restaurant with a dock in Country Club Cove. Limited and carefully planned development can enhance tourism and still maintain the natural beauty of the lake.

1s. In regards to the planned development on Lake Shelbyville. I believe this would be a mistake. Lake Shelbyville is an exception to all the other lakes around, it has not been developed and should not be developed in any other way than it already has. As a fisher and a hunter and also a conservationist, I believe altering the ecosystem of the lake as well as private ownership adjoining the lake will serve as a doorway to more private ownership on the lake. Lake Shelbyville is a public space already enjoyed by many. If the development goes through what's to keep it from being a quagmire similar to Eagle Creek.

And lastly state law requires hunters maintain at least 200 yards between structures and campsites and 300 yards from docks. The areas proposed are great hunting and fishing spots. If these are sold to private owners you may have disputes and complaints over property lines i.e. what's owned by land owner vs. what's public. Is the water line the property line? One final note if the development goes through and tenants move in, during hunting season will they be aware that people actually hunt from boats on the lake and in the woods. This may cause the tenants to file noise complaints. Then where does it end?

Thank you for your time.

1t. I am not in favor of extending the green line for the new development. I moved back to my hometown after 40 years living in Chicago. The lake is truly a treasure for the town. It is pristine mainly due to the bar on commercial enterprise right on the lake. Lake Shelbyville is the reason that most people know where we are in the state. If the development of the former country club is necessary for economic development, then it will be attractive whether there is a public dock or not. There are too many examples of failed lake development and housing in the area; let's not make Shelbyville another one.

1u. My opinion regarding changing the Master Plan to allow docks to be built around country club cove would lead to more docks in other coves. As a house boater at Lithia Springs Marina, I believe that would open this up to the docks in other coves and take away from the beautiful shoreline.

1v. I would like to keep the lake as it is today with a green belt. Do not think should allow private developments lakeside.

1w. I am in favor of retaining the "pristine natural" nature of the current shoreline and would be against allowing private, additional location of docks. Any increase of docks should be done at existing marinas and resort. Thanks!

1x. It has been brought to our attention that the Corps of Engineers are being asked to change the Master Plan. As a long time and current lake user I don't think opening up the lake for additional docks is a good thing. We feel there is sufficient docking areas now with the marinas now serving the lake. The green belt around the lake makes the lake a beautiful attraction for all to enjoy.

Thank you for your time.

1y. I embrace change and economic development but I don't believe that changing the Master Plan for one developer to build a subdivision is the correct action. Not sure that the development talked about will work… not enough information given at this point.

1z. I am a wife and mother. My husband and son use the lake, also my grandchildren. We like the lake as it is. We don't want to see any change to government property on the lake.

1aa. I do not think it is a good idea to put anymore boat docks on government property on Lake Shelbyville. There are enough boat ramps on the lake. Everything seems to be going smoothly as to how the lake is managed. Why change it

1bb. I am writing you to express my concern for allowing any sort of development around Lake Shelbyville that would intrude upon the green belt.

My opinion is that any type of intrusion on the green belt would ultimately have a very negative impact on the ecology and perhaps economy of Lake Shelbyville communities.

From my numerous years of renting boats to hundreds of tourists I personally know how important the green belt & mainly "untouched" wilderness around the lake is to those that travel to Lake Shelbyville.
Please keep the natural beauty of the lake as it is for future generations to enjoy as I have.
Thank you for your time & consideration.

1cc. I believe the recommendation to allow a right of way to be allowed/given/awarded to any party to cross property assigned to the Eagle Creek Resort or a State Park or any land owned and managed by the Army Corps of Engineers at the Lake Shelbyville site is a mistake and should not be granted. First of all, it establishes a bad precedent. Secondly, allowing the construction of another boat dock/marina is most unnecessary. There now exists a sufficient number of docks and marinas to well serve users and visitors to Lake Shelbyville. Third, one of the main reasons Lake Shelbyville is popular is due to its beauty and the wide open views, especially as seen from the lake itself. People come to this site to recreate and to enjoy the beauty and natural landscape of

the State Parks and Army Corps land. USACE has created a wonderful site. It is a true asset for users who come from the area, the State and other parts of the country. Please do not allow any defacing or marring of this gem.

Thank you for considering my comments.

THE
CITY OF SHELBYVILLE
Municipal Building • 170 East Main Street
Shelbyville, Illinois 62565
(217) 774-5531

December 9, 2015

Mr. John Summers
Assistant Operations Manager
Lake Shelbyville Project Office
1989 State Route 16
Shelbyville, IL 62565

Re: Master Plan Update

Dear Mr. Summers:

The City of Shelbyville offers the following suggestions for the 2016 Lake Shelbyville Master Plan update:

1. Establish a public use and Lake access area lease at LD-16 Big Red's Multiple Resource Area.

2. Re-open the resort at Eagle Creek. The existing infrastructure and amenities would support the redevelopment of the resort facilities. Once the future of Eagle Creek is determined, the City would like to offer areas around Shelbyville for a resort facility. The City would like the option to present to any potential developers several areas on the south end of the Lake. This would include Dam West, the area between Dam West and the LD-16 (Water Tower Point Multiple Resource Area), the Hunter Lake Multiple Resource Area, and the Lithia Springs Recreation Area and Marina. Although the Dam West Area (North 9th Street) would be our first choice, we would like for any legitimate developer to have input into selecting the area most feasible for development.

Thank you for giving the City of Shelbyville an opportunity to present our ideas for the betterment of our community and Lake Shelbyville.

Sincerely,

Jeff Johnson
Mayor

Response to comments to change land classification from Low Density Recreation to High Density Recreation to allow a day use area under lease to the City of Shelbyville:

The Environmental Assessment addresses this request. See Appendix A.

2. Request to change land use classification from Low Density Recreation to High Density Recreation in an area west of Sullivan Marina and Campground

2a. I would like the land across Route 32 to the west to be included in the new Master Plan for the Sullivan Marina & Campground to expand.

2b. I would like to request that the land to the west of Sullivan Marina & Campground (just across Route 32) be included in the new Lake Shelbyville Master Plan for future expansion of the Sullivan Campground.

2c. I would like the land to the west of Sullivan Marina & Campground (just across Rte 32) be included in the new Lake Shelbyville Master Plan for future expansion of the Sullivan Campground.

2d. I would like the see the Army Corps included the land west of Sullivan Marina for further expansion of the marina. Sullivan Marina & Campground continues to grow & expand and is vital to the economy of our area.

2e. I would like to ask that the land to the west of the Sullivan Marina & Campground (just across Route 32) be included in the new Lake Shelbyville Master Plan for future expansion of the Sullivan campground.

2f. We, Sullivan Marina and Campground have interest in expansion opportunities on the piece of ground directly to the west of our current leased area.

2g. I am Store Manager of the Sullivan IGA, which is a full service retail grocery store in Sullivan if you aren't familiar with us. I see quite an increase in my business in the summer months due to the tourism we see because of the campgrounds nearby and Lake Shelbyville. I have heard talk of a possible expansion idea for Sullivan Marina & Campground, that would expand to the land across Route 32 to the west. I would like to see that be included into the 2016 Lake Shelbyville Master Plan, because I see an expansion being a plus to my business and to Sullivan as a whole.

2h. I think that opening the land west of Sullivan Marina would bring added development to the north end of the lake, which Sullivan would welcome. Good.

Response to request to change land use classification from Low Density Recreation to High Density Recreation in an area west of Sullivan Marina and Campground:

The Environmental Assessment addresses this request. See Appendix A.

3. Request for expansion of General Dacey Trail

3a. Connect Lone Point to Coon Creek with a multi-use dirt trail. The trail would be built mainly on the sewer utility line. This trail would meet the goals established by the General Dacey Trail Master Plan of connecting high density use areas. I believe we have the knowledge and resources to successfully build and maintain this trail section. This would also add to the length of the Illini Trail experience.

3b. The Central Illinois Mountain Bicycling Association (CIMBA) has a continued interest in mountain biking and multi-use trail at the Camp Camfield area. Through a partnership many miles of beautiful trails have been established, maintained and improved in this area. It is the desire of the group to finalize construction of the final proposed segment of trail which would constitute one additional mile of trail. CIMBA would continue its mission to maintain this additional trail with the same level of commitment. The Black section of trail was previously discussed and agreed upon in the Making Trails Work program.

3c. Concerning the Camp Camfield trail system, CIMBA would like to revisit the original Phase 3 and Phase 4 areas. There is potential there to implement a point-to-point trail that would be a great addition to the system. Of course, CIMBA would assume all maintenance duties. We would like to discuss this with you if possible.

3d. CIMBA would like to complete the “Black” Trail at Camp Camfield. The trail was part of the 2014 Making Trails Work project but was never completed. The area has been surveyed and approved by Lori (Lara) Anderson in 2010. CIMBA would perform all construction as well as maintenance in the future. This is to be our final trail in the system and we could then construct a new kiosk with updated maps and signage.

3e. Explore the feasibility of a multi-use trail connecting Camp Camfield to the Bo Woods Campground.

3f. Bicycle route designated around entire lake with signs

3g. Great job! I’ve got nothing but praise for the current leadership & Corps employees! They have done a fantastic job of working with the community on tourism, recreation and development of our assets. I’d like to see these efforts continue, especially enhancing bicycle infrastructure and opportunities. I’m happy to volunteer to help with these projects in whatever capacity needed. Great folks! Phil, Jon, Matt, Brock, Sarah, Lee, Jeremy

Extend sidewalk by beach to connect to causeway sidewalk over to new shelter and widen along beach to allow bicycle access.

Extend trail to east edge of property (State Rte 16 access) to allow for future extension toward Windsor, as part of National Bicycle Route system.

Extend and connect existing trail sections.

Develop water trail map and infrastructure on the north end of the lake.

Develop primitive campsite on bike trail – scenic point

Continue to add mileage to existing bike trails at Camp Camfield and Shelbyville.

Officially open Chief Illini Trail to mountain biking.

Response to request for expansion of the General Dacey Trail:
The General Dacey Concept Master Plan was developed in 2002 and approved as part of the 2004 Lake Shelbyville Master Plan. Suggestions will be incorporated into the Lake Shelbyville Operational Management Plan. Trails with completed Environmental Compliance checks will be coordinated as funding allows and/or through partnerships. Environmental Compliance policy will be followed for other trails.

4. Request to reopen Eagle Creek Resort

THE
CITY OF SHELBYVILLE
Municipal Building • 170 East Main Street
Shelbyville, Illinois 62565
(217) 774-5531

December 9, 2015

Mr. John Summers
Assistant Operations Manager
Lake Shelbyville Project Office
1989 State Route 16
Shelbyville, IL 62565

Re: Master Plan Update

Dear Mr. Summers:

The City of Shelbyville offers the following suggestions for the 2016 Lake Shelbyville Master Plan update:

1. Establish a public use and Lake access area lease at LD-16 Big Red's Multiple Resource Area.

2. Re-open the resort at Eagle Creek. The existing infrastructure and amenities would support the redevelopment of the resort facilities. Once the future of Eagle Creek is determined, the City would like to offer areas around Shelbyville for a resort facility. The City would like the option to present to any potential developers several areas on the south end of the Lake. This would include Dam West, the area between Dam West and the LD-16 (Water Tower Point Multiple Resource Area), the Hunter Lake Multiple Resource Area, and the Lithia Springs Recreation Area and Marina. Although the Dam West Area (North 9th Street) would be our first choice, we would like for any legitimate developer to have input into selecting the area most feasible for development.

Thank you for giving the City of Shelbyville an opportunity to present our ideas for the betterment of our community and Lake Shelbyville.

Sincerely,

Jeff Johnson
Mayor

4b. Compel the State to make a decision on Eagle Creek Resort or return it to USACE.

4c. Open Eagle Creek Resort. This is a must for the economy of Shelby County.

4d. US Army Corps should take over Eagle Creek Resort area and demolish the hotel rather than throwing more money at more studies.

4e. We need to get Eagle Creek Resort opened up again to attract the tourism that we have lost. We also do not want to allow any further encroachments on the lake such as boat docks and piers.

4f. Rebuild Eagle Creek Resort

4g. Corps needs to take back Wolf and Eagle Creek from State of Illinois

4h. Work with State of IL to re-open Eagle Creek facility!

4i. Relocate or rebuild resort

Response to request to reopen Eagle Creek Resort:
Eagle Creek Resort, located on property under lease to the Illinois Department of Natural Resources, has been closed since August 2009. The IDNR has undertaken a study to determine what, if anything, can be salvaged. However, the study has stalled and has an indefinite completion date. The Corps continues to work with the IDNR to resolve this issue to either reopen the resort in its present form or construct a similar regional attraction.

5. Request to dredge an area around Sullivan Marina

5a. I would also like there to be a priority on dredging the north end of the lake near the Sullivan Marina to expand the opportunities for boaters on the north end of the lake.

5b. Sullivan Marina dredging

5c. The channel from Sullivan Marina and Campground to Bo Woods is becoming more and more shallow each year. This is becoming dangerous for boaters even during summer pool, who wish to travel this end of the lake. In addition, the docks at Sullivan Marina are damaged from going aground each winter during drawdown. Remedies, such as dredging and/or water control deviations should be looked at. We are willing to help any way that we can.

5d. Sullivan Marina dredging to upgrade the boating facility

Response to request to dredge an area around Sullivan Marina & Campground: Current Operations and Maintenance budget at Lake Shelbyville does not provide capability to dredge Sullivan Marina. Lake Shelbyville continues to submit a budget package for dredging in the Sullivan Marina area, to include a channel to the Whitley Creek Boat Ramp.

6. Other

6a. Widen boat ramp at Lithia Springs Access Area to accommodate 2 boats/trailers
Response: The Corps plans to widen all boat ramps on the project to accommodate a courtesy dock and at least two launch lanes to meet current Corps design standards. Plans are contingent upon funding.

6b. Increase the frequency of Lake Shelbyville and Carlyle water quality testing. The testing is down to three times a year. It used to be 6 or more and should be at least that again.
Response: Current budget constraints have reduced the frequency of water quality testing. This will continue until budgets allow for an increase in testing.

6c. Remove logjams above wildlife area.
Response: The Corps does not have the authority to operate on lands it does not own.

6d. Please put the sign back up for the "Fin & Feathers" pond. Old sign was rotten and fell apart and had to be removed last year.
Response: Arrangements have been made to install new sign at Fin & Feathers in 2016.

6e. Make the normal summer pool of the lake 600'. Easy to remember, public friendly. Easy to know actual daily height above or below 600'. I realize that 0.3' is a lot of actual water in the lake, but what actually determines 599.7' as summer pool?
Response: 600 foot summer pool – The pool level of 599.7 was calculated based on anticipated flows, watershed drainage, and the amount of time it would take to lower lake levels down to normal recreation pool.

Lake level indicators at the boat ramps would be very helpful to boaters as they are launching their boats.
Response: Although this is not a Master Plan issue, comment will be taken into consideration in order to improve customer service.

6f. As chair of UKEP (The Upper Reach) a meeting will be held on November 23, 2015 at 1 pm in Arthur. We will be discussing and editing the projects we have prioritized for the Upper Reach. Temporary titles and categories follow: (Not in order)
Environmental Compliance – wastewater treatment, a regional solution
Response: Facilities at the north end of the lake are all connected to the City of Sullivan wastewater treatment system. The Corps operates two systems on the south end of the lake and will continue to investigate opportunities to connect these systems to the City of Shelbyville, an effort which will improve efficiency and reduce USACE Operations & Maintenance costs.

Sedimentation Study Lake Shelbyville
Response: Budget packages are submitted each year to conduct a full sedimentation study on Lake Shelbyville. Package has yet to be funded.

Land owner contact – non-point, erosion, sedimentation control
Response: USACE cannot direct landowners on how to manage their property. USDA/NRCS and other agencies have programs that encourage landowners to participate in conservation measures.

Conservation/agriculture easements
Response: USACE cannot direct landowners on how to manage their property. USDA/NRCS and other agencies have programs that encourage landowners to participate in conservation measures.

Creek/stream stabilization
Response: The Lake Shelbyville Corps can only complete work on USACE owned lands. Budget packages are submitted annually to complete work on Lake Shelbyville property. These packages remain unfunded.

Watershed water quality analysis
Response: Current budget constraints have reduced the frequency of water quality testing. This will continue until budgets allow for an increase in testing.

Lake Shelbyville Greenway
Response: The Shoreline Management Plan governs the use and development of Lake Shelbyville's lands. It is the policy that private exclusive use will not be permitted on new lakes or on lakes where no private facilities existed as of 13 December 1974, the date of the implementing regulation (ER 1130-2-406). Current policy is documented in the Lake Shelbyville OMP.

6g. Upper Kaskaskia portion of KWA Plan of Work
Response: UKEP portion of KWA Plan of Work has been incorporated into Lake Shelbyville's Operational Management Plan.

Lake Shelbyville Sedimentation Study
Response: Budget packages are submitted each year to conduct a full sedimentation study on Lake Shelbyville. Package has yet to be funded.

Landowner contact for non-point erosion and sedimentation control
Response: USACE cannot direct landowners on how to manage their property.

Conservation easements in sensitive area
Response: USACE cannot direct landowners on how to manage their property. USDA/NRCS and other agencies have programs that encourage landowners to participate in conservation measures.

Stream (river) bank stabilization
Response: The Lake Shelbyville Corps can only complete work on USACE owned lands. Budget packages are submitted annually to complete work on Lake Shelbyville property. These packages remain unfunded.

Watershed water quality analysis
Response: Current budget constraints have reduced the frequency of water quality testing. This will continue until budgets allow for an increase in testing.

Wastewater environmental compliance – a regional approach
Response: Facilities at the north end of the lake are all connected to the City of Sullivan wastewater treatment system. The Corps operates two systems on the south end of the lake and will continue to investigate opportunities to connect these systems to the City of Shelbyville, an effort which will improve efficiency and reduce USACE Operations & Maintenance costs.

1135 wildlife habitat restoration project
Response: 1135 project remains a part of the 2016 Master Plan and is contingent upon funding by both the Corps and the State of Illinois.

6h. The VFW donated a 5x7 American flag for the Woods Lake fishing pier (Tyler Goble). Hopefully, the flag will eventually be mounted and lighted. Additional a Thank You to the VFW would seem to be necessary.
Response: The flag will be raised at the grand opening of the Wood's Lake fishing pier in June 2016.

6i. New Convention Center and motel complex in Shelbyville at 9th St.
Response: Through mutual agreement with the City of Shelbyville, this has been deferred until a decision has been made about Eagle Creek Resort.

Wi-Fi on both sides of the lake in all campgrounds
Response: The Corps is currently investigating Wi-Fi opportunities within Lake Shelbyville campgrounds.

6j. Better signage throughout the system and 50 miles out in each direction
Response: Lake Shelbyville has a sign plan in place that identifies signs to be added and replaced. Current budget constraints limit the amount of sign work we can complete each year. We are open to working with any group or individual that can help improve signage in the region.

6k. Need restrooms at the Dacey Trail, some handicap accessible
Response: While this is not a Master Plan issue, Lake Shelbyville will review the suggestion and consider contingent upon funding and/or partnership.

Would like to see a small amphitheater at the 9th St. Beach (near the parking lots). This could help at the 4th of July when fireworks are scheduled at the lake. Bands, entertainment, etc. could be held in that area for other special events, too. Make sure electrical supplies are adequate and water is available for vendors that might participate.
Response: While this is not a Master Plan issue, Lake Shelbyville will review the suggestion and consider contingent upon funding and/or partnership.

6l. Wi-Fi hotspots in parks
Response: The Corps is currently investigating Wi-Fi opportunities within Lake Shelbyville campgrounds.

Guzy wetlands needs a sign (Rte 128)
Response: The Guzy Wetlands is under IDNR ownership and management. Information passed along to that agency.

Interactive trail guide with wildlife and tree/flower identification
Response: While this is not a Master Plan issue the request will be taken into consideration to improve customer service. Project is dependent upon funding and staffing.

6m. Wi-Fi hotspots in campgrounds
Response: The Corps is currently investigating Wi-Fi opportunities within Lake Shelbyville campgrounds.

Wildlife studies to regulate the hunting so numbers are not decimated (population counts)

Corps, you are doing a fine job! Thank you
Response: Lake Shelbyville actively monitors the huntable species to ensure species are not overharvested. Spring turkey surveys are sent to all tag holders annually and documented increases in numbers have been recorded. A white-tailed deer check station was implemented in 2006 to sample 50% of the deer harvested during shotgun deer season. Biologists work closely with IDNR to

reduce gun tags when warranted. Waterfowl flights are flown each week during the season to monitor the waterfowl populations utilizing the lake as well. Lake Shelbyville has a vested interest in ensuring a huntable population is always available to hunters.

6n. Lake Sedimentation study to determine the water holding capacity of the lake.
Response: Budget packages are submitted each year to conduct a full sedimentation study on Lake Shelbyville. Package has yet to be funded.

Landowner contact person to work in the watershed to inform landowners of the importance of reducing non-point source pollution and programs to aid them in their efforts to control nutrient levels
Response: USACE cannot direct landowners on how to manage their property. USDA/NRCS and other agencies have programs that encourage landowners to participate in conservation measures.

Continuing work on regional wastewater treatment to protect the lake from pollution
Response: All Corps facilities at the north end of the lake are tied into the Sullivan wastewater treatment system. The Corps operates two systems on the south end of the lake and will continue to investigate opportunities to connect these systems to the City of Shelbyville, an effort which will improve efficiency and reduce USACE Operations & Maintenance costs.

Watershed water quality analysis monitors in Lake Shelbyville, Carlyle Lake and the Lower Kaskaskia to aid in the effort to reduce nutrient levels in the watershed
Response: Three water quality tests are conducted annually on Lake Shelbyville by USACE employees. A report is provided each year.

Complete 1135 wildlife habitat project at Lake Shelbyville
Response: 1135 project remains a part of the 2016 Master Plan and is contingent upon funding by both the Corps and the State of Illinois.

Study seasonal water levels to increase the amount of water for water supply from Lake Shelbyville
Response: This is a water management issue, not addressed in the Master Plan.

Improve direction signs around the lake
Response: Lake Shelbyville has a sign plan in place that identifies signs to be added and replaced. Current budget constraints limit the amount of sign work we can complete each year. We are open to working with any group or individual that can help improve signage in the region.

Continue studies to find aquatic plant species that will grow in the lake and establish these plants for fish and wildlife habitat and bank stabilization
Response: In 2012, an aquatic specialist surveyed the lake and made suggestions to improve the aquatic plant diversity in Lake Shelbyville to increase fish and wildlife habitat as well as stabilize the banks. Each year Lake Shelbyville staff in conjunction with IDNR plants numerous aquatic species based on these recommendations with little success due to untimely flooding. Staff will continue to work on establishment.

Wi-Fi hot spots at campgrounds
Response: The Corps is currently investigating Wi-Fi opportunities within Lake Shelbyville campgrounds.

6o. Add "Scenic Overlook" signage on Rte 16 for Visitor Center overlooks.
Response: Lake Shelbyville has a sign plan in place that identifies signs to be added and replaced. Current budget constraints limit the amount of sign work we can complete each year. We are open to working with any group or individual that can help improve signage in the region.

6p. Fishing should be listed as the first activity throughout the Master Plan as it is the most popular activity on the Lake Shelbyville complex. It is usually listed last throughout the document which does not reflect its prominence.

A draft proposal to allow fishermen to place woody debris in the lake for fish habitat has been drafted and sent to Army Corps Administrators. Action needs to be completed on the proposal as the lack of woody habitat is having a profound negative impact on important game fish species.
Response: A policy outlining guidance permitting fishermen to place woody vegetation in the lake is currently being drafted. There is no definite timeframe for completion

Page 12-11 d) Fisheries Management add: "Nursery ponds are used to aid in stocking walleye, sauger, smallmouth bass and largemouth bass. IDNR fish hatcheries supplement the lakes fishery by stocking muskie, walleye, and on occasion other species."

"Fisheries biologist is stationed in Charleston IL"

"The establishment of aquatic plants is important to game fish species. Aquatic plants are introduced when possible."

Section 4-04 – ECOLOGIC b) add sauger, yellow bass, and smallmouth bass to the species list.

Section 5-03 ECONOMIC POTENTIAL c) remove “best bass fishing lake in the state” and replace with “lake supports a diverse and quality fishery”.

The utilization of waterfowl management area for “short term” nursery ponds should be considered and explored. This is a much more economical alternative to constructing a dedicated nursery pond. Areas with potential include parts of the McGee and Okaw Bluff Waterfowl Management Areas and the wetlands in the Whitley Creek Bottoms. The primary target species would be walleye and sauger, which would be released into the lake around Mid-May to allow for planting in these impoundments.
Response: This has been discussed in the past. However, due to frequent flooding, these are not considered viable as the investment in fish species could be lost to overtopping of area. A dedicated nursery pond is planned but funding is currently not available.

LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED
SHELBYVILLE ILLLINOIS

APPENDIX C – PREVIOUS DESIGN MEMORANDA

LAKE SHELBYVILLE DESIGN MEMORANDA

Memorandum Number	Title	Date Submitted
1	Hydrology and Hydraulic Analysis	29 Dec 60
2	Site Selection	2 Mar 61
3	General Design	28 Dec 61
4	Geology and Soils	1 Mar 62
5	Buildings, Utilities, and Access Roads	1 May 62
6A	Real Estate Memorandum for Damsite Areas	9 May 62
7A	Preliminary Master Plan	1 Jun 62
8A	Relocations – Utilities	31 Oct 62
	Revised and Resubmitted	13 Feb 64
6B	Real Estate Memorandum for Public Use Areas and Reservoir	21 Dec 62
8C-2	Relocations – County and Township Roads	10 Jul 63
8C-1	Relocation – State Highways	27 Nov 63
7B	Master Recreation Plan	30 Jun 64
8B	Relocations – Railroads	1 Jul 64
9A	Availability of Construction Materials	21 Aug 64
9	Main Dam and Spillway Cemetery	30 Nov 64
8D	Relocation Plan Relocations –	1 Apr 65
8E	Miscellaneous Utilities Maintenance	1 Feb 66
10	Facilities	9 Jul 68
11	Improved Access to Public Use Areas	30 Oct 73
12	Letter Report, Shoreline Erosion	29 Jan 93

The original Lake Shelbyville Master Plan, Design Memorandum 7B, was approved in October 1964, revised in 1974 and updated in 1998 and 2004. There were nine supplements and three letter reports requesting changes or additions to the original document. Eight supplements and two letter reports were submitted requesting changes or additions to the revised or updated documents. A series of documents on Shoreline Erosion has modified the Master Plan. The Shoreline Erosion documents include a Shoreline Erosion Management Plan and Environmental Assessment, a memorandum, and two letter reports.

The following paragraphs in this section represent a chronological presentation of the supplements and letter reports to prior master plans.

Original Master Plan 1964 – 12 Supplements and Letters

•Original Master Plan, 30 June 1964, presented a plan for operation and development of the proposed new reservoir. Plan was approved by ENGCW-OM, 16 October 1964.

•Supplement No. 1, 31 August 1967, presented the necessary modifications for upgrading the sanitary facilities at Wilborn Creek, Sullivan, and Whitley Creek Access Areas. Improvements included the installation of water borne comfort stations in lieu of the standard vault-type units that were previously approved for these areas, central shower and laundry buildings, and sanitary dump stations for the campsite developments at Areas 8 and 10, and sewage treatment facilities, 1st Endorsement, 19 October 1967.

•Letter, LMSED-PC, this office, 29 September 1967, Subject: Water Supply for Recreation Areas D-1, D-2, D-3, 1, 2, 3, and 13, Shelbyville Reservoir, Kaskaskia River, Illinois. The purpose of this letter was to obtain approval of a plan for supplying water to the subject recreation areas using the activity of Shelbyville's water system. Studies of comparative costs indicated a distinct economic advantage for using the city's water supply in lieu of costs for installing, operating, and maintaining treatment plants of sufficient size to furnish water to the seven access areas. It was recommended that the letter be approved as a basis for proceeding with negotiations with the City of Shelbyville for the water service contract. Letter was approved by LMVED-TD, 1st Endorsement, 2 November 1967.

•Supplement No. 2, 7 February 1968, proposed the upgrading of sanitary facilities and the site plans at recreation area D-1, D-2, D-3, 1, 2, 3 and 13. It also contained minor additions to the previously approved upgrading plan for recreation areas 6 and 8. Modifications included provisions of central shower and laundry buildings and sanitary dumping stations at camping areas 2 and 13, conversion of 25 existing SC-1's in lieu of five previously approved SC-1's at areas D-2 and D-3, sewage treatment facilities for area 1, 2, 3 and 13, and provision of marine sanitary stations near the launching ramps at areas D-3, 1, 3, 6, 8, and 13. With exception of the latter, supplement was approved by ENGCW-OM, 2nd Endorsement, 13 June 1968. It was suggested that one marine sanitary station be installed at Lake Shelbyville to determine the costs of installation, operation and maintenance for a one-year period.

•Supplement No. 3, 9 April 1969, proposed excavation and shaping of six previously approved boat harbor sites to ensure adequate and safe mooring and maneuvering areas as required, to develop and provide for their maximum utilization. Supplement was approved by LMVCO-O, 1st Endorsement, 5 May 1969.

•Letter, LMSSD-C, this office, 14 November 1969, Subject: Request for Approval of Contract with Moultrie County Rural Public Water District for Furnishing Water Service to Public Use Areas 6, 8, 10 and 11. Letter was approved by ENGGC-R, 2nd Endorsement, 29 December 1969.

•Supplement No. 4, 17 March 1970, presented a plan for providing improved access roadways to the Lithia Springs and Lone Point Public-Use Areas. The proposed improvements included construction of 10,900 feet of roadways with 20-foot wide surface and 4-foot shoulders. The access roads were designed to be comparable to the circulation roads within the recreation areas. The local county road authorities agreed to purchase all additional necessary rights-of-way and to be responsible for maintaining the completed roadway. Supplement was approved by ENDCW-EZ, 2nd Endorsement, 22 April 1971, with one reservation - "Prior to construction, local interests must acquire and turn over to the Government fee title for right as-of-way necessary to accommodate the improvements. Also, assurances that the roads will remain open to the public and that the county will accept maintenance responsibility with easement return, must be furnished." Subsequently, these requirements were further elaborated on in paragraph 3 of the 4th Endorsement.

•Letter, LMSED-PC, this office, 14 May 1970, Subject: Marine Sanitary Stations at Lake Shelbyville. In 2nd Endorsement to Supplement No. 2, ENGCW-OM, 13 June 1968, it was suggested that one such sanitary station be provided (see (3) above). However, to comply with Illinois Department of Public Health regulations that prohibit the discharge of sewage from boats into Federal impoundment areas, it was requested that two additional sanitary stations be installed. The three stations are located at recreation areas 6, 10, and 13 and should adequately serve the lake. Letter was approved by ENGCW-OR, 2nd Endorsement, 26 June 1970.

•Supplement No. 5, 15 January 1971, requested approval to construct a swimming area at the Shelbyville Dam West Access Area (D-3). In addition to the swimming beach, complementary facilities would include a connecting roadway, paved walking area, grass overflow parking area, drinking fountains, paved walkway and a bathhouse to include toilets, showers, and change space. It was proposed to complete phases of planned initial development of the facilities at the D-3 area and outgrant all lands and facilities to the City of Shelbyville for operation and maintenance. In addition to the proposed beach facility, previously approved facilities at this area include a boat launching ramp and related parking, modest picnicking and sanitary facilities, limited landscaping, boat harbor concession site, and adequate lands to complement the city park. Supplement was approved by ENGCW-PV, 2nd Endorsement, 10 March 1971.

•Supplement No. 6, 10 March 1972, requested authority for providing electrical facilities at the campsites in Coon Creek and Sullivan Public Access Areas (Sites 2 and 8). Improvements included campsite service equipment for 126 campsites at Coon Creek and 81 campsites at Sullivan Access Area. The provision of these facilities at 207 of the total 415 campsites originally approved for the lake would assure that the using public will have a choice of campsites relative to their needs. Supplement was approved by LMVPD-R, 1st Endorsement, 5 April 1972.

•Supplement No. 7, 23 August 1972, proposed the construction of an additional roadway at Lithia Springs Access Area to separate the concession area, boat launching complex, and day-use facilities from the camping facilities. In addition, a campground control station was proposed for purposes of maintaining security and collecting user fees. Supplement was approved by LMVPD-R, 6 October 1972.

•Supplement No. 8, 17 November 1972, proposed the development of a swimming beach facility on a portion of Area E, to be constructed jointly by the Corps of Engineers and the County Board of Moultrie County. Supplement was approved by LMVPD-R, 19 December 1972.

•Supplement No. 9, 18 April 1973, proposed upgrading and/or construction of new recreational facilities for the Opossum Creek, Lone Point, Coon Creek and Lithia Springs Access Areas. Changing recreational demands resulted in most of the picnic facilities being unused, therefore, the unused areas at Lone Point and Opossum Creek were converted to the more desirous recreational use of camping, with both tent and camper units. Additional campsites were added at Coon Creek and Lithia Springs. This supplement described the work and cost estimate of converting these picnic areas to camping use with support facilities. Supplement No. 9 was approved by LMVPD-R, 1st Endorsements, 9 November 1973.

Revised Master Plan 1974 - 9 Supplements and Letter

•Revised Master Plan, 20 May 1974, described how project lands, waters, and other resources would be conserved, enhanced, developed, and managed in the public interest. The plan also identified a reallocation of some projects lands, reflecting a change in management. Plan was approved 29 May 1975.

•Supplement No. 1, 15 October 1975 proposed the upgrading of beach sanitary facilities at the Wilborn Access Area and the Okaw Bluff, Sullivan Beach Area to meet State of Illinois standards for recreation areas established as rules and regulations by the Illinois Department of Public Health. Supplement was approved by LMVCO in a 3rd Endorsement on 7 May 1976.

•Letter, LMSED-BR, this office, 7 April 1976, Subject: Request authority to rename the Sullivan Access area the Forrest W. "Bo" Wood Access Area in recognition of Mr. Wood's support for water resources projects of the Kaskaskia River, Illinois. Letter was approved by LMVPD-R in a 1st Endorsement 29 April 1976.

•Supplement No. 2, 23 July 1976, proposed the development of a Visitor Center in the East Access Area. Supplement was approved by LMVPD-R in a 3rd endorsement dated 14 January 1977.

•Supplement No. 3, Illinois Department of Conservation Recreation - Resource Development Plans, provided updated plans submitted by the Illinois Department of Conservation now known as the Illinois Department of Natural Resources, for recreation - resource development on public lands managed by the State of Illinois agency at Lake Shelbyville. Supplement was approved by LMVPD-R in a 1st Endorsement dated 23 November 1976.

•Supplement No. 4, 9 February 1979, purpose: To reallocate land uses presently assigned to portions of the projects' land area, determine the best use for those access areas returned to the Corps from the Illinois Department of Conservation, and to update all site plans to reflect their as-built condition. Supplement was approved by LMVPD-R, 1st Endorsement, 6 April 1979.

•Letter, LMSOD-R, this office, 26 July 1979, Subject: Upgrade Sanitation Facilities, Code 710 Program, Lake Shelbyville, Illinois. Letter was approved by LMVPD-R, 1st Endorsement, 31 August 1979.

•Supplement No. 5, 31 May 1984, purpose: to modify five comfort stations to include shower facilities at two camping areas, and to prepare a supplement to the Real Estate Design Memorandum that proposes acquisition of six right-of-entry easements to remote parcels of public land. Supplement was approved by LMVPD-R, 3rd Endorsement, 22 February 1985 except for the acquisition of easements, which was denied.

•Supplement No. 6, 19 February 1988, purpose: to remodel two comfort stations to provide shower facilities, replace four vault toilets with two water borne facilities, and to expand the existing parking area at a boat ramp. Supplement was approved by CELMV-PD-R, 1st Endorsement, 24 March 1988.

•Supplement No. 7, 11 October 1996, proposed the construction of high water access ramps. Supplement was approved by CELMV-ET-PR, 1st Endorsement, 25 October 1996.

Shoreline Erosion Management Plan, 1993

These five documents provide for the protection of facilities from the shoreline erosion that is experienced at Lake Shelbyville.

•Letter Report, 11 May 1970, LMSED-PC, Lake Shelbyville, Illinois, Shoreline Erosion. This document recommended that shoreline protection be provided for areas where boat launching ramps were located and for one cemetery. For the remainder of the reservoir area the report recommended that protection be deferred until it was considered necessary.

•Memorandum, 17 October 1991, CELMV-PD-R, Subject: Facility Impacts of Shoreline Erosion, Lake Shelbyville, Illinois. This memorandum requested that the costs in the draft Shoreline Erosion Report be reconciled, NED benefits reported, additional information of the riprap design was needed, and no new facilities can be added nor can facilities be upgraded as part of the shoreline erosion plan.

•Shoreline Erosion Management Plan and Environmental Assessment, July 1992, St. Louis District COE. This plan identified those areas that would need to be protected, relocated or removed due to the progress of the shoreline erosion on the lake. This report only covered those facilities that would be impacted within the next 30 years, continuing with the philosophy of the previous report of deferring protection until it is necessary. The time period was chosen because of practical concerns such as the life of the facilities and changes in facility needs. The facilities at Dam East, Dam West, Lithia Springs, and Okaw Bluff Recreation Areas along with Eagle Creek State Park, Fox Harbor Marina (now known as Sullivan Marina and Campground) and Findlay Marina were areas that were considered to be the first priority for protection, relocation or removal of facilities. Locations with lower priorities were Bo Wood, Lone Point, Coon Creek, Opossum Creek, Whitley Creek, Wolf Creek State Park, and Wilborn Creek. An environmental Finding of No Significant Impact (FONSI) was signed on these actions on 4 February 1992.

•Letter Report, CELMS-OD-R, 29 January 1993, Shoreline Erosion Plan. This report proposed a combination of revetment and relocation as a result of the shoreline erosion at Lake Shelbyville as outlined in the above plan. This report contained detailed riprap designs and cost estimates for proceeding with the work outlined in the proceeding reports.

•Supplement No. 1 to Shoreline Erosion Letter Report, 17 September 1995, CELMS-CO-TO. The supplement corrected and clarified oversights in the Lake Shelbyville Shoreline Erosion Management Plan. The supplement included costs for relocating facilities and clarifying information on the size of new facilities.

Master Plan Update 13 October 1998 – 1 Letter

•Updated Master Plan, 29 July 1998, provides a current inventory and assessment of land and water resources and physical improvements, a reformulation of resource use objectives, discussions of influences on lake operations and management and an evaluation of existing and future needs required to protect the value of the resource base. Emphasis has been placed on increasing the efficiency of operations and rehabilitation of facilities. Plan was approved by CEMVS-DE, 1st Endorsement, 13 Oct 1998.

•Letter Report, 14 October 1999, CEMVS-CO-S, Findlay Marina. This report proposed maintenance dredging at the Findlay Marina site at Lake Shelbyville and identified low water issues at the marina's boat ramp due to flood damage reduction activities.

Master Plan Update, 29 July 2004 - 1 Letter

•Updated Master Plan, 5 May 2004, clarified future proposals related to Shoreline Erosion, modernization/consolidation of facilities and other special concerns. Plan was approved by CEMVS-DE, 29 July 2004.

•Supplement No.1, 11 December 2009, proposed adding two administrative full hookup campsites with an access road for volunteers to maintain a security presence in Dam West. The proposal also included the addition of a two-lane high water boat ramp at Coon Creek. Supplement was approved by CEMVS-DE, 11 December 2009.