



**US Army Corps
of Engineers** ®
Kansas City District

MULTIPLE-PURPOSE PROJECT

KANSAS RIVER BASIN

DELAWARE RIVER

KANSAS

PERRY LAKE MASTER PLAN



March 2022



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, KANSAS CITY DISTRICT
601 E. 12TH STREET, 635 FEDERAL BLDG
KANSAS CITY, MO 64106-2824

CENWK-PMP-R

MEMORANDUM FOR RECORD

SUBJECT: APPROVAL OF PERRY LAKE PROJECT MASTER PLAN

1. This Master Plan meets the policy and procedure outlined in Engineer Regulation/Engineer Pamphlet 1130-2-550 (DATED 30 January 2013), to be followed in preparation and revision of project Master Plans.
2. All requirements for the National Environmental Policy Act and other applicable environmental regulations have been met.
3. In order to guide the land management at Perry Lake into the future, I hereby approve this Master Plan.

TRAVIS J. RAYFIELD, PE, PMP
COL, EN
Commanding

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PREFACE

The Master Plan for Perry Lake was first approved May 1983. Subsequent revisions were prepared with the latest revision approved in December 1991.

In 2002 the US Army Corps of Engineers (Corps) developed and released a set of Environmental Operating Principles to instill environmental stewardship across all the Corps business practices. As the Nation's resource challenges and priorities have evolved, the principles have been refined and the Corps has re-committed to adhere to these principles. The re-energized Environmental Operating Principles 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.

The format used for this plan is outlined in Engineering Regulation/Engineer Pamphlet 1130-2-550 (DATED 30 January 2013), which sets forth policy and procedure to be followed in preparation and revision of project Master Plans. THIS GUIDANCE IS DIFFERENT FROM THE ORIGINAL Master Plan format which was a design memorandum. Perry Lake's original Master Plan can be found in Design Memorandum 3: a listing of all the previous Master Plan design memorandums and prior supplements can be found in Chapter 1, Section e.

Chapter 1 - Introduction

a. Project Authorization

The Perry Lake Project was authorized by the River and Harbor Act of 1954 (Public Law (PL) 83-780) in accordance with the recommendations set forth in House Document 81-642.

b. Project Purpose

The project was authorized for flood control, water supply, recreation, fish and wildlife, and municipal and industrial water supply purposes.

c. Purpose and Scope of Master Plan

This revised Master Plan replaces Design Memorandum 3, Master Plan for Perry Lake dated December 1991. The Master Plan is 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 the water-resource project. The Master Plan guides the efficient and cost-effective management, development, and use of project lands. It is a vital tool for the responsible stewardship and sustainability of project resources for the benefit of present and future generations.

The Master Plan guides and articulates the Corps' responsibilities pursuant to federal laws to preserve, conserve, restore, maintain, manage, and develop the project lands, waters, and associated resources. The Master Plan is a dynamic operational document projecting what could and should happen over the life of the project and is flexible based upon changing conditions. The Master Plan deals in concepts, not in details, of design or administration. Detailed management and administration functions are addressed in the Operational Management Plan (OMP), which implement the concepts of the Master Plan into operational actions.

The Master Plan will be developed and kept current for Civil Works projects operated and maintained by the Corps and will include all land (fee, easements, or other interests) originally acquired for the projects and any subsequent land (fee, easements, or other interests) acquired to support the operations and authorized missions of the project.

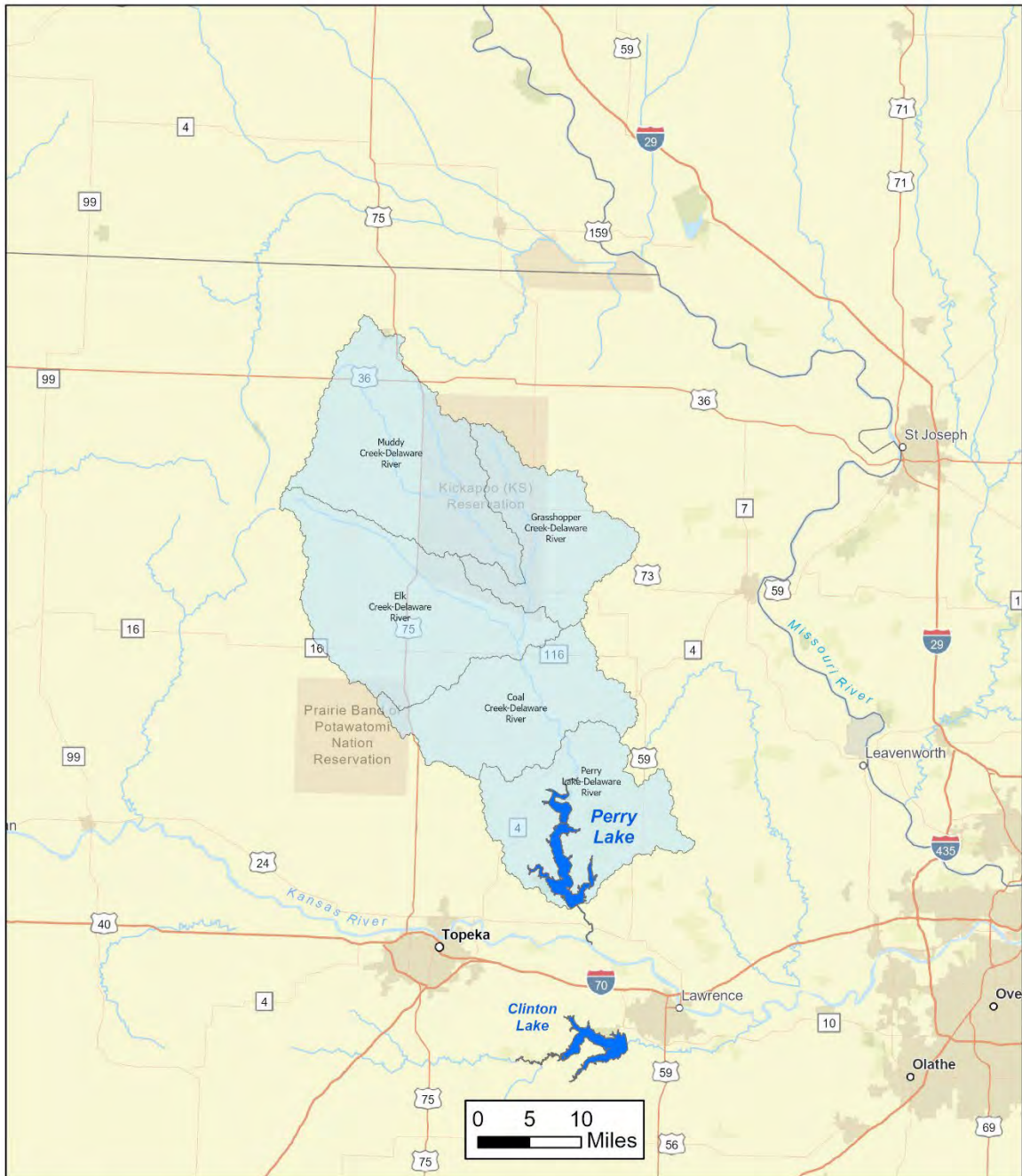
The Master Plan is not intended to address the specifics of regional water quality, shoreline management, or water-level management; these areas are covered in a project's shoreline-management plan or water-management plan. However, specific issues identified through the Master Plan revision process can still be communicated and coordinated with the appropriate internal Corps resource (i.e. Operations for shoreline management) or external resource agency (i.e. Kansas Department of Health and Environment for water quality) responsible for that specific area.

d. Brief Watershed and Project Description

Perry Lake dam is located about 3 miles north of Perry, Kansas at river mile 5.3 on the Delaware River, in Jefferson County in the northeast part of the state. The lake is in close proximity to Topeka, Kansas City and Lawrence.

The project primarily lies in western Jefferson County. Perry Lake is typical of northern Kansas, which consists of rolling uplands, eroded valleys of varying widths and meandering streams. The valley along the Delaware River is formed by irregular hills with slopes ranging from fairly gentle to steep. The steep slopes are usually covered in native woodlands. Gentler slopes prevail in the upper valley of the main river and along tributary arms and are generally tillable.

The Delaware River Basin has a drainage area of approximately 1,157 square miles extending north from its mouth at the Kansas River. In the western portion of Jefferson County, the basin is nearly 32 miles wide. Perry Lake dam controls nearly 1,129 square miles or approximately 97.5 percent of the entire Delaware River basin. At multipurpose pool, the lake has approximately 11,354 surface acres and a 159-mile shoreline.



Watershed	Acres
Muddy Creek-Delaware River	176,077
Grasshopper Creek-Delaware River	103,605
Elk Creek-Delaware River	179,839
Coal Creek-Delaware River	125,440
Perry Lake-Delaware River	137,548



PERRY LAKE WATERSHED
722,509 ACRES
1,129 SQ MILES

e. Listing of Prior Design Memorandums

Table 1.1

Design Memorandum	Title	Date Submitted	Date Approved
1	Hydrology	23 Dec 60	16 Feb 61
2	General Project Development	2 Nov 61	20 Mar 62
Supp 1	Boundary Surveys	2 Jun 66	10 Oct 66
Ltr DM 3	Stoplog Modification	22 Feb 72	
3	Master Plan (Revised) Appendix A-E Appendix F-Lakeshore Mgt. Plan	10 Aug 83 9 Aug 76 15 Mar 75	18 May 83 28 Sep 76 20 May 75
3A	Preliminary Master Plan	16 Oct 61	15 Jun 65
3B C-1	Development Chapter Construction DM C-1 to DM 3B	19 Jan 66 17 Jul 67	3 May 66 29 Sep 67
3C	Master Plan and Appendix III Supplement 1 - Perry Area & Old Town Supplement 2 – Rock Creek Concession	11 Apr 69 27 Aug 71 31 Mar 72	30 Sep 69 28 Sep 71 24 May 72
3C	Operational Management Plan	30 Nov 82	10 May 83
3D	Master Plan		10 Dec 91
4	Soil Embankment Design	16 Aug 63	29 Jan 64
5	Access Roads	27 Feb 63	26 Jul 63
6	County Road Detour	31 May 63	15 Jul 63
7	Sources of Construction Materials	29 Jan 63	13 Sep 63
8	Outlet Works and Spillway	26 Apr 63	9 Aug 63

9	Administrative Facilities	17 May 63	17 Jul 63
9B	Maintenance and Storage Buildings	8 Feb 79	
10	Preliminary Cost Allocation	8 Nov 63	3 Jun 65
11	State Highway Relocations	4 Feb 64	10 Apr 64
12	Radio Tower Access Road	10 Jan 64	17 Jan 64
13	Cemetery Relocation Plan	31 Mar 64	15 May 64
14	Real Estate Supplement A Supplement B Supplement C Supplement D Supplement E Supplement F Supplement G Supplement H Supplement I Supplement J	8 May 64 2 Sep 65 27 Jan 66 11 Feb 66 29 Apr 66 1 Jun 66 23 Aug 66 14 Sep 66 31 Jan 67 11 Feb 63 2 Aug 74	17 Jul 64 14 Mar 66 31 Mar 67 22 Sep 66 6 Jul 66 14 Sep 66 7 Nov 66 18 Nov 66 15 Jun 67 19 Mar 63 24 Jan 75
15	Jefferson County Road Relocations Supplement A – Road Dustproofing	24 Jul 64 25 Mar 71	10 Nov 64 12 Apr 71
16	Relocation of Railroad Facilities	30 Dec 64	18 Mar 65
17	Powerline Relocations Supplement A	18 Jan 65 23 Apr 69	24 Mar 65 28 May 69
18	Telephone Line Relocations Supplement A	1 Apr 65 23 Apr 69	16 Aug 65 28 May 69
19	Relocation of Grade School Jefferson County School District	28 Jan 65	22 Nov 65
20	Cities Service Gas Co. Relocation of Pipelines	25 May 65	16 Jul 65
21	Reservoir Clearing	30 Sep 65	3 Dec 65
22	Relocation of Municipal Facilities City of Valley Falls	11 Apr 66	8 Sep 66

	Supplement A	29 Mar 71	28 Sep 71
23	Gas Service Co. Relocation of Gas Distribution Lines	11 Feb 66	2 May 66
24	Waterline Relocation – Jefferson County; Rural Water District #3	23 Apr 69	28 May 69
25	Jefferson County Road Improvements	29 Nov 73	23 Jan 74
26	Report on the Allocation of Costs	30 Mar 73	14 May 73
27	O&M Project – Water Supply	6 Jun 77	5 Jul 77
28	Relief Well Replacement	18 Oct 85	8 Oct 85
29	Breakwater Raise	9 Dec 85	

f. Pertinent Project Information

Table 1.2

GENERAL	
Location of the Dam	The dam is located about 3 miles north of Perry Kansas in Jefferson County and at river mile 5.3 of the Delaware River.
<u>Drainage Areas</u>	
Mouth of the Delaware River	1,157 square miles
Controlled area above Perry dam site	1,129 square miles
LAND	
Total Acquisition (as of 17 Jan 91) Fee	39,340 acres
Easement	3,449 acres
Separable Recreation in Fee Fish and Wildlife General Plan (Approved 3 Jul 81) Acquisition Guideline Fee	0 acres 10,984 920.6 feet, mean sea level (msl)

Flowage Easement Elevation	926.0 feet, msl
AUTHORIZED RESERVOIR CAPACITY (Acre Feet)	
Full Pool	695,257
Multipurpose Pool	200,004
Flood Control Pool	515,519
Sedimentation	140,000
RESERVOIR SURFACE AREA	
Water area at Flood pool	25,389 acres
Water area at multipurpose pool	11,354 acres
Shoreline at multipurpose pool	159 miles
ELEVATION (feet, msl)	
Top of Dam	946.0
Spillway Crest	922.0
Valley Floor	825.4
Flood Pool	920.6
Multipurpose Pool	891.5
5-Year Flood	900.0
10-Year Drawdown	889.5
EMBANKMENT	
Type	Earth
Base Width	920 feet
Crown Width	30 feet
Maximum Height above Streambed	151 feet
Maximum Height above Valley Floor	121 feet
Total Length	7,750 feet

OUTLET WORKS	
Type	Gated
Capacity at top of flood pool	27,500 cubic feet per second (CFS)
Length Portal to Portal	592 feet
Control Gates	Two 11.75' X 23.5' service gates Two 11.75' X 23.5' emergency gates

SPILLWAY	
Location	Left Abutment
Type	Uncontrolled limited service
Width	300 feet
Spillway Crest	922.0 feet, msl

Chapter 2 - Project Setting and Factors influencing Management and Development

a. Description of Reservoir

At multipurpose pool, Perry Lake covers 11,354 acres and can expand to as much as 25,389 acres during periods of heavy rain as excess runoff is impounded to prevent downstream flooding. Perry Lake works in conjunction with other lakes operated by the Corps to provide flood protection for the Kansas River Basin and the lower Missouri and Mississippi Rivers.

Perry Lake has approximately 159 miles of shoreline which traverse up the Delaware River, Rock Creek, Slough Creek, and Little Slough Creek arms of the reservoir. The Lake has approximately 138,900 acre-feet (acre-ft) of storage for multipurpose and sedimentation and at flood control pool increases to 397,200 acre-ft of storage.

b. Hydrology and Groundwater

The Delaware River, Rock Creek, Slough Creek and Little Slough Creek are the major sources of surface water in the Delaware River Basin. Stream flow is dominated by surface runoff. The drainage area upstream of the dam is 367 square miles.

Most groundwater in the watershed is located in the alluvial aquifers. Water quality in the alluvial aquifers is generally good although nitrates, minerals, pesticides, and bacteria can be localized concerns.

c. Sedimentation and Shoreline Erosion

From 1969 to 2009, the multipurpose pool lost 43,216 ac-ft of storage to sedimentation. This represents 18% of the original multipurpose pool volume. The average annual rate of loss was 1,080 ac-ft/year or 0.44% of the original volume/year. (WRAPS. 2007)

From 1969 to 2009, the flood control pool lost 6,361 ac-ft of storage to sedimentation. This represents 1% of the original flood control pool volume. The average annual rate of loss was 159 ac-ft/year or 0.03% of the original volume/year.

Table 1 Pool Volumes Over Time

Survey Year	Multipurpose Pool Volume (ac-ft)	Flood Control Pool Volume (ac-ft)	Data Type
1969	243,220	765,100	Computed from 1960 topographic maps
1979	223,743	740,037	Survey of sediment ranges
1989	209,513	725,308	Survey of sediment ranges

2001	206,682	722,079	Bathymetry survey of sediment ranges, combined with USGS DEM's
2009	200,004	715,523	Eisenbraun August 2009 bathymetric survey combined with 2006 and 2010 LiDAR data, computed by Surdex Corporation

Metals and trace elements in sediment originate naturally within the basin. The daily intake of metals and trace elements are classified as deficient, optimal or toxic.

US Environmental Protection Agency (USEPA) has established two levels of concern in sediment for concentration of heavy metals, trace elements, and organochlorine compounds. These two levels are threshold-effects level (TEL) and probable-effects level (PEL). Tests conducted in 2001 by USGS (Juracek 2003) indicate the presence of 22 metals and trace elements of the 26 tested.

Arsenic, chromium and copper exceeded the TELs but were less than the PELs in Perry Lake. For nickel, the concentrations exceeded both the TEL and most the PEL. The following figure represents the chemical concentrations in the bottom sediment of Perry Lake.

Shoreline erosion is another ongoing issue, specifically in the main body of the lake. Wave action caused by high winds whipping across the lake batter the shorelines facing the main body. While this erosion is not believed to have a significant impact to the lake filling in with sediment, it does however affect the water quality, the shoreline, and the parks and trails near the shoreline. Over the years portions of campgrounds were required to be closed due to significant erosion undercutting roadways creating safety concerns for visitors.

An area of erosion concern is around 200 yards downstream from the outlet channel on either side of the Delaware River. The banks have been eroding over the years and large portions are beginning to sluff off into the river. The area has severe erosion during increased releases due to unprotected banks. This area is a popular fishing spot during the spring and summer months. A small road created during the dewater of 2017 provides an easy public access point to the river but continues to erode into the river.

d. Water Quality

The Kansas City District Water Quality Program collects monthly water samples from standardized locations during the recreation season (April through September). Chemical, physical, and biological parameters are measured to evaluate water quality from four inflows on the Delaware River, four lake sites, and below the dam at the outflow. This data describes conditions and changes from the inflow streams, within the main lake, and outflow focusing on eutrophication, nutrients, sediment, herbicides,

metals, and contaminants. Perry Lake water quality improves as water moves through the lake as settling, dilution, and biological processes remove sediments and nutrients. Perry Lake is listed on the Kansas 303(d) list for accelerated eutrophication or impairments from excess nutrients available for plant/algae growth. Federal and state agencies are working with water-quality partners (e.g., Delaware River Watershed Restoration and Protection Strategy (WRAPS) and landowners to focus watershed conservation efforts on priority or target areas in the watershed to meet water-quality goals in Perry Lake. Water quality meets state standards in the lake and outlet and is conducive to Project Operating Purposes.

The primary water-quality concern in Perry Lake, as identified by KDHE including Perry Lake on the impaired waters or Kansas 303(d) list, is eutrophication leading to increased risk of toxic algal blooms and dissolved oxygen concerns. Harmful algae blooms and algae toxins leading to public health risks have increased in Kansas since 2010, also noted by KDHE. Perry Lake HABs have occurred infrequently (i.e. 3 of 10 years) with all public health advisories associated with high density, but relatively low



toxin producing blooms (KDHE unpublished weekly HAB reports 2010-2021). Perry Lake swim beaches have not been closed due to harmful algae bloom warnings at Perry as of 2022.

Sediment inputs and herbicide from runoff from agricultural practices are another water quality concern at Perry Lake. Herbicides, specifically atrazine, are decreasing as agricultural run-off from row crops within the watershed is improved from watershed conservation and pesticide management efforts. Measured total atrazine concentrations occasionally exceed KDHE water quality criteria (3 ug/L) during spring sampling at inflows and upstream lake sites, but not at the lower lake site or outlet from 2010-2019. Water-quality monitoring will continue as a critical part of a holistic, environmentally

sound water-quality management strategy for the project to continue to meet applicable federal and state environmental laws, criteria, and standards.

The water quality of Perry Lake supports excellent sport fishery of crappie, sauger, white bass, smallmouth bass, largemouth bass, and catfish. Water releases from the outlet also provide optimum dissolved oxygen and temperature requirements for native fish other aquatic species with lower concentrations of common herbicides, nutrients, turbidity, and total suspended solids than found above the lake.

e. Project Access

Access to Perry Lake is good. A map showing the primary access highways is provided in Appendix B. Four highways act as focal access roads which funnel traffic from other nearby highways into the lake area. US Highway 24 is the major access route to the southern portion of the lake (Administration Area, dam, Outlet Area). It follows the east-west Kansas River population corridor and links the lake to Interstates 70 and 35; US Highways 40, 75, and 59; and Kansas State Highways 4, 10, 16, and 32. State Highway 4 provides access to the western and northern section of the lake. State Highways 16 and 92 provide access to the northern and eastern portions of the project. This network of highways allows visitors a wide variety of access routes. Direct access to the lake is also provided by County Roads 6, 13, 442, 458, 1023, 1029, and 1039. This road network is expected to provide access over the life of the project.

f. Climate

The Delaware River basin lies within the Humid Continental (warm summers) climate zone, which is characterized by long hot summers, and mild to cold winters that are normally the driest part of the year.

	Temperature (F)									Precipitation (inches)										
	Means			Extremes		Mean # of Day							Snow		Mean Number of Days					
	Daily Max	Daily Min	Monthly	Record High	Record Low	Max		Min					Mean	Greatest Monthly	Greatest Daily	Mean	Maximum Monthly	.10 or More	.50 or More	1.00 or More
						90 and Above	32 and Below	32 and Below	0 and Below											
Jan	38.5	18.3	28.4	72	-18	0	9.5	27.8	2.1	.98	5.24	2.23	3.8	21.9	2.6	0.5	0.1			
Feb	44.3	22.0	33.1	82	-11	0	5.6	22.8	1.3	1.36	5.89	2.56	4.3	71.80	3.6	0.7	0.2			
Mar	54.8	31.5	43.2	90	-7	0	0.9	16.3	0.1	2.71	10.55	2.31	0.8	36.0	5.3	1.8	0.5			
Apr	64.6	42.6	53.6	94	13	0	0	4.6	0	4.06	9.11	3.93	0.2	10.0	6.5	3.2	1.2			
May	74.4	54.1	64.3	98	30	0.3	0	0.1	0	5.36	11.90	4.06	0	0.0	7.8	3.6	1.6			
Jun	83.4	63.5	73.4	107	44	3.7	0	0	0	5.88	16.26	5.92	0	0.0	7.3	3.9	1.9			
Jul	88.6	68.4	78.5	111	51	12.7	0	0	0	4.14	18.30	6.92	0	0.0	5.6	2.6	1.4			
Aug	87.8	66.2	77.0	107	42	12.2	0	0	0	4.05	12.43	5.30	0	0.0	5.9	2.6	1.2			
Sep	79.0	56.9	68.0	108	31	2.7	0	0	0	4.20	12.85	7.23	0	0.0	5.9	2.8	1.5			
Oct	67.5	45.4	56.4	98	20	0	0	2.2	0	3.35	10.42	3.72	0.2	7.0	5.6	2.2	0.8			
Nov	53.8	32.7	43.2	84	2	0	1	14.0	0	2.20	10.10	4.91	0.9	8.0	3.6	1.5	0.6			
Dec	40.6	21.5	31.0	76	-21	0	7.9	26.0	1.4	1.60	6.26	3.05	3.2	17.5	3.6	1.2	0.3			
Year	64.9	43.7	55.9	111	-21	31.6	24.9	113.8	4.9	39.89	18.30	7.23	13.4	71.8	63.3	26.6	11.3			

g. Topography, Geology, and Soils

The topography of Perry Lake is typical of northern Kansas, which consists of rolling uplands, eroded valleys of varying widths and meandering streams. The valley along the Delaware River is formed by irregular hills with slopes ranging from fairly gentle to steep. The steep slopes are usually covered in native woodlands. Gentler slopes prevail in the upper valley of the main river and along tributary arms and are generally tillable.

Perry Lake is located on the southern edge of the Dissected Till Plains section of the Central Lowlands Physiographic Province. The mature and well-drained topography of the area has developed during and since Pleistocene time. The drainage divides are mantled with as much as 40 feet of glacial drift. Thin, discontinuous deposits of loess overlie the till and residual bedrock soil. Differential weathering of the nearly horizontal limestone and shale beds of Pennsylvania Age have produced frequent benches and scarps. Terraces dating from the Pleistocene to the present exist along the Delaware Valley. The Delaware River has experienced alternating periods of deposition and degradation since early Pleistocene time. Glaciation of the area caused widening and deepening of the river valleys, removal of some bedrock from the uplands, deposition of glacial drift, and in its later stages, alluviation of the Delaware River. Following the erosion and deposition associated with the Kansas glacier, there were at least two subsequent periods of degradation and alluviation during the remainder of the Pleistocene Age and in recent times.

Soils in the area are fairly stable unless denuded. Most of the parks, except Slough Creek Park, are on glacial drift deposits up to forty (40) feet deep. These soils, unless covered with native or cool season grass, are subject to severe sheet and gully erosion. This condition becomes quite significant in the parks and agricultural areas where these glacial soils do not have sufficient cover to reduce soil erosion. The crop production land that has been classified as highly erodible was removed from the program and planted to native grass or cool season grasses that provide protective cover. The river bottom fields in the northern portion of the project contain rich, deep soils suitable for agriculture.

h. Resource Analysis (Level One Inventory Data)

Operational civil works projects administered by the Corps are required, with few exceptions, to prepare an inventory of natural resources. The basic inventory required is referred to within Corps regulations (ER and EP 1130-2-540) as a Level One Inventory. This inventory includes the following: vegetation in accordance with the National Vegetation Classification System through the sub-class level; assessment of the potential presence of special status species including but not limited to federal- and state-listed endangered and threatened species, migratory species, and birds of conservation concern listed by the U.S. Fish and Wildlife Service (USFWS); land (soils) capability classes in accordance with the Natural Resource Conservation Service criteria; and wetlands in accordance with the USFWS' Classification of Wetlands and Deepwater Habitats of the United States. This basic inventory information is used in

preparing project master plans and the OMP. The OMP is a five-year management plan setting forth detailed information required to implement the concepts set forth in the master plan. An overview of the natural resources and related management actions at the project is provided in the following sections and paragraphs.

1) Fish and Wildlife Resources

The impoundment of the Delaware River and other tributary streams and rivers, which form Perry Lake, changed it from a riverine to a lake system. Fisheries in Perry Lake are managed by the Kansas Department of Wildlife, and Parks (KDWP) Division of Fisheries. A variety of sport and non-sport fish species are found in the lake. A list of fish species can be found in appendix C.

The project lands, with its variety of habitats, support a number of game animals, furbearers, and other mammal species. A wide variety of resident and migratory bird species use project lands and water for at least a portion of the year. These provide visitors with both consumptive and non-consumptive use. Reptiles and amphibians typical of the upper Flint Hills region are also located on Perry Lake.



2) Vegetative Resources

As part of the Level I inventory the project lands were classified according to the National Vegetation Classification System down to the sub-class level. In addition, an

assessment was made as to the condition of those lands to determine if they are sustainable.

Description of each of the assessment categories:

Sustainable - Meeting the desired state. The acreage is not significantly impacted by any factors that can be managed and does not require intensive management. The acreage also meets operational goals and objectives set out in the project OMP or other applicable management document. These acres are considered healthy and sustainable for future generations. Only minor management practices may be required to maintain the health.

Transitioning - Managed to meet desired goals. The acreage is impacted by human or other environmental factors that require management of the acreage to meet goals and objectives outlined in the project OMP or other applicable management document.

Degraded - Does not meet desired goals. The acreage is significantly impacted by human or other environmental factors that prevent the acreage from meeting desired goals outlined in the project OMP or other management documents. The acreage is not considered healthy. Intense management may be required to meet desired goals.



Table 2.2

Project Site Vegetation Classification and Condition Records for Fiscal Year 2016
**** THE FOLLOWING CLASSIFICATION INFORMATION IS DERIVED FROM THE NATIONAL VEGETATION CLASSIFICATION SYSTEM****

Vegetation Class	Vegetation Division	Vegetation Order	Vegetation Subclass	Sustainable	Transitioning	Degraded	Total Condition
Non-Vegetated	NON-VEGETATED	Non-Vegetated	Non-Vegetated	0	12146	0	12146
Herbaceous Vegetation	VEGETATED	Herb Dominated	Annual graminoid or forb vegetation	0	1790	0	1790
Herbaceous Vegetation	VEGETATED	Herb Dominated	Perennial graminoid vegetation (grasslands)	3280	5467	2188	10935
Shrubland (Scrub)	VEGETATED	Shrub Dominated	Deciduous shrubland (scrub)	0	180	0	180
Closed Tree Canopy	VEGETATED	Tree Dominated	Deciduous closed tree canopy	3810	6350	2539	12699
Closed Tree Canopy	VEGETATED	Tree Dominated	Mixed evergreen-deciduous closed tree canopy	5	20	3	28
Open Tree Canopy	VEGETATED	Tree Dominated	Deciduous open tree canopy	700	500	208	1408
Open Tree Canopy	VEGETATED	Tree Dominated	Evergreen open tree canopy	0	8	0	8
Open Tree Canopy	VEGETATED	Tree Dominated	Mixed evergreen-deciduous open tree canopy	30	50	20	100
Sparse Vegetation	VEGETATED	Vegetation Not Dominant	Unconsolidated material sparse vegetation	44	0	0	44
PERRY LAKE KANSAS Totals				7869	26511	4958	39388

3) Threatened and Endangered Species

The USFWS maintains the list of federally listed Threatened or Endangered Species, and their designated Critical Habitat, under the Endangered Species Act. KDWP is responsible for maintaining the state-listed species. The state Endangered Species Act and Kansas Wildlife Code are the guiding legislation for the state. A table of federal-listed species and their state-listed designation believed to occupy Jefferson County within the project boundary is found below.

Table 2.3

Name	State Status	Federal Status	Habitat
Northern Long-Eared Bat (<i>Myotis septentrionalis</i>)	N/A	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
Mead's Milkweed (<i>Asclepias meadii</i>)	Endangered	Threatened	Virgin prairies
Western Prairie Fringed Orchid (<i>Platanthera praeclara</i>)	N/A	Threatened	Mesic to wet unplowed tallgrass prairies

4) Invasive Species

A variety of aquatic and terrestrial species inhabit the lake and surrounding project land. A variety of methods such as chemical treatment and prescribed fire are used to control invasive species at the lake. A listing of those species and their prominence can be found in table 2.4.

Table 2.4

Invasive Species Name	Type of impact	Acres impacted	Acres treated (as of 2020)
Eastern red cedar (<i>Juniperus virginiana</i>)	Habitat Loss	5500	5
Emerald ash borer (<i>Agrilus planipennis</i>)	Impacts to Recreation Opportunities	100	1
Garlic mustard (<i>Alliaria petiolata</i>)	Habitat Loss	0	0
Johnson grass (<i>Sorghum halepense</i>)	Habitat Loss	500	10
Musk thistle (<i>Carduus nutans</i>)			
Sericea lespedeza (<i>Lespedeza cuneata</i>)	Habitat Loss	6000	1000
Teasel (<i>Dipsacus sp.</i>)	Habitat Loss	100	0
Zebra mussel (<i>Dreissena polymorpha</i>)	Infrasctructure Impacts	10	0

5) Ecological Setting

Perry Lake is near the intersection of the of the oak-hickory climax forest of the East and the Great Plains of the mid-West, within the upper Central Irregular Plains Ecoregions (Chapman et al.). Prior to settlement the area was largely tall and mid grass prairie. More recently settlers have plowed the prairie grass for agricultural uses, which has allowed encroachment of woody vegetation. Development along the shoreline for parks, boat ramps, private docks, and marinas is limited to area south of Kansas State Highway 92 (K-92). Areas north of K-92 includes the wildlife refuge and the Perry Wildlife Area operated by KDWP. Perry Wildlife Area contain a number of off-channel wetlands and other habitat enhancements such as tree and shrub planting, food plots, and habitat brush piles.

Practices such as introducing cool season grasses, cultivating fields for crop production, and suppressing wildfire have all contributed to the reduction of prairie. These practices have also accelerated soil erosion and depleted nesting habitat and cover.

6) Wetlands

Much of the wetland systems classified at the project are associated with the lake and the tributaries feeding into the lake. Classification of the wetlands was derived from the USFWS Classification of Wetlands and Deepwater Habitats of the United States. A table listing the wetland Systems and acreages is found below.

Table 2.5

System	SubSystem	Class	Class Acres
Lacustrine	Littoral	Unconsolidated Shore	1
Palustrine	NO SUB-SYSTEM	Unconsolidated Shore	1
Lacustrine	Limnetic	Unconsolidated Bottom	11752
Palustrine	NO SUB-SYSTEM	Emergent Wetland	1374
Lacustrine	Littoral	Unconsolidated Bottom	14
Riverine	Lower Perennial	Unconsolidated Bottom	180
Palustrine	NO SUB-SYSTEM	Scrub-Shrub Wetland	262
Palustrine	NO SUB-SYSTEM	Aquatic Bed	265
Palustrine	NO SUB-SYSTEM	Unconsolidated Bottom	29
Riverine	Lower Perennial	Unconsolidated Shore	5
Palustrine	NO SUB-SYSTEM	Forested Wetland	702

Borrow Areas and Utilities

Perry Lake has three historic borrow areas. One located at the entrance to the ATV Park that has been used to build dams during dewater operations, this borrow area is approximately 2 acres. The second borrow area is located near the northwestern portion of Rock Creek Park along Rock Creek Road. The third borrow area is located on the southern portion of Thompsonville Park along the outer road. The Thompsonville and Rock Creek Park borrow areas total approximately one acre.

Borrow areas have had no apparent effects, adverse or beneficial, in the recreation programs for public use. The borrow area selected during dam construction has since created challenges for the natural resource program. Large drainages created from erosion has made it challenging for lessees to navigate equipment through the area reducing the number of acres that can be properly maintained using the agricultural lease program.

The project has easements and licenses for road rights-of-way, overhead and buried electric lines, water lines, sewer lines, gas lines, telephone lines, and communication cables. The number of easements and licenses by utility is found below:

Electric – 19

Telephone/Communications – 15

Water – 20

Gas – 8

Major roads/highways - 4

Perry Lake was originally authorized and constructed to contain 150,000 acre-feet of storage for water supply. While the Kansas Water Office has all of the storage under contract, only 25,000 acre-feet of storage has been activated and the remaining 125,000 acre-feet of storage is for future-use. This city of Valley Falls has two intakes. Lake Ridge Estates (Jefferson County Rural Water District #11) has a withdrawal point near the shoreline and a water right to withdrawal a specified amount of water categorized as natural flow from the Delaware River.

i. Mineral and Timber Resources

There are currently no mineral extractions at Perry Lake. If grants are issued authorizing extraction of mineral resources from the project, the grant would contain special conditions and stipulations for protecting the natural, physical, structural, and cultural aspects of the project for its authorized purposes.

Firewood permits are issued on an as-needed basis to perform forest-stand management. No commercial harvesting has taken place at the project.

j. Paleontology

Paleontological resources include both the organic and mineralized remains in body or in trace forms of living organisms, often referred to as fossils. These resources are almost always a separate management issue from cultural resources, and have their own resource protection laws, most notable the Paleontological Resources Preservation Act (PRPA), which was signed into law on March 30, 2009. Fossils in the Perry Lake vicinity primarily consists of invertebrate marine fossils associated with the early Carboniferous Period (354-323 million years ago). The fossils associated with this time period are less likely to be of general interest to the public but have value to specific research questions and should be preserved, especially where particularly rich outcrops are exposed. If outcrops are discovered their location should be recorded, and the location monitored to ensure that would-be fossil collectors have proper permits and/or permission to make collections.

k. Cultural Resources

Background

Numerous cultural resources have been recorded on Perry project lands. Cultural resources are the physical remains of past human activity and occupation and include

prehistoric and historic archeological sites, artifacts, features, burial sites including mounds and cairns, buildings, structures, objects, landscapes, and traditional cultural places. In Kansas, including the Perry Lake area, past periods of human occupation have been divided into broad time periods including the Paleoarchaic (10,000-1 B.C.), Early Ceramic (A.D. 1-1000 A.D.), Middle Ceramic (A.D. 1000-1500), Late Ceramic (A.D. 1500-1800), and Historic (A.D. 1800 to present). Each of these time periods is represented by diagnostic remains that represent cultural practices and adaptation to environmental factors.

1) Previous Investigations

The Perry Lake Project consists of 27,986 acres of USACE fee-owned land above the multipurpose pool, of which at least 3,012 acres have been professionally surveyed (10.8%). The earliest surveys, unfortunately, do not provide maps of surveyed areas, so these number represent the minimum number of surveyed acres.

Initial archeological investigations for the Perry Lake Project began shortly following its authorization under the River and Harbors act of 1954. Construction of the lake began in 1964 and was completed in 1969. The Kansas Historical Society (KSHS) and the University of Kansas (KU) both conducted archeological field reconnaissance of the proposed reservoir area in the early 1960s as part of the Inter-Agency Archeological and Paleontological Salvage Program of the National Park Service (NPS). Four sites found by KSHS during their early survey were excavated and reported in 1983. Three sites were tested by the NPS and reported in 1965. KU tested and excavated at 36 sites, reported in 1968. KU and KSHS continued to survey and test sites through the 1970s and 1980s. Several surveys related to roads and other infrastructure began in the 1970s and continue to the present day. A large survey was performed by Environmental Analysis, Inc. in 1987, and included testing at three sites. Kaw Valley and Development, Inc. tested 17 sites. Throughout the 1980s and 1990s, much of the valley also has been surveyed by a knowledgeable amateur archeologist. He recorded many sites, but his survey areas have not been recorded.

The first management plan was drafted but not completed in 1977 by Iroquois Research Institute. In 1992, an updated Historic Properties Management Plan (HPMP) was completed for Perry Lake by the Kansas City District office. Since 1992, the 13 archaeology projects at Perry Lake have been small and targeted toward construction and maintenance projects at the lake, such as wetlands, dam safety projects, and roads. One notable exception has been the limited excavations and survey by KSHS and the Kansas Anthropological Association in 2017.

2) Recorded Sites

A total of 230 cultural resource archeological sites are recorded on the fee-owned land and another 13 sites are recorded on easement land. No archeological sites are listed on the National Register of Historic Places (NRHP). Table 1 shows the NRHP statuses of the recorded sites on fee and easement lands. Ten sites were evaluated and found to be eligible for listing on the NRHP, making them “historic properties.”

Eighty sites were evaluated and found to be not eligible for the NRHP and so require no additional consideration. A total of 111 sites have not yet been evaluated for eligibility and so are assumed to be eligible until otherwise evaluated (per division guidance). Forty-one sites are described as inundated, but many are at the lake's edge and can be evaluated. One site has no associated site form so should be evaluated and re-recorded. Because only a portion of the fee-owned lands have been surveyed, is it likely that additional sites are present and some of them might be eligible for the NRHP.

Table 1. Archeological Sites at Perry Lake and their NRHP Eligibility Statuses.

	Eligible	Not Eligible	Inundated/Partly Inundated	Need Evaluation	Unknown	Total
Fee-owned land	9	77	41	102	1	230
Easement land	1	3		9		13

One structure at Perry Lake is listed on the NRHP. The Delaware River Composite Truss bridge was listed on the NRHP in 2003. It is at the northeast edge of the city of Valley Falls where Coal Creek Road crosses the Delaware River. Another important architectural resource that is eligible for the NRHP is the Cedar Creek Marsh Arch Bridge (listed on the Kansas State Register of Historic Places).

3) Cultural Resources Management

The cultural resources management policy of the District is to preserve and protect significant cultural resources in a spirit of stewardship for the nation. Federal law and USACE regulations require USACE to identify, evaluate, and provide stewardship for cultural resource sites on USACE land at Perry Lake. These laws include but are not limited to the NHPA, Archeological Resource Protection Act, and the Native American Graves Protection and Repatriation Act.

4) Historic Properties Management Plan

The HPMP for Perry Lake is the primary tool used to provide proper stewardship for cultural resources on project lands. The HPMP specifies the appropriate management of cultural resources and serves as an appendix to the lake Operation Management plan. All organizational elements that have administrative and management responsibilities for Perry Lake have access to the plan. The HPMP is an effective way of identifying and meeting the District's cultural resource stewardship needs and requirements. HPMPs provide comprehensive overviews of all cultural resources on USACE-owned property and easement lands; information on current and future

required stewardship actions; information on eligibility status of all known sites at the project; information on past investigations; information on land use restrictions; updates from site monitoring; future budget needs for specific actions; and an overview of current laws and regulations.

5) Standard Guidelines

All real estate actions and other undertakings (projects that require federal funding or permits and have the potential to affect historic properties) that include ground disturbing activity require a cultural resource review to determine if the activity could impact cultural resource sites. The District Archeologist reviews project plans, makes determinations on the necessity for field investigations, coordinates the undertaking with the Kansas State Historic Preservation Officer, and consults with appropriate federally recognized Native American tribes.

Sites listed on or eligible for listing on the NRHP are required to be monitored and protected from destruction or looting activity. For undertakings that have the potential to impact NRHP properties, avoidance is the preferred alternative. If avoidance is not possible, any disturbance would require SHPO and Tribal consultation. Mitigation measures would also be required for such disturbances. In the case of archeological sites, mitigation typically consists of intensive excavations. Unevaluated sites that could be impacted would require an NRHP eligibility determination prior to the undertaking. Sites determined not eligible for the NRHP can be modified in a manner consistent with land use classifications, resource management objectives, and environmental laws. Detailed guidance on land use is contained in the HPMP.

I. Interpretive/Visual Qualities

The interpretive programs and displays presented by project personnel emphasize and use the aforementioned important scenic features and cultural resources in environmental education efforts. In addition, many of the formal presentations by the Corps focus on water safety efforts, natural resource management, and local flora and fauna. In addition, the Corps is often invited to speak or have an informational booth at local fairs, civic group gatherings, and school functions.



Several interpretive displays can be found in the Perry Lake Project Office and Visitor Center. The displays include history of Perry Lake and the Corps, explanations of the authorized uses of the lake, multiple maps, brochures, and other visitor assistance tools.

Additional interpretive displays can be found at each of the six Corps managed boat ramps in the form of kiosks. The kiosks display rules and regulations, lake maps, lake information, and life jacket loaner stations.



m. Demographics

The population of the State of Kansas is over 2.9 million people. According to the Kansas State Comprehensive Outdoor Recreation Plan, the population density in Kansas has steadily shifted from rural agricultural regions to urban areas. The overall population of Kansas has only grown 2.1 percent from 2010 to 2019, which is lagging behind the National growth projection of about 4.1 percent during that same time period. Perry Lake is almost entirely within Jefferson County. During that same time period Jefferson County saw a growth of -0.3 percent.

Jefferson County, with an estimated 2019 population of 19,043, is the 29th most populous county out of 105 counties in the state. The median age of the population for Jefferson County is 43.3 years as compared to the State of Kansas at 36 years. The Wichita State University Center for Economic Development and Business Research projects that Jefferson County will have a downward curve in population, with an estimate of 14,090 by the year 2064.

According to the last census, the racial demographic of the county was 95.8 percent white, 0.8 percent black or African American, 1.0 percent Native American, 0.3 percent Asian, 0.1 percent Pacific Islander, and 2.0 percent from two or more races. Hispanic or Latino of any race were 3.0 percent of the population.

n. Economics

Perry Lake provides up to 75.4 million gallons/day of water users in northeastern Kansas, making it an important reservoir in the state. (Kansas Water Office. 2020).

The money spent by visitors to Corps lakes on trip expenses adds to the local and national economies by supporting jobs and generating income. Visitor spending represents a sizable component of the economy in many communities around Corps lakes. Perry Lake Project contributed the below to the economy (USACE. 2019):

605,233 visits per year (Fiscal Year (FY) 2019) resulted in:

- \$24,452,884 in visitor spending within 30 miles of the lake
- \$12,662,130 in sales within 30 miles of the lake
- 205 jobs within 30 miles of the lake
- \$4,894,371 in labor income within 30 miles of the lake
- \$6,785,631 in value added within 30 miles of the lake
- \$5,474,019 in National Economic Development Benefits

With multiplier effect, visitor trip spending resulted in:

- \$20,468,412 in total sales
- 264 jobs
- \$7,131,944 in labor income
- \$10,970,296 in value added (wages & salaries, payroll benefits, profits, rents, and indirect business taxes)

Cumulative damages prevented from project implementation through FY20 totaled \$7,066,479,400.

o. Recreational Facilities, Activities and Needs

1) Zones of Influence

Lawrence, Topeka, and Kansas City account for the largest share of visitors, however there are a number of smaller towns which contribute visitors to Perry Lake and its facilities.

2) Visitation Profile

During the period of FY16 – FY20 visitation ranged from 0.5 million to over 0.85 million visits with an average of 0.70 million total visits to all Corps, State, and grantee managed areas (USACE. 2020). The FY19 visitation was influenced by historic flood levels for an extended period and the FY20 was impacted by the presence of the COVID 19 virus outbreak, both of which had long periods of time with facility closures or limited access, Total overnight visits during this time period ranged from 78,916 visits to 260,283 visits with an average of 202,088 overnight visits per FY. Day-use visits accounted for between 329,735 to 603,096 with an average of 501,654 day-use visits per FY during FY16 – FY20.

Table 2.5. Total Visitation	
Fiscal Year	Visitation Total
2016	823,097
2017	852,252
2018	729,477
2019	605,233
2020	508,650
Average over this period is 703,742 Visits	

3) Recreational Analysis

By providing opportunities for active recreation, the Corps lakes help combat one of the most significant of the nation's health problems: lack of physical activity. Recreational programs and activities at Corps lakes also help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self-esteem; and increase water safety and awareness. The program also increases community involvement and ownership of shared resources. Physical recreation contributes to a full and meaningful life, which is good for the mind and body, good for the economy, and great for the outdoors.

Perry's recreation areas, trails, and water add to the attraction, vitality, and appreciation for the outdoors. These areas provide a sense of place and allow a growing population to enjoy outdoor recreation opportunities in an ever-growing landscape. While visitation

in recreation areas remains strong, there are indications that there is new demand for upgraded facilities and non-traditional recreation opportunities.

Recreation has evolved into a more modernized and high-tech activity since the construction of Perry's recreation areas. For example, sewer hookups, 50-amp electrical hookups, concrete sites, and wireless internet are becoming the new standard for campers. Technology has changed the habits of modern camping and campgrounds, which are vital to Perry Lake. The popularity of cabins, all-season shelters, natural surfaced trails, dog parks, horse facilities, disc golf, and outdoor adventure parks have also become apparent in other federal, state, county, and municipal parks in the region.

Facilities in FY19

- 14 recreation areas
- 3 picnic sites
- 707 camping sites
- 5 playgrounds
- 2 swimming areas
- 50 number of trails
- 78 trail miles
- 1 fishing docks
- 17 boat ramps
- 1,116 marina slips

Visits (person-trips) in FY19

- 605,233 in total
- 137,930 picnickers
- 78,916 campers
- 206,475 swimmers
- 77,697 walkers/hikers/joggers
- 132,123 boaters
- 154,633 sightseers
- 70,541 fishermen
- 31,931 special event attendees
- 22,295 others

4) Recreational Carrying Capacity

No official study of carrying capacity has been done on Perry Lake.

p. Related Recreational, Historical, and Cultural Areas

The recreational, historical, and cultural opportunities near Perry Lake are varied and vast. Clinton, Pomona, and Hillsdale Lakes, all of which are operated by the Corps, Kansas City District, are located within 50 miles of Perry Lake. The existence and

availability of these other large lakes likely has the most significant impact to visitation at Perry Lake.

The Cities of Lawrence and Topeka offer many recreational, historical, and cultural areas within a fifteen to twenty minute drive from the lake.

Recreational:

Swimming Pools

City Parks

Multiple Trail Systems

Parks and Recreation organized sports, classes, and trainings

University of Kansas Sporting Events

Historical:

University of Kansas Natural History Museum

Watkins Museum of History

Dole Institute of Politics

Granada Theater

Freedom's Frontier National Heritage Area

Downtown Lawrence Historic District

Brown v. Board of Education National Historic Site

Jayhawk Theater

Kansas Museum of History

Historic Lecompton

Cultural:

Lied Center for Performing Arts

Spencer Museum of Art

Haskell-Baker Wetlands

Haskell Cultural Center and Museum

Lawrence Arts Center

Watkins Museum of History

Mulvane Art Museum

In addition, the Kansas City metro area offers many other recreational, historical, and cultural opportunities, including the Kansas Speedway, Kaufmann Center for Performing Arts, Liberty Memorial, and the Nelson-Atkins Museum of Art.

q. Real Estate Acquisition Policy

The Acquisition Criteria for Perry Lake was established in accordance with the Joint Policy established by the Department of Interior and Department of the Army on 22 February 1962.

“The reservoir area lands will be purchased in fee title, all lands within the reservoir below the maximum full-pool line plus a reasonable surcharge to provide for the effects of saturation, wave action, and bank erosion. Easements will be taken in remote areas where the determination has been made that the lands have no substantial value for protection of fish and wildlife resources, or for public outdoor recreation. For the Perry Reservoir, fee acquisition will encompass, on sound blocking practices, all lands below the 926-foot contour elevation.”

Flowage easements was acquired in lieu of fee title only for (a) lands lying above the storage pool, (b) lands that are in remote portions of the project area, (c) lands that were determined to be of no substantial value for protection or enhancement of fish and wildlife resource, or for public outdoor recreation, and (d) it is to the financial advantage of the Government to take easements in lieu of fee title.

Permanent road easements include existing and additional rights of way required for access. The temporary road easements are for use during the construction of access roads.

r. Pertinent Public Laws

1) Application of Public Laws.

Development and management of federal reservoirs are regulated by a number of statutes and guided by Corps documents. The following sections provide a summary of the relevant policies and federal statutes.

2) Recreation

The policies and public laws listed below address development and management of recreational facilities on public lands and are pertinent to the Perry Lake Project.

PL 78-534, Flood Control Act of 1944 (22 December 1944), authorized the Chief of Engineers to provide facilities in reservoir areas for public use, including recreation and conservation of fish and wildlife.

PL 79-526, Flood Control Act of 1946 (24 July 1946), amends PL 78-534 to include authority to grant leases to nonprofit organizations at recreational facilities in reservoir areas at reduced or nominal charges.

PL 83-780, Flood Control Act of 1954 (3 September 1954), further amends PL 78-534 and authorizes 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 recreational purposes when in the public interest.

PL 87-874, Flood Control Act of 1962, broadened the authority under PL 78-534 to include all water-resource projects.

Joint Land Acquisition Policy for Reservoir Projects (Federal Register, Volume 27, 22 February 1962) allows the Department of the Army to acquire additional lands necessary for the realization of potential outdoor recreational resources of a reservoir.

PL 88-578, Land and Water Conservation Fund Act of 1965 (1 September 1964), prescribes conditions under which the Corps may charge for admission and use of its recreational areas.

PL 89-72, Federal Water Project Recreation Act of 1965 (9 July 1965), requires sharing of financial responsibilities in joint federal and non-federal recreational and fish and wildlife resources with no more than half the cost borne by the federal government.

PL 90-480, Architectural Barriers Act of 1968 (12 August 1968), as amended, requires access for persons with disabilities to facilities designed, built, altered, or leased with federal funds.

PL 101-336, Americans with Disabilities Act of 1990 (ADA) (26 July 1990), as amended by the ADA Amendments Act of 2008 (PL 110-325), prohibits discrimination based on disabilities in, among others, the area of public accommodations and requires reasonable accommodation for persons with disabilities.

PL 102-580, Water Resources Development Act of 1992 (31 October 1992), authorizes the Corps to accept contributions of funds, materials, and services from non-federal public and private entities to be used in managing recreational facilities and natural resources.

PL 103-66, Omnibus Budget Reconciliation Act - Day-Use Fees (10 August 1993), authorized the Corps to collect fees for the use of developed recreational sites and facilities, including campsites, swimming beaches, and boat ramps.

PL 104-333, Omnibus Parks and Public Lands Management Act of 1996 (12 November 1996), created an advisory commission to review the current and anticipated demand for recreational opportunities at lakes and reservoirs managed by the federal government and to develop alternatives to enhance the opportunities for such use by the public.

PL 104-303 (the Water Resources Development Act of 1996), authorizes recreation and fish and wildlife mitigation as purposes of the project, to the extent that the additional purposes do not adversely affect flood control, power generation, or other authorized purposes of the project.

3) Water Resource Protection and Flood Risk Management

A number of public laws address water resources protection and flood risk management and integration of these goals with other Project purposes such as recreation. The following are pertinent to Perry Lake:

PL 75-761, Flood Control Act of 1938 (28 June 1938), authorizes the construction of civil engineering projects such as dams, levees, dikes, and other flood risk management measures through the Corps.

PL 78-534, Flood Control Act of 1944 (22 December 1944), specifies the rights and interests of the states in water resources development and requires cooperation and consultation with State agencies in planning for flood risk management.

PL 79-14, Rivers and Harbors Act of 1945 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.

PL 85-500, Water Supply Act of 1958 (3 July 1958), authorizes the Corps to include municipal and industrial water supply storage in multiple-purpose reservoir projects.

PL 87-88, Federal Water Pollution Control Act Amendments of 1961 (20 July 1961), requires federal agencies to address the potential for pollution of interstate or navigable waters when planning a reservoir project.

PL 89-80, Water Resources Planning Act of 1965 (22 July 1965), provides for the optimum development of the Nation's natural resources through coordinated planning of water and related land resources. It provides authority for the establishment of a water resources council and river basin commission.

PL 89-298, Flood Control Act of 1965 (27 October 1965), authorizes the Secretary of the Army to design and construct navigation, flood risk management, and shore protection projects if the cost of any single project does not exceed \$10 million.

PL 92-500, Federal Water Pollution Control Act (Clean Water Act) (October 18, 1972) Establishes a national goal of eliminating all discharges into U.S. waters by 1985 and an interim goal of making the waters safe for fish, shellfish, wildlife and people by July 1, 1983. Also provides that in the planning of any Corps reservoir consideration shall be given to inclusion of storage for regulation of streamflow.

PL 95-217, Clean Water Act of 1977 (15 December 1977), amends PL 87-88 and requires the Environmental Protection Agency (EPA) to enter into written agreements

with the Secretaries of Agriculture, the Army, and the Interior to provide maximum utilization of the laws and programs to maintain water quality.

PL 99-662, Water Resource Development Act of 1986 (17 November 1986), establishes cost sharing formulas for the construction of harbors, inland waterway transportation, and flood risk management projects.

4) Fish and Wildlife Resources

A number of public laws address protection and maintenance of fish and wildlife resources. The following are pertinent to the Perry Lake project:

PL 79-732, Fish and Wildlife Coordination Act (10 March 1934), provides authority for making project lands available for management by interested State agencies for wildlife purposes.

Title 16 U.S. Code (U.S.C.) §§ 668-668a-d, Bald and Golden Eagle Protection Act of 1940 (8 June 1940) as amended, prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald eagles (*Haliaeetus leucocephalus*), including their nests or eggs.

PL 85-624, Fish and Wildlife Coordination Act (12 August 1958), states that fish and wildlife conservation will receive equal consideration with other project purposes and be coordinated with other features of water resources development programs.

The Federal Water Project Recreation Act of 1965 (PL 89-72) requires consideration of opportunities for fish and wildlife enhancement in planning water resources projects. Non-federal bodies are encouraged to operate and maintain the project fish and wildlife enhancement facilities. If non-federal bodies agree in writing to administer the facilities at their expense, the fish and wildlife benefits are included in the project benefits and project cost allocated to fish and wildlife. Fees may be charged by the non-federal bodies to repay their costs. If non-federal bodies do not so agree, no facilities for fish and wildlife may be provided.

PL 91-190, National Environmental Policy Act of 1969 (NEPA) (1 January 1970), establishes a broad federal policy on environmental quality stating that the federal government will assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings, and preserve important historic, cultural, and natural aspects of our national heritage.

PL 93-205, Conservation, Protection, and Propagation of Endangered Species (28 December 1973), requires that federal agencies will, in consultation with the U.S. Fish and Wildlife Service (USFWS), further conservation of endangered and threatened species and ensure that their actions are not likely to jeopardize such species or destroy or modify their critical habitat.

PL 95-632, Endangered Species Act Amendments of 1978 (10 November 1978), specifies a consultation process between federal agencies and the Secretaries of the

Interior, Commerce, or Agriculture for carrying out programs for the conservation of endangered and threatened species.

PL 101-233, North American Wetland Conservation Act (13 December 1989), directs the conservation of North America wetland ecosystems and requires agencies to manage their lands for wetland/waterfowl purposes to the extent consistent with missions.

PL 104-303 (the Water Resources Development Act of 1996). Authorized recreation and fish and wildlife mitigation as purposes of the project, to the extent that the additional purposes do not adversely affect flood control, power generation, or other authorized purposes of the project.

PL 106-147, Neo-tropical Migratory Bird Conservation Act (20 July 2000) promotes the conservation of habitat for neo-tropical migratory birds.

5) Forest Resources

The following law pertains to management of forested lands and is pertinent to the Perry Lake project:

PL 86-717, Conservation of Forest Land Act of 1960 (6 September 1960), provides for the protection of forest cover in reservoir areas and specifies that reservoir areas of projects developed for flood risk management or other purposes that are owned in fee and under the jurisdiction of the Secretary of the Army and the Chief of Engineers will be developed and maintained so as to encourage, promote, and ensure fully adequate and dependable future resources of readily available timber through sustained yield programs, reforestation, and accepted conservation practices.

6) Cultural Resources

A number of public laws mandate protection of cultural resources on public lands. The following are pertinent to Corps project lands at the Perry Lake project:

PL 59-209, Antiquities Act of 1906 (8 June 1906), applies to the appropriation or destruction of antiquities on federally owned or controlled lands and has served as the precedent for subsequent legislation.

PL 74-292, Historic Sites Act of 1935 (21 August 1935), declares that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States.

PL 86-523, Reservoir Salvage Act of 1960 (27 June 1960), provides for the preservation of historical and archaeological data that might otherwise be lost as the result of the construction of a dam and attendant facilities and activities.

PL 89-665, National Historic Preservation Act of 1966 (NHPA) (15 October 1966), establishes a national policy of preserving, restoring, and maintaining cultural resources.

It requires federal agencies to take into account the effect an action may have on sites that may be eligible for inclusion on the National Register of Historic Places.

PL 93-291, Archaeological and Historic Preservation Act of 1974 (24 May 1974), amends PL 86-523 and provides for the Secretary of Interior to coordinate all federal survey and recovery activities authorized under this expansion of the Reservoir Salvage Act of 1960. The federal construction agency may expend up to 1 percent of project funds on cultural resource surveys.

PL 96-95, Archaeological Resources Protection Act of 1979 (31 October 1979), updates PL 59-209 and protects archaeological resources and sites on public lands and fosters increased cooperation and exchange of information among governmental authorities, the professional archaeological community, and private individuals.

PL 101-601, Native American Graves Protection and Repatriation Act (16 November 1990), requires federal agencies to return Native American human remains and cultural items, including funerary objects and sacred objects, to their respective peoples.

7) Leases, Easements, and Rights-of-Way

A number of laws and regulations govern the granting of leases, easements, and rights-of-way on federal lands. The following are pertinent to Corps project lands at the Perry Lake project:

16 U.S.C. § 663, Impoundment or Diversion of Waters (10 March 1934), for wildlife resources management in accordance with the approved general plan.

10 U.S.C. § 2667, Leases: Non-excess Property of Military Departments and Defense Agencies (10 August 1956), authorizes the lease of land at water-resource projects for any commercial or private purpose not inconsistent with other authorized project purposes. U.S.C. Titles 10, 16, 30, 32, and 43 address easements and licenses for project lands;

16 U.S.C. § 460d authorizes use of public lands for any public purpose, including fish and wildlife, if it is in the public interest.

16 U.S.C. §§ 470h-3, Lease or Exchange of Historic Property (15 October 1966), for historic properties.

PL 91-646, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (2 January 1971), establishes a uniform policy for fair and equitable treatment of persons displaced as a result of federal or federally assisted programs.

PL 94-579, Federal Land Policy and Management Act of 1976 (21 October 1976) establishes a policy that the federal government receives fair market value for the use of the public lands and their resources unless otherwise provided for by statute. It also provides for the inventory of public land and land-use planning and establishes the extent to which the executive branch may withdraw lands without legislative action.

s. Management Plans

Operation Management Plan - Dated 2021

Whereas the Master Plan is a more conceptual framework to guide the park, the OMP gives more specificity to what work will be accomplished over the next five years. The OMP is updated annually.

Chapter 3 - Resource Objectives

a. Recreation Objectives

- 1) Update facilities to meet current recreational user needs and standards (utilities, campsites, buildings, roads, parking etc.)
- 2) Continue management practices to improve park and operating efficiency.
- 3) Expand lake access (boat ramps) and day use facilities to alleviate overcrowding at existing park area.
- 4) Investigate alternative management options for public use area, such as leases, cooperative agreements, etc.
- 5) Explore partnership opportunities to leverage resources and achieve common goals.



b. Natural Resources Objectives

- 1) Manage and improve habitat, both aquatic and terrestrial.
- 2) Control noxious and invasive plants and wildlife as able.
- 3) Promote biodiversity health through reintroduction and proper management of native grasslands and timber.
- 4) Work to improve safe access for the public to natural resource areas.
- 5) Work with other agencies and stakeholder groups to leverage resources and achieve common goals.

Chapter 4 - Land Allocation, Land Classification, Water Surface, and Project Easement Lands

a. Land Allocation

Lands are allocated by their congressionally authorized purposes for which the project lands were acquired. There are four land allocation categories applicable to Corps projects:

1) Operations (i.e., flood control, hydropower, etc.)

Lands acquired for the congressionally authorized purpose of constructing and operating the project. Most project lands are included in this allocation.

2) Recreation

Lands acquired specifically for the congressionally authorized purpose of recreation. These are referred to as separable recreation lands. Recreation lands in this allocation can only be given a land classification of "Recreation."

3) Fish and Wildlife

Lands acquired specifically for the congressionally authorized purpose of fish and wildlife management. These are referred to as separable fish and wildlife lands. Lands under this allocation can only be given a land classification of "Wildlife Management."

4) Mitigation

Lands acquired or designated specifically for the congressionally authorized purpose of offsetting losses associated with development of the project. These are referred to as separable mitigation lands. Lands under this allocation can only be given a land classification of "Mitigation."

Table 4.1

Land-Use Allocations	
Allocation	Acres
Operations	376
Recreation	6,239
Fish and Wildlife	21,371
Total Land-Use Allocations	27,986
Water	11,354
Total Fee Acquisitions	39,340

b. Land Classification

Land classification designates the primary use for which the lands are managed. Project lands are zoned for development and resource management consistent with authorized project purposes and the provisions of the National Environmental Policy Act and other federal laws. The land classifications in this Master Plan are found in EP 1130-2-500 dated June 2013 and differ from those found in the previous 1985 version of the Master Plan which was a design memorandum. The classification names vary only slightly from the previous classification system and do not result in any direct changes to the way the land is managed.

1) Project Operations

This category includes those lands required for the dam, spillway, switchyard, levees, dikes, offices, maintenance facilities, and other areas that are used solely for the operation of the project.

2) High-Density Recreation

Lands developed for intensive recreational activities for the visiting public including day-use areas and/or campgrounds. These could include areas for concessions (marinas, comprehensive resorts, etc.), and quasi-public development.

3) Mitigation

This classification will only be used for lands with an allocation of Mitigation and that were acquired specifically for the purposes of offsetting losses associated with development of the project.

4) Environmentally Sensitive Areas

These are areas where scientific, ecological, cultural, or aesthetic features have been identified. Designation of these lands is not limited to just lands that are otherwise protected by laws such as the Endangered Species Act, the National Historic Preservation Act or applicable State statutes. These areas must be considered by management to ensure they are not adversely impacted. Typically, limited or no development of public use is allowed on these lands. No agricultural or grazing uses are permitted on these lands unless necessary for a specific resource management benefit, such as prairie restoration. These areas are typically distinct parcels located within another, and perhaps larger, land classification, area.

5) Multiple Resource Management (MRM) Lands

This classification allows for the designation of a predominate use as described below, with the understanding that other compatible uses described below may also occur on these lands (e.g. a trail through an area designated as Wildlife Management.) Land classification maps must reflect the predominant sub-classification, rather than just Multiple Resource Management.

a) Low-Density Recreation

Lands with minimal development or infrastructure that support passive public recreational use (e.g. primitive camping, fishing, hunting, trails, wildlife viewing, etc.)

b) Wildlife Management

Lands designated for stewardship of fish and wildlife resources.

c) Vegetative Management

Lands designated for stewardship of forest, prairie, and other native vegetative cover.

d) Future/ Inactive Recreation Areas

Areas with site characteristics compatible with potential future recreational development or recreation areas that are closed. Until there is an opportunity to develop or reopen these areas, they will be managed for multiple resources.

6) Water Surface

c. Project Easement Lands

Project easement land classification is for those lands for which the Corps holds an easement interest, but not fee title. Planned use and management of easement lands will be in strict accordance with the terms and conditions of the easement estate acquired for the project. Easements were acquired for specific purposes and do not convey the same rights of ownership to the Corps as other lands.

1) Operations Easement

The Corps retains rights to these lands necessary for project operations (access, etc.).

2) Flowage Easement

The Corps retains the right to inundate these lands for project operation.

3) Conservation Easement

The Corps retains the rights to lands for aesthetic, recreation, and environmental benefits. (Currently none at the project)

Chapter 5 - Resource Plan

Compartment 1 – Delaware River

1) Classification: MRM: Wildlife Management

2) Management Agency: USACE

3) Location/Acreage: 306 acres

4) Description and Use: The east half of the compartment has a series of ridges and hills split up by very deep ditches and streams. The hills slope west into lowlands and into the Delaware River. The western boundary of the compartment is the downstream portion of the Delaware River. There is a pond in the north end and three small ponds in the southeast corner of the compartment. There is a system of streams and ditches in the north end of the compartment that feed into the Delaware River.

This compartment consists of large acreages of highly mixed eastern deciduous forest with about 75 acres old pasture and hay ground. The 6-acre brome field in the north has been converted to warm season, native grasses and forbs. The fields in the old pasture areas in the central and southeastern parts of the compartment are showing increasing encroachment by honey locust and eastern red cedars. The grasses in those fields are much more mixed with native forbs and provide better wildlife food and cover. The woods, which comprise the largest portion of this compartment, are a well-varied stand of eastern deciduous forest, containing a high degree of species diversity for this area.

Primary use of this area is for wildlife management, public hunting, and agricultural production.

5) Resource Objectives

- (a) Noxious weed control (sericea lespedeza).
- (b) Provide easier public access.
- (c) Reduce woody vegetation encroachment (eastern red cedar).

6) Development Needs:

- (a) Provide safe accessible hunting opportunities to aid in control of wildlife.
- (b) Improve low water crossing to aid in access for equipment.

7) Special Considerations:

- (a) Currently do not have access off Ferguson Road, walk in access is very difficult for users from Outlet Road.
- (b) Gas pipeline run through part of the compartment.

Compartment 2 – Off-Road Trail

1) Classification: High Density Recreation

2) Management Agency: USACE

3) Location/Acreage: 163 acres

4) Description and Use: This area consists of a 140-acre off-road trail designed for ATV's and dirt bikes. The east and west end of the compartment are ridgelines and are divided by a deep draw and drainage ditches.

There are two ponds inside the compartment. The east end of the compartment has a series of deep drainage ditches that flow into a stream. A third of the compartment is a mixed of grasslands and scrub brush. The remaining two thirds is timber, which comprise the largest portion of this compartment, are a well-varied stand of eastern deciduous forest, containing a high degree of species diversity for this area.

5) Resource Objectives:

- (a) Provide a safe riding environment for off-road vehicles.
- (b) Control erosion from ORV trails.
- (c) Noxious weed control (sericea lespedeza).

6) Developmental Needs:

- (a) Replace and repair damaged fence around ORV area boundaries.
- (b) Repair creek crossing on southeast boundary for vehicle/equipment access.
- (c) Create emergency access for first responders in the ORV area.

7) Special Considerations:

(a) Work closely with Jefferson County to develop a response plan for first responder access. Currently access is limited and providing timely medical responses when accidents occur is difficult.

Compartment 3 – Outlet Park

- 1) Classification: MRM - Low-Density Recreation
- 2) Management Agency: USACE and Jefferson County, Kansas
- 3) Location/Acreage: 479 acres
- 4) Description and Use: This is a multiuse area consisting of an agricultural lease, off-leash dog trail, day use areas, wetland, and radio control airfield.

The east end of the compartment is a hillside that falls west into bottoms and lowlands that make up the remaining area. The downstream of the Delaware River splits the compartment in two. The Delaware Marsh is 50 acres and comprises most of the east half of the compartment. Ephemeral ponds and moist soil wetlands scatter the low area after very wet events. The NRCS determined that the soils of the east crop field qualify as wetlands protected by the Food Security Act of 1985. Perry Lake Outlet into the Delaware River partners with two relief well ditches on the east and west sides. Some ephemeral ponds and moist soil wetlands are as scattered around the grasslands.

A mixture of warm season and cool season grasses make up a majority of the compartment. Much of the timber runs along riparian corridors and is comprised of native, water tolerant trees. An old pine tree nursery can be found on the north end of the compartment. Various thickets of dogwoods and plums are scattered throughout the area.

5) Resource Objectives:

(a) To provide a natural setting for unstructured recreation such as hiking, off-leash dog trails, bird watching, fishing, and archery hunting.

(b) To maintain the wetland to promote effective management of shorebird and moist soil vegetations.

(c) Continue working with Jefferson County to provide safe, accessible hiking and off-leash dog trails.

(d) Continue working with local clubs to have a safe and accessible location of RC airplane users.

(e) Provide access to Delaware River.

6) Development Needs

(a) Improve roadway surfaces to allow for safer access to the area.

(b) Construct parking lot on west side near river access point.

7) Special Considerations

- (a) Occasional issues occur with multiple uses and interests in the area.

Compartment 4 – Project Operations

1) Classification: Operations

2) Management Agency: USACE

3) Location/Acreage: 376 acres

4) Description and Use: Steep terrain on either side of the dam and rolling hills surrounding the Project Office, Emergency Spillway and Spring yard. Primary use of the area is for project operations including office buildings, maintenance storage yards and project operational supply storage.

The north end of the compartment is Perry Lake. The emergency outlet has a stream that drains into the lake. There are large ephemeral ponds in portions of the emergency outlet. A year-round spring is located on the southeast portion of the compartment in the “Spring Yard” which is used for storage of project supplies.

Much of the compartment is cool season grass. Two small warm season grass and forbs fields are located in the southeast corner. The stands of timber run along riparian corridors and fields ends and predominately consist of native trees. An old pine tree wind break along 39th St was removed in 2013 and replaced with a mixture of oaks, pecans, and other various native trees and a line of ninebark, American plum, and chokecherry.

5) Resource Objectives:

(a) Provide an area for project administrative, maintenance, and operational facilities to ensure project purposes are met while ensuring public safety.

(b) To interpret project purposes and benefits to the public using exhibits, signs, and presentations.

(c) To ensure surveillance and safe operations of the flood control structure.

(d) To maintain dam, outlet, and spillway structures.

(e) To provide the public with a facility to obtain information about lake facilities and applicable policies while offering visitor contact and assistance by project personnel.

(f) To provide a safe and secure location to store vehicles, equipment, and supplies.

(g) To provide limited day use and recreation facilities.

(h) To provide accessible sites for project volunteers.

6) Development Needs

(a) Repave dam roadway to prevent detrition of road or dam structure and increase longevity.

(b) Control erosion of outlet channel banks.

7) Special Considerations

(a) Aging structure, utilities and mechanical features continue to be an issue.

(b) Upgrade to project security and force protection to meet current army requirements.

Compartment 5 – Perry Yacht and Marina

1) Classification: High-Density Recreation

2) Management Agency: Lease Area

3) Location/Acreage: 125 acres

4) Description and Use: This compartment contains Lake Perry Yacht and Marina which is a 530-slip marina with a full-service restaurant/bar, repair shop, storage yard and swimming beach.

The compartment is comprised of a mix of bottomlands, rolling hills and small mounds, with a general trend of sloping down toward the shoreline. There is a jetty in the north west corner. The main body of Perry Lake surrounds the compartment to the west and north and includes a man-made lagoon for a marina in the north section of the compartment. A small draw runs along the northern edge into the main lake.

5) Resource Objectives:

(a) To provide a recreation opportunity for boaters and day users by providing goods and services.

(b) Provide a secure location for boat mooring.

(c) Provide a safe location for swimming.

6) Development Needs

(a) None.

7) Special Considerations

(a) Long term developmental plan by lease holders includes the addition of camp sites and cabins for overnight use.

Compartment 6 – Ferguson and Slough Creek Bridge

1) Classification: MRM: Low-Density Recreation

2) Management Agency: USACE

3) Location/Acreage: 999 acres

4) Description and Use: This compartment is mostly bottom lands with rolling hills and several large mounds, with topography that slopes down to the shoreline toward the west and north. The entire western edge is abutted by the main body of Perry Lake, with several small draws flowing out to the lake. Additionally, this compartment consists of Slough Creek Bridge Boat Ramp which is one of the larger and busier access points on Perry Lake.

This compartment consists of numerous scattered grass fields, food plots, and a tree planting that is now a mature stand of pines. Many hay fields are brome, fescue, and native grasses separated by upland deciduous forest, scrub brush, and old fence and tree lines. Upland deciduous trees on the hillsides and woodlots, the shorelines however, is a mixture of willows and cottonwoods. Several small fencerows cut through the compartment making good edges. The old Perry Park area contains some of the best timber on Perry Lake. There is also an old wildflower area just south of the large mound, Round Mound, but woody encroachment has had a detrimental impact on vigor of the flowers. *Sericea lespedeza* is a serious problem on this area.

5) Resource Objectives:

(a) To provide a natural setting for unstructured recreation such as hiking, bird watching, fishing, and hunting.

(b) To provide a developed boat ramp for public access.

(c) Continue partnership with Kansas Trail Council on maintenance of the Perry Lake Trail.

(d) To maintain healthy grasslands, prevent invasion of woody plants and support food and habitat for wildlife.

6) Development Needs:

(a) Resurface parking lot and access road to Slough Creek Bridge Boat Ramp.

(b) Extend breakwater near boat ramp area to provide a windbreak.

(c) Construct parking lots for better access to the Perry Lake Trail.

(d) Improve low water crossings in agricultural fields to ease access.

7) Special Considerations

(a) Old Perry Park area has the potential for future development including using older hard surfaced roads for a walking trail. Additionally, an expired water treatment facility needs to be removed from the area.

Compartment 7 – Slough Creek Educational Point

1) Classification: MRM – Low-Density Recreation

2) Management Agency: KDWP, Private Lands Division

3) Location/Acreage: 325 acres

4) Description and Use: This compartment has a ridge that runs from north to south near the western edge of this compartment, surrounded by lowlands and shoreline. The main body of Perry Lake abuts the western and southern edges of the compartment with a large creek draining toward the south into the lake. It is primarily brome fields separated by old woody fencerows and woody drainages. These brome stands are both large and productive.

This is a multi-use area under the management of KDWP, primary objective is to provide limited recreation opportunities such as a walking trail and controlled hunting through state managed hunting programs. Additionally, KDWP uses the area to demonstrate effective grassland management practices by educating landowners on various management methods.

5) Resource Objectives:

- (a) Maintain the area as an environmental study area.
- (b) Restore disturbed areas back to a native prairie environment.
- (c) Study practices for control of noxious weeds.

6) Development Needs:

(a) Remove current structures (restrooms and shelter) to create a more natural environment.

7) Special Considerations

(a) This is a multi-use area; balance of competing interests is vital to the success of the area.

Compartment 8 – 82nd & Kiowa

1) Classification: MRM: Wildlife Management

2) Management Agency: USACE

3) Location/Acreage: 1,108 acres

4) Description and Use: This compartment consists of bottom lands and flood plain. The eastern edge of the compartment is steep ridges sloping down to the shoreline to the west. The Big Slough Creek flows from the north section down along the southern edge, with many cut-off channels and meanders throughout. Several sections of wetland and marshland. The southern section abuts the main body of Perry Lake to the west. The area is a mixture of riparian forest, upland deciduous forest, crop fields, and a healthy, newly planted, prairie grass stand. The small size of the fields maximizes edge habitat but makes solutions to the erosion problems more difficult.

Primary use of the area is for wildlife management, this area is maintained through the agricultural lease program.

5) Resource Objectives

- (a) Control noxious weeds with an emphasis on sericea lespedeza.
- (b) Maintain native and cool-season hay fields.
- (c) Improve wildlife carrying potential by maintaining wildlife food plots.
- (d) Promote hunting and other outdoor activities on public lands.

6) Development Needs

- (a) Create parking lots for better public access.
- (b) Improve low water crossing for safer access.
- (c) Reclaim overgrown hay fields.

7) Special Considerations

- (a) None.

Compartment 9 – USD 501

1) Classification: MRM - Low-Density Recreation

2) Management Agency: USACE/USD 501/Audubon Society

3) Location/Acreage: 264 acres

- a. 4) Description and Use: This compartment consists of Bottom lands and flood plain. The Big Slough Creek flows from the north east section down along the southern edge, with many cut-off channels and meanders throughout. Several sections of wetland and marshland. The vegetation is mostly bottomland deciduous forest with a few scattered open grass areas, with a mixture of native and cool-season grasses. There are many small fields surrounded by woody borders, resulting in a large quantity of edge habitat. The fields are primarily crop fields some of which are classified as highly erodible and most of the others have mild to moderate erosion problems.

This area is used for outdoor education by both UDS 501 and the Audubon Society.

5) Resource Objectives

(a) Partner with USD 501 and Audubon Society to effectively manage the natural resources.

(b) Provide a location for students and nature enthusiast to learn about Kansas ecosystems and learn outdoor skills.

6) Development Need

(a) Improve access road to the area.

(b) Improve gate to the area to prevent unauthorized access.

7) Special Considerations

(a) Continue to support USD 501 and Audubon Society.

Compartment 10 – Slough Creek Park

1) Classification: High-Density Recreation

2) Management Agency: USACE

3) Location/Acreage: 621 acres

4) Description and Use: The topography of this compartment varies widely throughout. There are steep ridges on the western edge and low-lying areas along the north and south. The entire west, south and east edge of this compartment are surrounded by the main body of Perry Lake. There is a small pond in the central area of the compartment, and several small draws that lead out from the center toward the main lake. This area has several scattered brome and prairie fields. All of these are small but are very productive. Certain hay fields do contain food plots for the campground's abundant wildlife.

This area contains one of the largest campgrounds on Perry Lake, the campground consists of 176 campsites, two group camps, two boat ramps, multiple sections of hiking trails and multiple hay fields that are part of the agriculture leasing program.

5) Resource Objectives:

(a) Provide a safe family friendly camping experience for our users.

(b) Provide access to Perry Lake by maintaining boat ramps.

(c) Provide day use activities such as hiking for users.

(d) (c) Continue partnership with Kansas Trail Council on maintenance of the Perry Lake Trail.

(e) Balance public use and wildlife management.

6) Development Needs

(a) Improve roadways for safe access.

(b) Upgrade campsites to meet current design standards in EM 1110-1-400.

(c) Upgrade utilities to meet customer demands and industry standards.

(d) Expand parking lot in Worthington Loop to accommodate demand.

(e) Upgrade group camps by providing utilities for users.

(f) Replace aging and inefficient infrastructure.

(g) Hayfield restoration and timber stand improvement.

7) Special Considerations:

(a) Special hunts are conducted in the area to provide additional hunting opportunities.

(b) Perry Lake Trail is maintained in cooperation with Kansas Trail Council.

Compartment 11 – 66th & Apple Valley

1) Classification: MRM – Wildlife Management

2) Management Agency: USACE

3) Location/Acreage: 658 acres

4) Description and Use: The compartment is mostly rugged terrain with steep slopes heading toward the shoreline with some crop land in the northern section and bottomland in the center portion. The entire western edge of this compartment is abutted by the main body of Perry Lake, with several small draws running from east to west into the lake. This unit is a highly varied unit, containing crop fields, brome fields, brushy areas, riparian forest, and upland deciduous forest. Because of the multitude of small fields, edge habitat is plentiful on this unit. Upland deciduous forest is the largest component on the unit. Some crop fields have been removed and converted into wetlands and warm season grasses.

Primary use of the area is for wildlife management, this area is maintained through the agricultural lease program. This area also borders the Lakeside Village Improvement District and does have lake access and a developed boat ramp for public use.

5) Resource Objectives:

(a) Continue to provide public access at the Lakeside Village Boat Ramp.

(b) Control noxious weeds with an emphasis on sericea lespedeza.

(c) Maintain native and cool-season hay fields.

(d) Improve wildlife habitat by maintaining wildlife food plots.

(e) Promote hunting and other outdoor activities on public lands.

(f) Boundary line surveillance around subdivision.

(g) Continue partnership with Kansas Trail Council on maintenance of the Perry Lake Trail.

6) Development Needs

(a) Create parking lots for better public access.

(b) Improve low water crossing for safer access.

(c) Reclaim overgrown hay fields.

7) Special Considerations:

(a) Rural Water District has two wells near the shoreline, this can create local problems during periods of high water and prevents access for maintenance of those wells. Additionally, when the wells go under water the Lakeside Village Community

loses access to water. Access to wells also must be through agricultural fields and can damage crops during the growing season.

(b) Perry Lake Trail is maintained in cooperation with Kansas Trail Council.

Compartment 12 – Longview Park

1) Classification: High-Density Recreation

2) Management Agency: USACE

3) Location/Acreage: 298

4) Description and Use: The compartment is mostly steep ridges and rugged terrain in the central portion, sloping down to relatively flat areas along the shoreline. The western and southern section are abutted by the main body of Perry Lake, with several draws running the compartment and flowing into the lake. There are some viable prairie grass areas, mainly in the group shelter loop and along entrance road. The timber in this unit is almost exclusively mature deciduous trees with some invasive woody vegetation mixed in the prairie grass fields.

Additionally, this area consists of two group camps, one having 26 individual sites with water and electricity and one primitive group camp area. This area also has an 18-hole disc golf course that is operated in partnership with a local disc golf club and a two-lane boat ramp for public access to the lake.

5) Resource Objectives:

- (a) Provide a safe family friendly camping experience for our users.
- (b) Provide access to Perry Lake by maintaining boat ramps.
- (c) Continue partnership with disc golf club on the maintenance and operation of the disc golf course.
- (d) Continue partnership with Kansas Trail Council on maintenance of the Perry Lake Trail.
- (e) Balance public use and wildlife management.

6) Development Needs

- (a) Improve roadways for safe access.
- (b) Upgrade campsites to meet current design standards in EM 1110-1-400.
- (c) Upgrade utilities to meet customer demands and industry standards.
- (d) Replace aging and inefficient infrastructure.
- (e) Hayfield restoration and timber stand improvement.

7) Special Considerations:

- (a) Special hunts are conducted in the area to provide additional hunting opportunities.
- (b) Perry Lake Trail is maintained in cooperation with Kansas Trail Council.

(c) Disc Golf Course is maintained in cooperation with a local disc golf club.

Compartment 13 – Lakewood Hills & Lakeshore Estates

1) Classification: MRM – Wildlife Management

2) Management Agency: USACE

3) Location/Acreage: 2,004 acres

4) Description and Use: With some crop land at the northern end of the compartment, the rest is relatively steep ridges with varying topographies. The Little Slough Creek runs through the middle of the compartment. The Western edge of the compartment is abutted by Perry Lake, with several small draws running off the ridges to the west and south into the main body of the lake. This compartment is a mixture of brome and prairie grass fields, along with several crop fields. Some timbered areas on steep slopes consisting of upland deciduous species and some fields that have very difficult access that are succeeding to Osage orange and other woody pioneers. There is a perennial stream with an associated riparian corridor also present in the unit. Deciduous trees with a mixture of woody invasive vegetation border the fields. The south end has a series of brome hay fields separated by tree lines and brush.

Primary use of the area is for wildlife management, this area is maintained through the agricultural lease program. This compartment borders two large subdivisions. Rural Water District #7 has a well located near Lakewood Hills and has access to the shoreline for well maintenance. This area is also home to Old Military Trail, a popular trail head for the Perry Lake Trail.

5) Resource Objectives:

(a) Control noxious weeds with an emphasis on sericea lespedeza.

(b) Maintain native and cool-season hay fields.

(c) Improve wildlife habitat by maintaining wildlife food plots.

(d) Promote hunting and other outdoor activities on public lands.

(e) Boundary line surveillance around subdivision.

(f) Continue partnership with Kansas Trail Council on maintenance of the Perry Lake Trail.

(g) Reduce unauthorized off-road vehicle use in the area.

6) Development Needs:

(a) Create parking lots for better public access.

(b) Improve low water crossing for safer access.

(c) Reclaim overgrown hay fields.

(d) Remove old infrastructure in the Old Military Trail Area.

7) Special Considerations

(a) Numerous unauthorized off-road vehicle trails are adjacent to the subdivisions. Enforcement and prevention of this has been difficult, adjacent homeowners have expressed great concern of this activity in the area.

(b) Perry Lake Trail is maintained in cooperation with Kansas Trail Council.

(c) Wells are in the area for a Rural Water District #10.

Compartment 14 – Old Town Park

1) Classification: High-Density Recreation

2) Management Agency: USACE

3) Location/Acreage: 73 acres

4) Description and Use: The northern edge of the compartment hosts K-92 Highway, which is elevated above the rest of the very flat compartment. The western edge of the compartment abuts the main body of Perry Lake with a small draw running off the southeast section into the lake.

This area also consists of Old Town Park, this park has a campground consisting of 38 individual campsites, a boat ramp and baseball field.

5) Resource Objectives:

- (a) Provide a safe family friendly camping experience for our users.
- (b) Provide access to Perry Lake by maintaining boat ramps.
- (c) Provide a location for youth sports by maintaining a baseball field for public use.

6) Development Needs

- (a) Improve roadways for safe access.
- (b) Upgrade campsites to meet current design standards in EM 1110-1-400.
- (c) Upgrade utilities to meet customer demands and industry standards.
- (d) Replace aging and inefficient infrastructure.
- (e) Develop a partnership with a local baseball club for joint management of the baseball field.
- (f) Remove old roadways and closed campsites.

7) Special Considerations

- (a) Siltation in the area adjacent to the boat ramp has reduced water depth limiting access to and from the ramp while making boating hazardous in the area.
- (b) Elevation of the campground is low; this area sees frequent flooding resulting in closers and difficulties in management of resources.

Compartment 15 – Paradise Point

1) Classification: MRM – Low-Density Recreation

2) Management Agency: USACE, ABATE of Kansas

3) Location/Acreage: 456 acres

4) Description and Use: Mostly bottomland with some rolling hills. The main channel of the Delaware River borders the north and west end of the compartment. Perry Lake abuts the southern edge of the compartment. A meander of the main channel of the Delaware is in the northern section and surrounds a large swath of wetland and marsh. The area is primarily covered with brome fields, all highly productive. Other features include an old tree nursery populated with trees too old and large to move now, woody fencerows and some sizable stands of upland deciduous forest. The 1993 and 1995 floods damaged large areas of grass, parts of the nurseries, and parts of the wooded areas in this compartment also extensive driftwood piles were deposited in some areas.

Primary use of the area is for wildlife management, this area is maintained through the agricultural lease program. Part of this area is under lease to ABATE of Kansas who hosts multiple events per year as part of their organizational mission. Additionally, RWD #10 has wells on the shoreline for public drinking water.

5) Resource Objectives:

- (a) Control noxious weeds with an emphasis on sericea lespedeza.
- (b) Maintain native and cool-season hay fields.
- (c) Improve wildlife habitat by maintaining wildlife food plots.
- (d) Promote hunting and other outdoor activities on public lands.
- (e) Continue lease with ABATE of Kansas.
- (f) Continue easement with RWD #10.

6) Development Needs

- (a) Create parking lots for better public access.
- (b) Improve low water crossing for safer access.
- (c) Reclaim overgrown hay fields.

7) Special Considerations

(a) ABATE of Kansas installed a gate in 2018 to prevent unauthorized access to the area, this was unpopular with residents who feel they should be able to access the area by vehicle.

Compartment 16 – 94th & Cheyenne

1) Classification: MRM – Wildlife Management

2) Management Agency: USACE,

3) Location/Acreage: 2,421 acres

4) Description and Use: Mostly flat terrain with some rolling hills and steep ridges following the lake and river. Several small and large draws throughout the compartment. A large low-lying wetland with depths that vary based on the lake level. Two large creeks on the western side of the compartment. This compartment consists of meadows separated by timbered draws and side slopes, resulting in a mix of grass and forest with a great deal of edge habitat. Some of the grass is native prairie. But this prairie has lost a good deal of its diversity through a long history of grazing and broad-leaf herbicide used to control noxious weeds. There are several brome hay fields bordered by a mix of deciduous hardwoods and woody shrubs. There are several crop fields that are slowly being taken out of production due to flooding and soil erosion.

Primary use of the area is for wildlife management, this area is maintained through the agricultural lease program. Additionally, this compartment borders the City of Ozawie and Indian Ridge Subdivision which has a boat ramp for public access.

5) Resource Objectives:

- (a) Control noxious weeds with an emphasis on sericea lespedeza.
- (b) Maintain native and cool-season hay fields.
- (c) Improve wildlife habitat by maintaining wildlife food plots.
- (d) Promote hunting and other outdoor activities on public lands.
- (e) Continue license with Indian Ridge Subdivision for a public boat ramp.
- (f) Boundary line surveillance around subdivision.
- (g) Reduce unauthorized off-road vehicle use in Indian Ridge Subdivision.

6) Development Needs

- (a) Create parking lots for better public access.
- (b) Improve low water crossing for safer access.
- (c) Reclaim overgrown hay fields.
- (d) Increase gates and signage on agricultural fields near Indian Ridge Subdivision.

7) Special Considerations

(a) City of Ozawie has previously enquired about leasing land on the north west corner of the city for future development of parks.

(b) Indian Ridge Subdivision has requested assistance with unauthorized off-road use, project staff makes efforts to patrol the area but has had little impact on the problem.

Compartment 17 – KDWP Wildlife Area

1) Classification: MRM - Wildlife Management

2) Management Agency: KDWP; Wildlife Division

3) Location/Acreage: 11,311 acres

4) Description and Use: Varying topography. Delaware river runs the length of the compartment with several creeks that feed it and large swaths of wetlands and marshes. Vegetation varies throughout this large compartment. Mostly cropland with some riparian buffer zones along the river and creeks.

Area has many uses, primary use if for fish and wildlife management by the KDWP. Area has many features including agricultural leases, wetlands, boat ramps and public hunting access.

5) Resource Objectives:

(a) Continue lease with KDWP for the management of the project natural resources.

(b) Ensure area remains available for public use.

(c) Review annual management plans.

6) Development Needs

(a) None.

7) Special Considerations

(a) None.

Compartment 18 – City of Valley Falls

1) Classification: MRM - Low-Density Recreation

2) Management Agency: City of Valley Falls

3) Location/Acreage: 356 acres

4) Description and Use: Predominantly bottomland. The Delaware River runs the East and Northern boundary of the compartment, and a small pond. This area consists primarily of riparian woodlands and open lawn areas, mowed to city park standards.

This compartment takes in portions of the City of Valley Falls. Development includes parks, baseball fields, a pool, lagoons, trails, and maintenance facilities.

5) Resource Objectives:

(a) Support the City of Valley Falls missions and developmental objectives.

6) Development Needs

(a) None.

7) Special Considerations

(a) City of Valley Falls has a water intake in the river, during times of low flow this can impact their ability to extract water.

Compartment 19 – City of Ozawkie

1) Classification: MRM - Low-Density Recreation

2) Management Agency: City of Ozawkie

3) Location/Acreage: 110 acres

4) Description and Use: The East side of the compartment is flat shoreline with gradual uphill trends. The North and West sections are steep shoreline along the Delaware River.

Primary use of the area is for recreational use including hiking trails and access to the lake shoreline. Area also includes wells for city water and other utility systems.

5) Resource Objectives:

(a) Support the City of Ozawkie missions and developmental objectives.

6) Development Needs

(a) None.

7) Special Considerations

(a) City of Ozawkie allows adjacent homeowners a 50ft. firebreak onto city leased property.

(b) City of Ozawkie has shown interested in leasing additional property on the north west corner of the city for future recreational development.

Compartment 20 – USD 345

1) Classification: MRM - Low-Density Recreation

2) Management Agency: USD 345

3) Location/Acreage: 126 acres

4) Description and Use: Peninsula with steep slopes towards the lake. large draw on the North East section of this compartment and one pond on the Southern portion. The area is primarily comprised of a border of upland deciduous forest and some old prairie areas, most of which have had extensive woody invasion by Osage orange and red elm. The school district has instituted a program to control the invasion vegetation and restore some of the prairie.

This area is used for outdoor education by USD 345.

5) Resource Objectives

(a) Partner with USD 345 to effectively manage the natural resources.

(b) Provide a location for students to learn about Kansas ecosystems and outdoor skills.

6) Development Need

(a) Formalize legal access to the area.

(b) Improve gate to the area to prevent unauthorized access.

7) Special Considerations

(a) Access to this area is via private property through a local agreement with the landowner. There is not legal access to the property by USACE or USD 345.

Compartment 21 – Perry Yacht Club

1) Classification: High-Density Recreation

2) Management Agency: Perry Yacht Club

3) Location/Acreage: 28 acres

4) Description and Use: Shallow peninsula gradually rising to a steep hill. Large draw on the West side of the compartment.

This compartment is the location of Perry Yacht Club, a private recreational lease for sailing vessels. Area consists of 130 slip marina, campground, storage area, on site housing for caretaker, two boat ramps, kayak launch area, and a clubhouse.

5) Resource Objectives:

(a) Continue to support Perry Yacht Clubs mission and developmental objectives.

6) Development Needs

(a) None.

7) Special Considerations

(a) During times of low water sail boats are unable to leave the area due to shallow water conditions.

(b) Directly above the mooring slips there have been erosion issues, Perry Yacht Club has consulted with multiple companies on plans to reduce erosion and preserve trees in the area.

Compartment 22 – West Lake

1) Classification: MRM – Wildlife Management

2) Management Agency: USACE

3) Location/Acreage: 785 acres

4) Description and Use: Steep slopes towards the lake with several steep draws leading toward the shoreline. Several steep draws leading toward the shoreline. The major resource components of this compartment are the brome fields that have gone into succession, some upland deciduous and riparian woods, and a mixture of woody fields, brushy areas, and weedy areas (the latter primarily in the low, inundated areas).

This is multi-use area that consists of hunting, mountain biking on developed trails and hiking the old Grasshopper Point recreation area.

5) Resource Objectives:

(a) Manage timber for effective wildlife management.

(b) Establish foot plots in Grasshopper Point to provide an additional food source for wildlife.

(c) Monitor boundary along multiple subdivisions for encroachment.

(d) Support KDWP by providing location for mountain bike trails.

(e) Establish formal partnership for better use of Grasshopper Point.

(f) Reduce unauthorized off-road vehicle use.

6) Development Needs

(a) Replace gates at Grasshopper point to prevent unauthorized access.

(b) Close off multiple unauthorized access points.

(c) Formalize partnership with KDWP on mountain bike trails.

7) Special Considerations

(a) Water intake for RWD #11.

Compartment 23 – Rock Creek Marina

1) Classification: High-Density Recreation

2) Management Agency: Rock Creek Marina

3) Location/Acreage: 119 acres

4) Description and Use: This compartment contains gradual sloping toward the shoreline. The Southern end of the compartment is Perry Lake. Most of the area is impacted by the marina lease. An eastern deciduous stand lot of timber is on the east end of this lease.

This compartment contains Rock Creek Marina which 476 slip marina with a full-service restaurant, repair shop, storage yard, cabins, and campground.

5) Resource Objectives:

(a) To provide a recreation opportunity for boaters and day users by providing goods and services.

(b) Provide a secure location for boat mooring.

(c) Provide a safe location for swimming.

6) Development Needs

(a) None.

7) Special Considerations

(a) Long term developmental plan by lease holders includes the addition of camp sites and additional cabins for overnight use.

Compartment 24 – Rock Creek Arm

1) Classification: MRM – Wildlife Management

2) Management Agency: USACE

3) Location/Acreage: 1,779 acres

4) Description and Use: The compartment is mostly bottom ground and wooded creek. Steep ridges exist on the East end and along the shoreline of the lake. The center of the compartment is a low which is one of Perry Project's closest approximations to swamp lands. This area stayed wet and boggy even during the drought of 1988-1989. Rock Creek runs down the middle of the western 2/3 of the compartment. The eastern 1/3 contains steep draws that feed into the lake. This compartment is a large majority of hay land and cropland, riparian woods along Rock Creek, and deciduous forest.

Primary use of the area is for wildlife management, this area is maintained through the agricultural lease program.

5) Resource Objectives:

- (a) Control noxious weeds with an emphasis on sericea lespedeza.
- (b) Maintain native and cool-season hay fields.
- (c) Improve wildlife habitat by maintaining wildlife food plots.
- (d) Promote hunting and other outdoor activities on public lands.

6) Development Needs

- (a) Create parking lots for better public access.
- (b) Improve low water crossing for safer access.
- (c) Reclaim overgrown hay fields.

7) Special Considerations:

- (a) None

Compartment 25 – Hickory Acres

1) Classification: MRM - Low-Density Recreation

2) Management Agency: USACE

3) Location/Acreage: 397 acres

4) Description and Use: The southern border of this compartment is a ridgeline that wraps around east to west. The ridge slopes down into the lake with very little leveling off for bottom ground. There are two streams that run off the north end of the compartment into the lake. The compartment is on the Rock Creek arm of the lake. The largest component of this compartment is upland deciduous forest with some mature stands for this part of Kansas. Some fields of native grass were sown by the Kansas State Extension Service in the western part of this compartment during the time soon after acquisition, but failure to burn those fields or lease them for hay production allowed woody encroachment. There are many small crop fields surrounded by woody fencerows or timber stands. The net result is considerable edge habitat.

5) Resource Objectives:

(a) Control noxious weeds with an emphasis on sericea lespedeza.

(b) Maintain native and cool-season hay fields.

(c) Improve wildlife habitat by maintaining wildlife food plots.

(d) Promote hunting and other outdoor activities on public lands.

(e) Monitor boundary along subdivision for encroachment.

(f) Continue relationship with KDWP on horse trail.

(g) Continue license for roadway to access dock zone.

(h) Manage private docks in compliance with the Perry Lake Shoreline Management Plan.

6) Development Needs

(a) Prevent horse riders encroaching onto private property.

7) Special Considerations

(a) Biggest dock zone on Perry Lake is within Hickory Acres Subdivision.

Compartment 26 – Perry State Park

1) Classification: High-Density Recreation

2) Management Agency: KDWP

3) Location/Acreage: 1,595 acres

4) Description and Use: A wide open upland sits on the southwest side of the compartment. The upland comes to a ridgeline to the north and east and drops into bottoms as it meets the lake. A pond is located to the north with another to the south end of the compartment. More than half a dozen streams run through the draws and into the lake. Cool season grass fields run alongside 237 Highway. A mixture of upland deciduous forest and brushy areas encompass much of the area with pockets of old fields claimed by woody succession.

This area is primarily used for recreation, and consists of multiple campsites, park buildings, boat ramps, trails, beaches, and administrative offices for KDWP.

5) Resource Objectives:

(a) To provide an intensive structured recreation opportunity by providing a concentration of park facilities that can withstand the impact of heavy visitor use.

(b) To provide overnight camping facilities for both transient and destination users.

(c) To provide day-use picnic facilities.

(d) To provide natural areas and habitats for exploration and interpretation.

(e) To provide a safe location for swimming.

(f) To provide visitor contact and assistance by KDWPT personnel.

(g) To protect cultural resources.

6) Development Needs

(a) Improve beach area.

(b) Construct additional cabins.

(c) Construct approved archery area.

(d) Enhance ADA accessibility throughout park.

7) Special Considerations

(a) None.

Compartment 27 – Rock Creek Park

1) Classification: High-Density Recreation

2) Management Agency: USACE

3) Location/Acreage: 704 acres

4) Description and Use: A high and steep ridgeline runs along the west boundary of the compartment. The ridgeline falls and flattens out into bottoms. Various points come out of the ridge creating very deep draws. Two streams run through the draws that come off the ridge to the west into the lake. A small pond is in the middle of the compartment. This compartment consists of several scattered warm season grass fields. The outside borders consist of native eastern deciduous hardwoods and eastern red cedars.

This compartment consists of Rock Creek Park, the second largest USACE park on Perry Lake. Rock Creek Park is a r434 site campground with a boat ramp, restrooms, shower houses, dump stations, playgrounds, and horse trails.

5) Resource Objectives:

(a) Provide a safe family friendly camping experience for our users.

(b) Provide access to Perry Lake by maintaining boat ramp.s

(c) Provide day use activities such as hiking for users.

(d) Continue partnership with KDWP on maintenance of the Perry Lake Equestrian Trails.

(e) Balance public use and wildlife management.

6) Development Needs

(a) Improve roadways for safe access.

(b) Upgrade campsites to meet current design standards in EM 1110-1-400.

(c) Upgrade utilities to meet customer demands and industry standards.

(d) Find partner to increase use of the Thompsonville Park area.

(e) Upgrade group camps by providing utilities for users.

(f) Replace aging and inefficient infrastructure.

(g) Hayfield restoration and timber stand improvement.

7) Special Considerations:

(a) Special hunts area conducted in the area to provide additional hunting opportunities.

(b) Perry Lake Equestrian Trail is maintained in cooperation with KDWP

Chapter 6 - Special Topics/Issues/Considerations

Water Treatment Plant - The existing water treatment plant in the old Perry Park campground is no longer operable. The building still stands but is degrading rapidly. The entrance doors to the facility are no longer able to be locked and are consistently being blown open. Inside the facility, still sits a water tank and staircase leading above it. The area is still accessible to the public by way of foot traffic for hiking and other recreational activities. Being accessible to the public and the degrading structure poses a safety risk to visitors.

Resident Canada Geese - The Canada goose is common throughout most of Kansas. Most Canada geese are migrants, but an increasing number are becoming year-round residents, especially in park areas. Nesting Canada geese can be aggressive, and when concentrated in large numbers their feeding habits and droppings can become a health hazard, a general nuisance, and can also damage facilities.

Each Canada goose can produce about one to two pounds of droppings each day. Considering the already-substantial population, these droppings can create quite a mess. With the droppings come pollutants. These droppings can become a health risk by carrying *Salmonella* spp., *E. coli*, and *Listeria* spp. Heavy concentrations of goose droppings can also contain nitrogen which can pollute ponds and lakes, leading to excessive algae growth and reduced water quality

Zebra Mussels - Zebras Mussels were detected within Perry Lake in 2007. This invasive species poses significant management challenges throughout the three major business lines of Environmental Stewardship, Recreation, and Flood Risk Management, and it could ultimately affect water quality, also. Zebra mussels outcompete native mussel species and can negatively impact habitat conditions for other aquatic species. Zebra Mussel shells can be hazardous to visitors due to their sharp shells near swimming beaches, dock facilities, etc. Decomposing mussels can also emit a foul odor near recreation areas. Zebra mussels also adhere to water intake pipes, service gates, and other operational control structures often causing them to plug or jam up.

Treatment methods have focused on preventing the infestation from moving between bodies of water and limiting the impact to project facilities. Crucial infrastructure such as public water intakes have been retrofitted with treatment upgrades to prevent clogging of pipes, pumps, and other components. Public outreach and education have been a major component to preventing the spread and impact of this invasive species.

Invasive Vegetation – Autumn Olive, Bush Honeysuckle, and *Sericea Lespedeza* are the three major invasive species that pose significant management challenges to the Environmental Stewardship program at Perry Lake. These invasive species grow rapidly and are prolific seed producers. These species outcompete and displace native

plants reducing the biodiversity of the affected area. In wooded areas, Bush Honeysuckle and Autumn Olive thickets inhibit the growth of tree seedlings. This causes a major problem as mature trees die, there are no new tree growing as replacements. This threatens the future of forests as old trees begin to die off. In grasslands, Sericea Lespedeza containing a deep taproot allows it to outcompete other native grasses for water and nutrients. One single Sericea Lespedeza stem can produce 1,500 seeds. This causes major challenges as native grasses die, they are replaced with several Sericea plants, destroying the biodiversity of grasslands.

ATV/UTV Use – ATV/UTV use on Corps property has increasingly become an issue at Perry Lake. In particular Indian Ridge subdivision and Lakeshore Estates subdivision has become an issue with established ATV trails in forested areas along with the destruction of grasses and crops on agricultural leases administered by Perry Lake. Perry Lake does offer an ATV/UTV park with approximately 300 acres of off-road trails for use by the public. Over time, fence degradation has led to riding outside of the park boundaries. As a result, off-road trails have been established in the agricultural lease to the west and south of the ATV park and through the Magellan Midstream Partners gas pipeline easement that runs southeast of the park.

Chapter 7 - Agency and Public Coordination

On February 9, 2021, a virtual scoping workshop was held to identify any issues, concerns, comments of the lake stakeholders. The meeting consisted of a power point presentation on the lake's operation and management, as well as an overview of the master planning process. Approximately 10 people attended this meeting, excluding Corps employees.

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Chapter 8 - Summary of Recommendations

The Master Plan for Perry Lake was last approved in 1991. Over the past 30 years population demographics as well as the economy have undergone changes. These changes can affect patterns of recreation and usage and require a frequent examination of project management objectives and facilities

This Master Plan conceptually establishes and guides the orderly development, administration, maintenance, preservation, enhancement and management of all natural, cultural, and recreational resources at Perry Lake. The Master Plan is a land-use management document and does not address water-management operations and associated prime facilities (dam, spillway, etc.), as those operations are outlined in separate documents. The Master Plan is stewardship driven and seeks to balance recreational development and use with protection and conservation of natural and cultural resources.

Facility Modernization

It is the goal of the Corps at Perry Lake to continue to modernize current facilities within existing footprints of recreation areas.

Recreational Amenities

Additional amenities should be added as demand warrants and recreation trends dictate the types of facilities that be added, consistent with the Corps' recreation policy.

Chapter 9 - Bibliography

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**Appendix A Environmental Assessment and Draft Finding of No
Significant Impact (FONSI)**



US Army Corps
of Engineers
Kansas City District

U.S. Army Corps of Engineers - Kansas City District

**NEPA Review
Environmental Assessment & Finding of No Significant Impact**

PERRY LAKE MASTER PLAN, KANSAS RIVER BASIN DELAWARE RIVER

Jefferson County, Kansas

March 2022



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, KANSAS CITY DISTRICT
601 E. 12TH STREET, 635 FEDERAL BLDG
KANSAS CITY, MO 64106-2824

Finding of No Significant Impact

PERRY LAKE MASTER PLAN KANSAS RIVER BASIN DELAWARE RIVER NOVEMBER 2021

Summary

The U.S. Army Corps of Engineers - Kansas City District (USACE) proposes to revise the Perry Lake Master Plan. This revision would replace the Design Memorandum No. 3, Master Plan for Perry Lake dated December 1991. The Master Plan is 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 the water resource project. The Master Plan guides the efficient and cost-effective management, development, and use of project lands. It is a vital tool for the responsible stewardship and sustainability of project resources for the benefit of present and future generations.

This revision brings the Master Plan in compliance with the current guidance for format and contents as outlined in Engineering Regulation/Engineer Pamphlet 1130-2-550, dated 30 January 2013.

Alternatives

Alternative 1 - “No-Action” Alternative: Under the “No-Action” Alternative the current Master Plan dated November 1984 would remain in place. Management of the project lands and waters would remain unchanged.

Alternative 2 - Acceptance of Revised Master Plan (Recommended Alternative): This alternative is to accept the management plan as written. The proposed changes in this revision are minor terminology changes for land-use designations to be in compliance with Engineering Regulation/Engineer Pamphlet 1130-2-550 (DATED 30 January 2013). Proposed changes in facilities are detailed in Chapter 5 of the main Master Plan document, which includes such things as rehabilitation of campsites, rehabilitation/replacement of aging infrastructure, upgrade of access roads, construction of parking lots, and erosion control measures.

Summary of Environmental Impacts

The Recommended Alternative will help to modernize aging facilities and increase visitor safety. The Recommended Alternative would not likely adversely impact any federally listed threatened or endangered species or their habitat. There may be temporary localized impacts to water quality during construction of the breakwater structure and campsite upgrades/rehabilitations. Construction of new parking lots or shower houses would also cause minor loss to wildlife habitat within the existing park footprint. There will likely be no impact to cultural or historic resources.

Mitigation Measures

The Master Plan is programmatic in nature and references project needs only in a programmatic manner. Site specific actions and infrastructure projects will require individual site-specific analysis to determine if any mitigation may be warranted.

Public Availability

Prior to a decision on whether to prepare an Environmental Impact Statement, the USACE is circulating a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), **March 29, 2022**, with a thirty-day comment period ending on **April 29, 2022** to the public and resource agencies. The notice informs these individuals that the EA and Draft FONSI were available on the USACE webpage or that they could request a hard copy of the EA and Draft FONSI in order to provide comment.

Conclusion

After evaluating the anticipated environmental, economic, and social effects of the proposed activity, it is my determination that construction of the proposed emergency Master Plan update does not constitute a major federal action that would significantly affect the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date: _____

Travis J. Rayfield, PE, PMP
Colonel, Corps of Engineers
District Commander

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1.0 Introduction

The U.S. Army Corps of Engineers - Kansas City District (USACE), proposes to revise the Perry Lake Master Plan. Revisions include changes to the land use category nomenclature and document content and format to meet current Master Plan Guidance (ER/EC 1130-2-550). The revision also includes an update of management objectives, management compartment boundary updates, list of current facility. This Environmental Assessment (EA) provides the necessary information to fully address the potential environmental impacts of the proposed project as required under the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [USC] 4321 et seq.); the President's Council of Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] 1500 – 1508); and USACE ER 200-2-2 (33 CFR 230) (USACE, 2008).

1.1 Purpose and Need for Action

The purpose of this project is to revise the Master Plan to respond to current and projected future recreational needs and to meet the content and format of the most recent Master Plan regulation/guidance found in Engineering Regulation/Engineer Pamphlet 1130-2-550 (dated 30 January 2013).

The project is currently using a Master Plan dated from December 1991. The recreational trends and the population estimates detailed in that Master Plan are outdated and in need of revision.

1.2 Project Location

Perry Lake is located in Jefferson County in the northeast part of Kansas. It is approximately 40 miles west of Kansas City, and just northwest of Lawrence and northeast of Topeka. Towns in the vicinity of the project include Perry, Meriden, Ozawkie, Valley Falls, and Oskaloosa. The area surrounding Perry Lake is served by federal and state highways and a county road system. The dam crosses the Delaware River at river mile 5.3.



Figure 1. General Vicinity Map

2.1 Alternative 1 - "No-Action" Alternative:

Under the "No-Action" Alternative the current Master Plan dated December 1991 would remain in place. Management of the project lands and waters would remain unchanged.

2.2 Alternative 2 – Accept Revised Master Plan (Recommended Alternative):

This alternative would accept the management plan as written. The proposed changes in this revision are minor terminology changes for land-use designations to be in compliance with Engineering Regulation/Engineer Pamphlet 1130-2-550 (DATED 30 January 2013). Proposed changes in facilities are detailed in Chapter 5 of the Master Plan document, which includes such things as rehabilitation of campsites, rehabilitation/replacement of facilities, road improvements, and erosion prevention along shoreline.

Unit # - Name	Proposed Action
Unit 1 – Delaware River	Provide safe accessible hunting opportunities to aid in control of wildlife.
	Improve low water crossing to aid in access for equipment.
Unit 2 – Off-Road Trail	Replace and repair damaged fence around ORV area boundaries.
	Repair creek crossing on southeast boundary for vehicle/equipment access.
	Create emergency access for first responders in the ORV area.
Unit 3 – Outlet Park	Improve roadway surfaces to allow for safer access to the area.
	Construct parking lot on west side near river access point.
Unit 4 – Project Operations	Repave dam roadway to prevent detrition of road or dam structure and increase longevity.
	Control erosion of outlet channel banks.
Unit 5 – Perry Yacht & Marina	N/A
Unit 6 – Ferguson and Slough Creek Bridge	Resurface parking lot and access road to Slough Creek Bridge Boat Ramp.
	Extend breakwater near boat ramp area to provide a windbreak.

Unit # - Name	Proposed Action
	Construct parking lots for better access to the Perry Lake Trail.
	Improve low water crossings in agricultural fields to ease access.
Unit 7 – Slough Creek Educational Point	Remove current structures (restrooms and shelter) to create a more natural environment.
Unit 8 – 82 nd & Kiowa	Create parking lots for better public access.
	Improve low water crossing for safer access.
	Reclaim overgrown hay fields.
Unit 9 – USD 501	Improve access road to the area.
	Improve gate to the area to prevent unauthorized access.
Unit 10 – Slough Creek Park	Improve roadways for safe access.
	Upgrade campsites to meet current design standards in EM 1110-1-400.
	Upgrade utilities to meet customer demands and industry standards.
	Expand parking lot in Worthington Loop to accommodate demand.
	Upgrade group camps by providing utilities for users.
	Replace aging and inefficient infrastructure.
	Hayfield restoration and timber stand improvement.
Unit 11 – 66 th & Apple Valley	Create parking lots for better public access.
	Improve low water crossing for safer access..

Unit # - Name	Proposed Action
	Reclaim overgrown hay fields.
Unit 12 – Longview Park	Improve roadways for safe access.
	Upgrade campsites to meet current design standards in EM 1110-1-400.
	Upgrade utilities to meet customer demands and industry standards.
	Replace aging and inefficient infrastructure.
	Hayfield restoration and timber stand improvement.
Unit 13 – Lakewood Hills & Lakeshore Estatic	Create parking lots for better public access.
	Improve low water crossing for safer access.
	Reclaim overgrown hay fields.
	Remove old infrastructure in the Old Military Trail Area.
Unit 14 – Old Town Park	Improve roadways for safe access.
	Upgrade campsites to meet current design standards in EM 1110-1-400.
	Upgrade utilities to meet customer demands and industry standards.
	Replace aging and inefficient infrastructure.
	Develop a partnership with a local baseball club for joint management of the baseball field.
	Remove old roadways and closed campsites.
Unit 15 – Paradise Point	Create parking lots for better public access.

Unit # - Name	Proposed Action
	Improve low water crossing for safer access.
	Reclaim overgrown hay fields.
Unit 16 – 94 th & Cheyenne	Create parking lots for better public access.
	Improve low water crossing for safer access.
	Reclaim overgrown hay fields.
	Increase gates and signage on agricultural fields near Indian Ridge Subdivision.
Unit 17 – KDWP Wildlife Area	N/A
Unit 18 – City of Valley Falls	N/A
Unit 19 – City of Ozawie	N/A
Unit 20 – USD 345	Formalize legal access to the area.
	Improve gate to the area to prevent unauthorized access
Unit 21 – Perry Yacht Club	N/A
Unit 22 – West Lake	Replace gates at Grasshopper point to prevent unauthorized access.
	Close off multiple unauthorized access points.
	Formalize partnership with KDWP on mountain bike trails.
Unit 23 – Rock Creek Marina	N/A
Unit 24 – Rock Creek Arm	Create parking lots for better public access.

Unit # - Name	Proposed Action
	Improve low water crossing for safer access.
	Reclaim overgrown hay fields.
Unit 25 – Hickory Acres	Prevent horse riders encroaching onto private property.
Unit 26 – Perry State Park	Improve beach area.
	Construct additional cabins.
	Construct approved archery area.
	Enhance ADA accessibility throughout park.
Unit 27 – Rock Creek Park	Improve roadways for safe access.
	Upgrade campsites to meet current design standards in EM 1110-1-400.
	Upgrade utilities to meet customer demands and industry standards.
	Find partner to increase use of the Thompsonville Park area.
	Upgrade group camps by providing utilities for users.
	Replace aging and inefficient infrastructure.
	Hayfield restoration and timber stand improvement.

3.0 Affected Environment and Environmental Consequences (Impacts)

The project area is all the project lands owned and leased by USACE at the Perry Lake project located in the Jefferson County, Kansas. Perry Lake is comprised of 27 management compartments totaling approximately 28,865 acres.

3.1 Water Quality

Generally, Perry Lake water quality improves as water moves through the lake as settling, dilution, and biological processes remove sediments and nutrients. Perry Lake is listed on the Kansas 303(d) list for eutrophication or impairments from excess nutrients available for plant growth. Federal and state agencies are working with water-quality partners (e.g. Delaware River Watershed Restoration and Protection Strategy (WRAPS)) and landowners to focus watershed conservation efforts on priority or target areas in the watershed to meet water-quality goals in Perry Lake. Water quality meets state standards in the lake and outlet and is conducive to Project Operating Purposes.

Alternative 1 - “No-Action” Alternative: In the no-action alternative, the water quality would remain the same. The lake would likely continue to meet all use criteria.

Alternative 2 - Accept Revised Master Plan (Recommended Alternative): This alternative may result in potentially minor, temporary, construction-related adverse impacts to water quality resulting in increased turbidity and suspended sediments from the rehabilitation of the campsites/parking lots. These impacts would subside following construction. Minor long-term positive impacts to water quality would be anticipated from this alternative due to erosion control measures. In addition, a positive impact from the upgrade of restroom facilities away from sewage treatment to vault toilets.

3.2 Wetlands and other Waters of the U.S.

At multipurpose pool, Perry Lake covers 11,631 acres and can expand to as much as 25,389 acres during periods of heavy rain as excess runoff is impounded to prevent downstream flooding. The Delaware River, Rock Creek, Slough Creek and Little Slough Creek are the major sources of surface water in the Delaware River Basin. Stream flow is dominated by surface runoff.

Much of the wetland systems classified at the project are associated with the lake and the tributaries feeding into the lake. Classification of the wetlands was derived from the USFWS Classification of Wetlands and Deepwater Habitats of the United States. A table listing the wetland Systems and acreages is found below.

Table 1

System	SubSystem	Class	Class Acres
Lacustrine	Littoral	Unconsolidated Shore	1

Palustrine	NO SUB-SYSTEM	Unconsolidated Shore	1
Lacustrine	Limnetic	Unconsolidated Bottom	11752
Palustrine	NO SUB-SYSTEM	Emergent Wetland	1374
Lacustrine	Littoral	Unconsolidated Bottom	14
Riverine	Lower Perennial	Unconsolidated Bottom	180
Palustrine	NO SUB-SYSTEM	Scrub-Shrub Wetland	262
Palustrine	NO SUB-SYSTEM	Aquatic Bed	265
Palustrine	NO SUB-SYSTEM	Unconsolidated Bottom	29
Riverine	Lower Perennial	Unconsolidated Shore	5
Palustrine	NO SUB-SYSTEM	Forested Wetland	702

Alternative 1 - "No-Action" Alternative: The "No-Action" Alternative would likely result in placement of small amounts of fill (rip rap) in Waters of the U.S. as new areas of bank erosion arise. Each of these actions would need to undergo a Section 404/Section 10 analyses to determine if they meet permit criteria. It is likely that any such action would meet the requirements of a nationwide permit. It is anticipated that no wetlands would be impacted by this alternative.

Alternative 2 - Accept Revised Master Plan (Recommended Alternative): This alternative would have similar impacts as Alternative 1. In addition, there is structural fill from the addition/upgrade of rip-rap for wave retention and erosion control; fill may be added below the ordinary high water mark (OHWM). A section 404 permitting analysis would need to be undertaken to make sure the project meets any applicable permitting conditions. It is not anticipated that this alternative would not have any impacts to wetlands.

3.3 Fish and Wildlife

The impoundment of the Delaware River and other tributary streams and rivers, which form Perry Lake, changed it from a riverine to a lake system. Fisheries in Perry Lake are managed by KDWP Division of Fisheries. A variety of sport and non-sport fish species are found in the lake. A list of fish species can be found in appendix C.

The project lands, with its variety of habitats, support a number of game animals, furbearers, and other mammal species. A wide variety of resident and migratory bird species use project lands and water for at least a portion of the year. These provide visitors with both consumptive and non-consumptive use. Reptiles and amphibians typical of the upper Flint Hills region are also located on Perry Lake.

Alternative 1 - “No-Action” Alternative: Under the “No-Action” Alternative, no impacts to fish and wildlife would be expected KDWP would continue to manage fish and wildlife resources on the over 11,379 acres that are licensed to them as well as management of the fisheries in the lake. This is a long-term positive impact to fish and wildlife.

Alternative 2 - Accept Revised Master Plan (Recommended Alternative): KDWP would continue to manage fish and wildlife resources on the over 11,379 acres that are licensed to them as well as management of the fisheries in the lake. There may be minor short-term impacts to fish and wildlife for any of the proposed construction activities. These are within the high-density recreation areas already disturbed and fragmented from parking and other recreational features. There would be long-term beneficial impacts to wildlife from the better range management/hayfield restoration.

3.4 Threatened or Endangered Species

Name	State Status	Federal Status	Habitat
Northern Long-Eared Bat (<i>Myotis septentrionalis</i>)		Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
Mead’s Milkweed (<i>Asclepias meadii</i>)	Endangered	Threatened	Virgin prairies
Western Prairie Fringed Orchid (<i>Platanthera praeclara</i>)		Threatened	

Alternative 1 - “No-Action” Alternative: The “No-action” Alternative would not likely affect any federally listed threatened or endangered species.

Alternative 2 - Accept Revised Master Plan (Recommended Alternative): The proposed projects are not likely to affect any threatened or endangered species or their designated critical habitat.

3.5 Noise

Ambient noise levels vary by location and time of day. With noise levels being highest in areas of active recreation (main body of lake, campgrounds, etc.) during daylight hours

and the more isolated areas and during night time hours having the lowest level of ambient noise. The active recreation period of late spring to early fall also lending to higher noise levels than the winter time frame when recreation levels decrease.

Alternative 1 - “No-Action” Alternative: The “No-action” Alternative would not result in any additional impact to noise. Noise would continue at current levels. Noise levels being the loudest during busy recreation times and then remaining relatively quiet during times of low to no recreation.

Alternative 2 - Accept Revised Master Plan (Recommended Alternative): There may be brief localized impacts to noise associated with any of the proposed construction within the plan. However, once construction was complete it is anticipated that noise would return to preconstruction levels.

3.6 Health and Safety

Outdoor activities are inherently dangerous. The lake has had several health or safety incidents with both staff and visitors over the last several years. These range from drownings to vehicle accidents. Many minor incidents go unreported and don't get recorded by the safety office. As the lake's infrastructure ages the possibility of health or safety issues rises.

Alternative 1 - “No-Action” Alternative: The “No-Action” Alternative would result in aging infrastructure such as shower houses, etc. not being replaced. This could pose a health risk from treatment plants not keeping up with state standards.

Alternative 2 - Accept Revised Master Plan (Recommended Alternative): The Recommended Plan may cause short term impacts to health and safety from construction related activities. However, improvements to infrastructure should result in a long-term beneficial impact to health and safety.

3.7 Economics

Perry Lake provides up to 75.4 million gallons/day of water users in northeastern Kansas, making it an important reservoir in the state. (Kansas Water Office. 2020).

The money spent by visitors to Corps lakes on trip expenses adds to the local and national economies by supporting jobs and generating income. Visitor spending represents a sizable component of the economy in many communities around Corps lakes.

Alternative 1 - “No-Action” Alternative: Under the No-Action alternative the economic effects would remain largely unchanged. The number of visitors would be at least partially driven by the economy. During times of good economic growth visitation should rise as people have more disposable income. During times of recession, visitation should drop as people cut back on vacation and luxury goods such as boats and RV’s.

Alternative 2 - Accept Revised Master Plan (Recommended Alternative): This alternative would have a net economic benefit over the no-action alternative. As facilities are upgraded, such as creating more spacious camping pads and the larger 50-amp electrical service, campgrounds will attract larger RV’s and there should be an increase in visitation. This would bring an increase in the local economy.

3.8 Cultural Resources

At least 3,012 acres of fee-owned land (about 10.4%) have been professionally surveyed for archeological sites. Because early surveys were not mapped, they cannot be included in the surveyed acreage. A total of 230 cultural resource sites, including prehistoric camps, mounds, historic farmsteads, and bridges, have been recorded on the fee-owned land. Of these 230 sites, none are formally listed on the National Register of Historic Places (NRHP). However, 9 sites have been determined to be eligible for listing on the NRHP. Further investigations are required on another 102 sites to determine their NRHP eligibility. The remaining sites have been determined not eligible for the NRHP (n=77) or are inundated (n=41). One site is mapped on the GIS but has no site form, so remains unknown. One bridge, the Delaware River Composite Truss bridge, is listed on the NRHP and one bridge, the Cedar Creek Marsh Arch Bridge, is eligible for the NRHP.

Alternative 1 - “No-Action” Alternative: Under the no-action alternative there would likely be no impact to cultural resources.

Alternative 2 - Accept Revised Master Plan (Recommended Alternative): For any project that may involve ground clearance, plans would be developed. A qualified archaeologist would review the plans and site area to determine if they would impact cultural resources. There would also be coordination with the State Historic Preservation Officer (SHPO) as well as any applicable Tribal Historic Preservation Officer(s) (THPO).

4.0 Conclusion

The Recommended Plan would not likely result in any impacts to federally listed threatened or endangered species or their designated critical habitat. Water quality, fish

and wildlife, and noise levels would be temporarily disturbed by the proposed construction activity. The proposed action would have no impact to sites listed on or eligible for inclusion on the National Register of Historic Places. The project would have a minor long-term benefit to health and safety. Of the two alternatives considered, the Recommended Plan is consistent with current regulations and the protection of the human environment.

5.0 Coordination and Comments

The draft EA and FONSI is being e-mailed to individuals, agencies, and businesses contained on the USACE Regulatory public notice list. It was also available on the USACE Regulatory webpage at:

<http://www.nwk.usace.army.mil/Media/PublicNotices.aspx>.

Hard copies are available upon request.

7.0 Agency Compliance with Other Environmental Laws

Compliance with other environmental laws is listed below.

Federal Policy Compliance

Archeological Resources Protection Act, 16 U.S.C. 470, et seq.	Not Applicable
Clean Air Act, as amended, 42 U.S. C. 7401-7671g, et seq.	Full Compliance
Clean Water Act (Federal Water Pollution Control Act), 33 U.S.C. 1251, et seq. Full Compliance	
Coastal Zone Management Act, 16 U.S.C. 1451, et seq.	Not Applicable
Endangered Species Act, 16 U.S.C. 1531, et seq.	Full Compliance
Estuary Protection Act, 16 U.S.C. 1221, et seq.	Not Applicable
Federal Water Project Recreation Act, 16 U.S.C. 4601-12, et seq.	Full Compliance
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.	Full Compliance
Land and Water Conservation Fund Act, 16 U.S.C. 4601-4, et seq.	Not Applicable
Marine Protection Research and Sanctuary Act, 33 U.S.C. 1401, et seq. Not Applicable	
National Environmental Policy Act, 42 U.S.C. 4321, et seq.	Full Compliance
National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470a, et seq. Full Compliance	
Rivers and Harbors Act, 33 U.S.C. 403, et seq.	Full Compliance
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq. Full Compliance	
Wild and Scenic River Act, 16 U.S.C. 1271, et seq.	Not Applicable

Farmland Protection Policy Act, 7 U.S.C. 4201, et seq. Compliance	Full
Protection & Enhancement of the Cultural Environment (Executive Order 11593) Full Compliance	
Floodplain Management (Executive Order 11988)	Full Compliance
Protection of Wetlands (Executive Order 11990)	Full Compliance
Environmental Justice (Executive Order 12898)	Full Compliance

NOTES:

- a. Full compliance. Having met all requirements of the statute for the current stage of planning (either
- b. Partial compliance. Not having met some of the requirements that normally are met in the current stage of planning.
- c. Noncompliance. Violation of a requirement of the statute.
- d. Not applicable. No requirements for the statute required; compliance for the current stage of planning.

8.0 References

- CEQ. 2020. Regulations for Implementing the Procedural Provisions of NEPA, 40 CFR Parts 1500-1508, in accordance with 40 CFR 1507.3.
- FCA. 1941. Flood Control Act of 1941, 33 U.S.C. 701n, as amended (commonly referred to as Public Law 84-99, Flood Control and Coastal Emergencies Act).
- USACE. 2008. Procedures for Implementing the National Environmental Policy Act. Engineer Regulations (ER) 200-2-2. 33 CFR 230.

9.0 List of Preparers

This draft EA and draft FONSI were prepared by Mr. Curtis Hoagland, Environmental Resources Specialist, with cultural resource assistance provided by Mr. Gina Powell, Archeologist. The address of the preparers is: U.S. Army Corps of Engineers, Kansas City, District; PMP-R, Room 529, 601 E. 12th Street, Kansas City, Missouri 64106.

Appendix B Maps



Watershed	Acres
Muddy Creek-Delaware River	176,077
Grasshopper Creek-Delaware River	103,605
Elk Creek-Delaware River	179,839
Coal Creek-Delaware River	125,440
Perry Lake-Delaware River	137,548

D.
N

PERRY LAKE WATERSHED
722,509 ACRES
1,129 SQ MILES

Compartment #	Area Name	Acres	Classification
1	Delaware River	306	MRM: Wildlife Management
2	Off Road Trail	163	High Density Recreation
3	Delaware Marsh	479	MRM: Low Density Recreation
4	Dam & Administrative	376	Project Operations
5	Perry Yacht & Marina	125	High Density Recreation
6	Ferguson & Slough Creek Bridge	999	MRM: Wildlife Management
7	Slough Creek Education Area	325	MRM: Low Density Recreation
8	82nd & Kiowa	1,108	MRM: Wildlife Management
9	USD 501	264	MRM: Low Density Recreation
10	Slough Creek Park	621	High Density Recreation
11	66th & Apple Valley	658	MRM: Wildlife Management
12	Longview Park	298	High Density Recreation
13	Lakewood Hills & Lakeshore Estates	2,004	MRM: Wildlife Management
14	Old Town Park	73	High Density Recreation
15	Paradise Point	456	MRM: Low Density Recreation
16	94th & Cheyenne	2,421	MRM: Wildlife Management
17	Kansas Department of Wildlife & Parks	11,311	MRM: Wildlife Management
18	City of Valley Falls	356	MRM: Low Density Recreation
19	City of Ozark	110	MRM: Low Density Recreation
20	USD 345	126	MRM: Low Density Recreation
21	Perry Yacht Club	28	High Density Recreation
22	West Lake	785	MRM: Wildlife Management
23	Rock Creek Manna	119	High Density Recreation
24	Rock Creek Arm	1,779	MRM: Wildlife Management
25	Hickory Acres	397	MRM: Low Density Recreation
26	Perry State Park	1,595	High Density Recreation
27	Rock Creek Park	704	High Density Recreation

Land Management Compartments

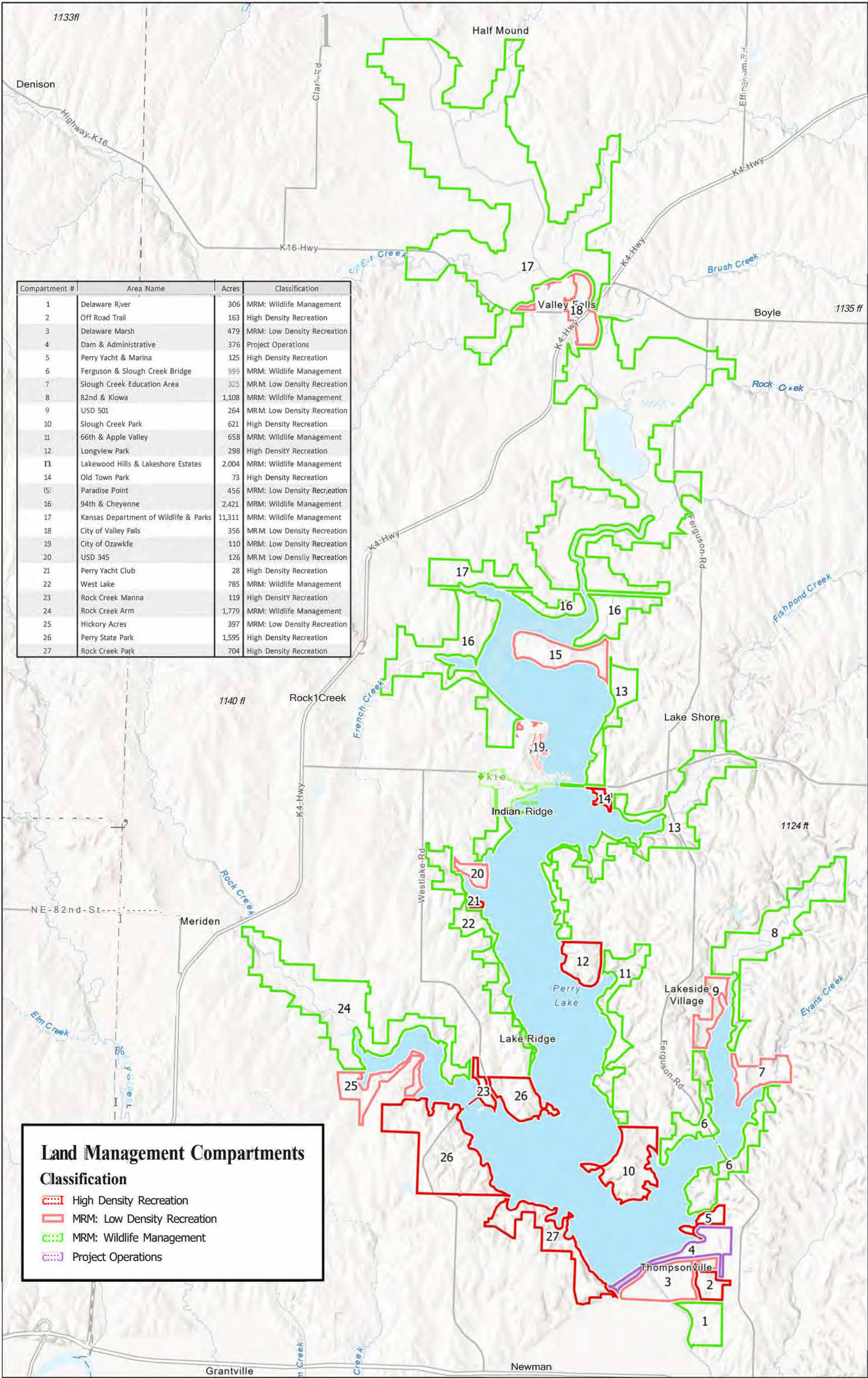
Classification

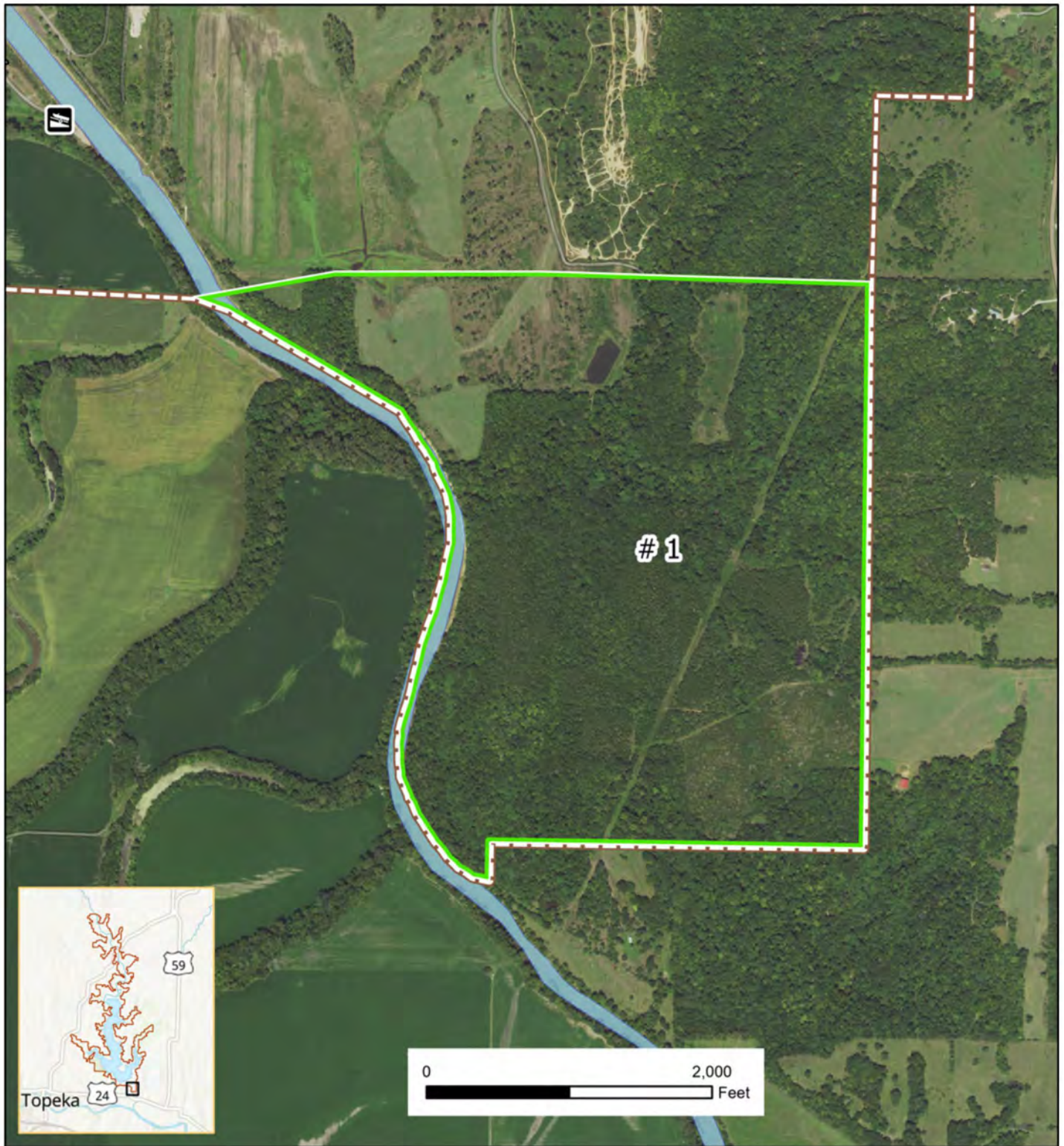
High Density Recreation




MRM: Low Density Recreation

MRM: Wildlife Management

Project Operations

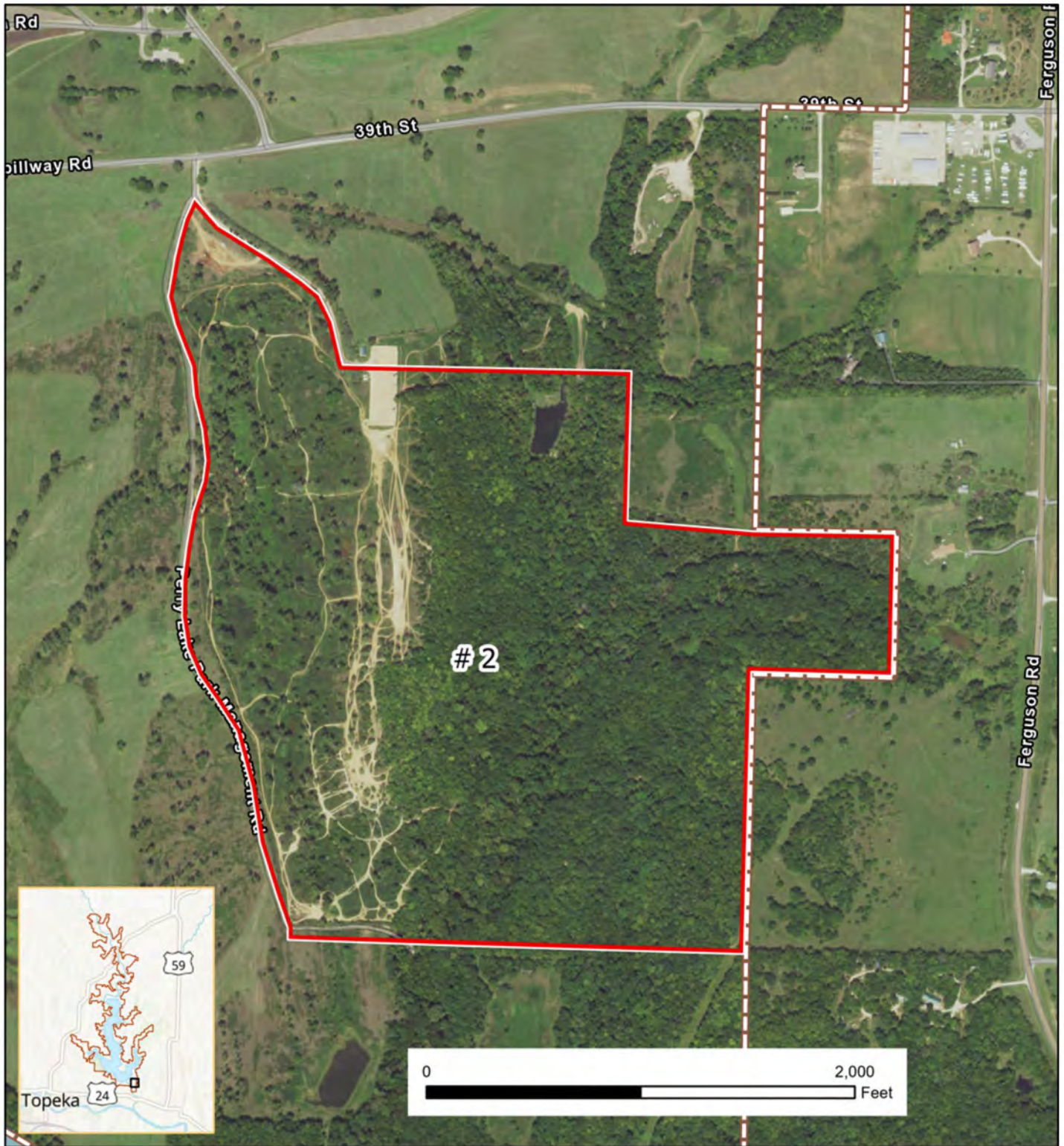




-  MRM: Wildlife Management
-  Corps Boundary
-  Boat Ramp



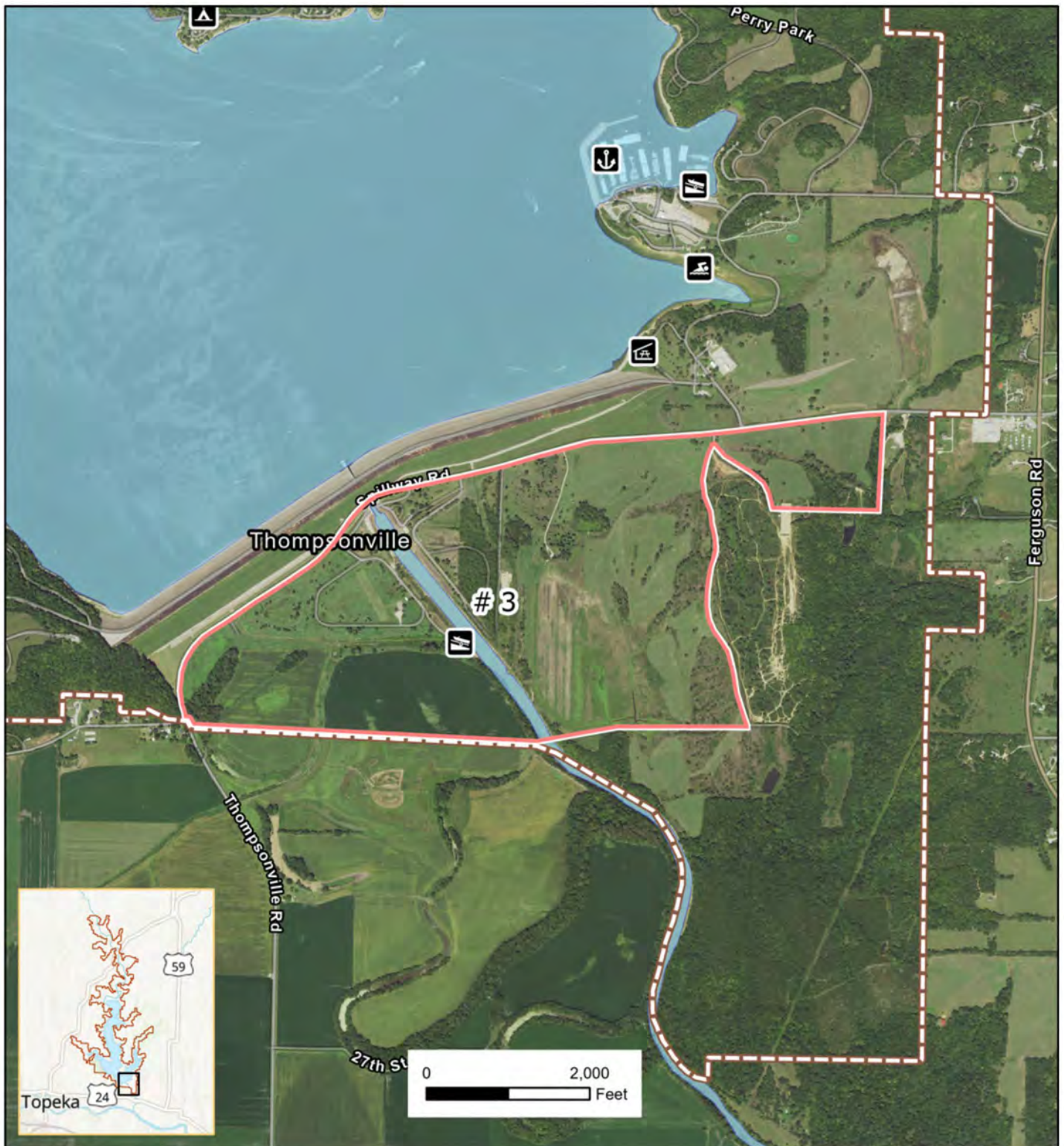
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LAND MANAGEMENT
COMPARTMENT #1
Delaware River
ACRES: 306



- High Density Recreation
- Corps Boundary



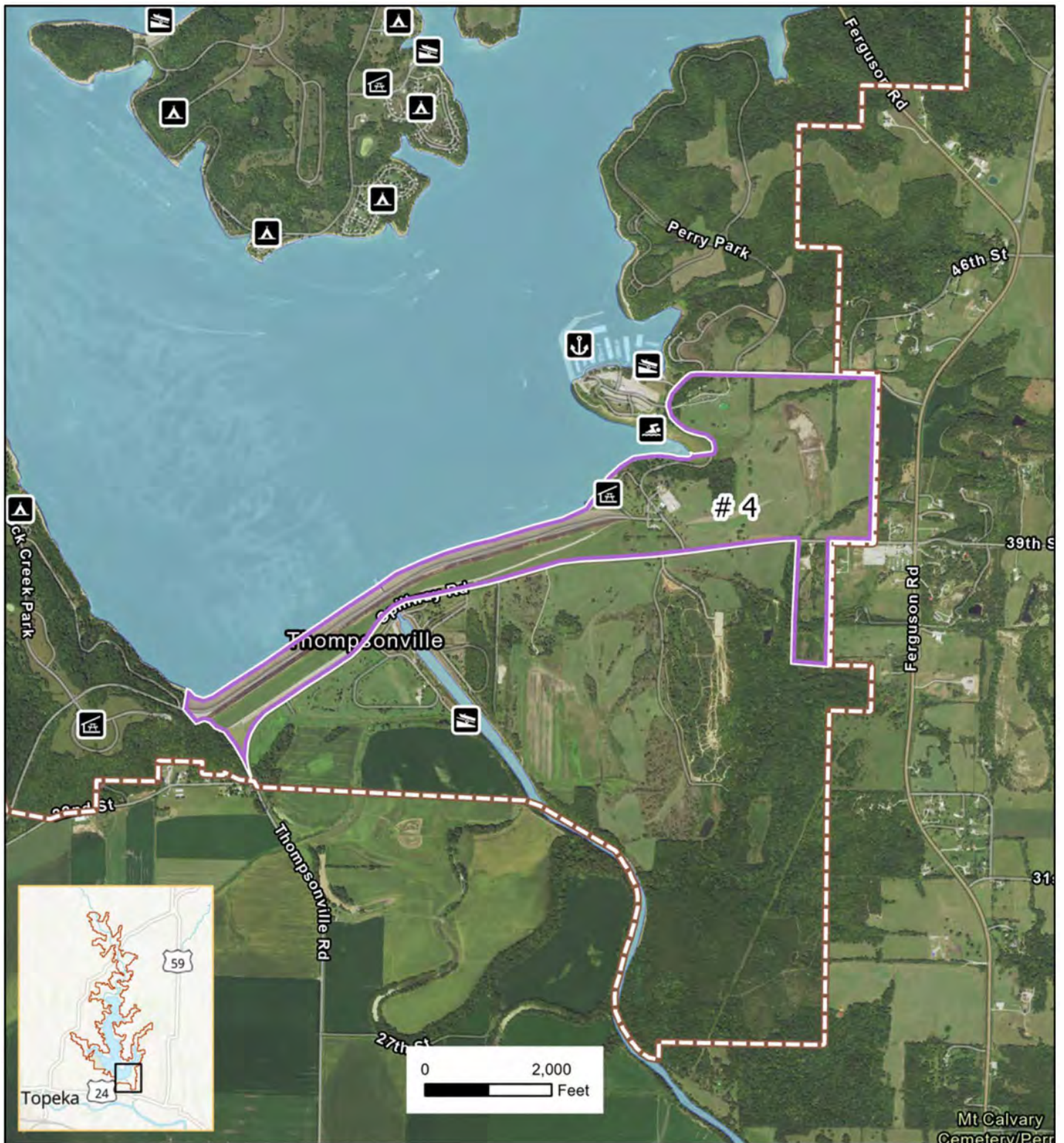
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 LAND MANAGEMENT
 COMPARTMENT #2
 Off Road Trail
 ACRES: 163



- MRM: Low Density Recreation
- Corps Boundary
-  Picnic Shelter
-  Campground
-  Swimming Beach
-  Marina
-  Boat Ramp

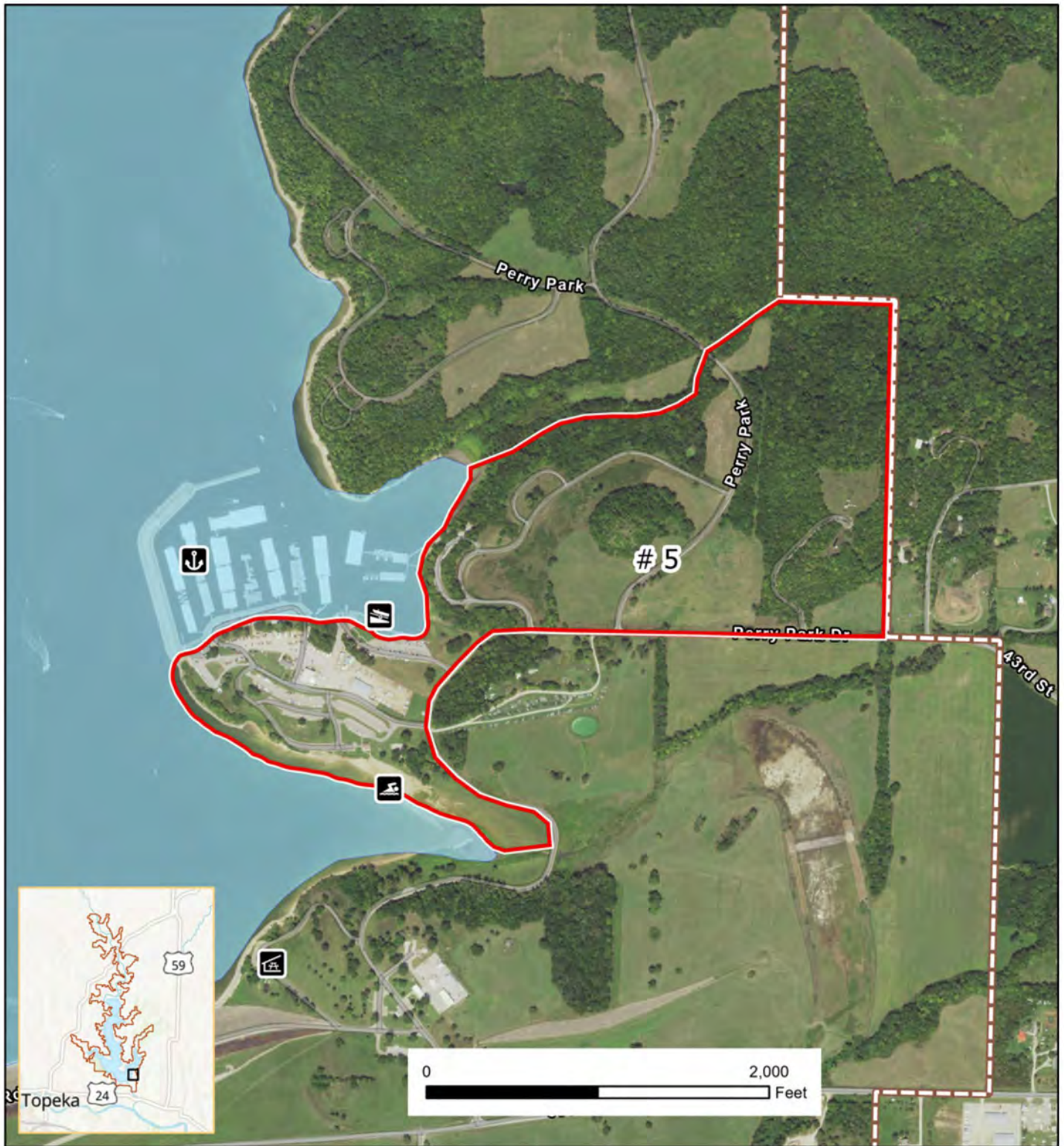


**PERRY LAKE MASTER PLAN
LAND MANAGEMENT
COMPARTMENT #3
Delaware Marsh
ACRES: 479**



- Project Operations
- Corps Boundary
- Picnic Shelter
- Campground
- Swimming Beach
- Marina
- Boat Ramp

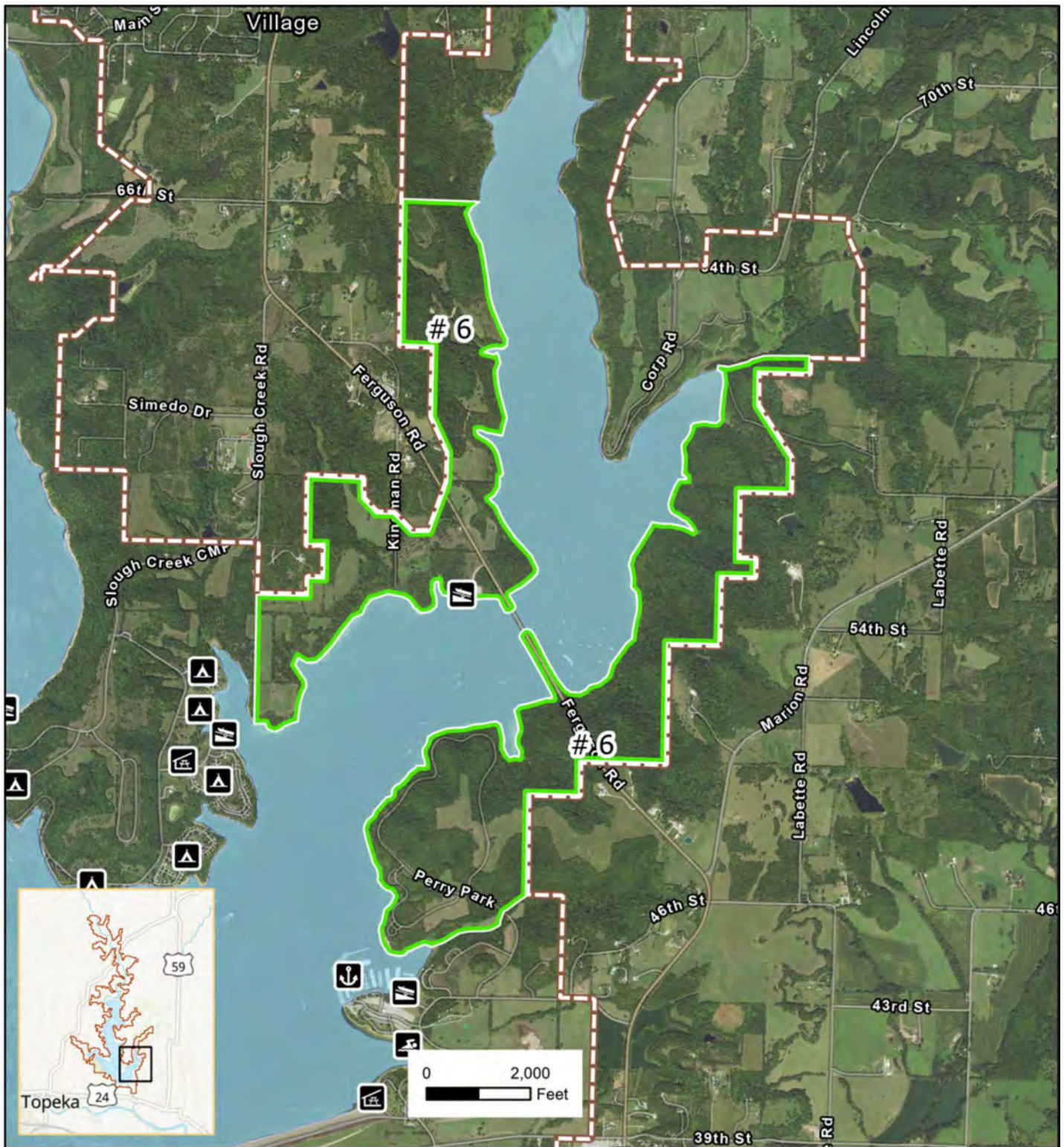
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LAND MANAGEMENT
COMPARTMENT #4
Dam & Administrative
ACRES: 376



- High Density Recreation
- Corps Boundary
-  Picnic Shelter
-  Swimming Beach
-  Marina
-  Boat Ramp



PERRY LAKE MASTER PLAN
 LAND MANAGEMENT
 COMPARTMENT #5
 Perry Yacht & Marina
 ACRES: 125



MRM: Wildlife Management

Corps Boundary

a Picnic Shelter

!! Campground

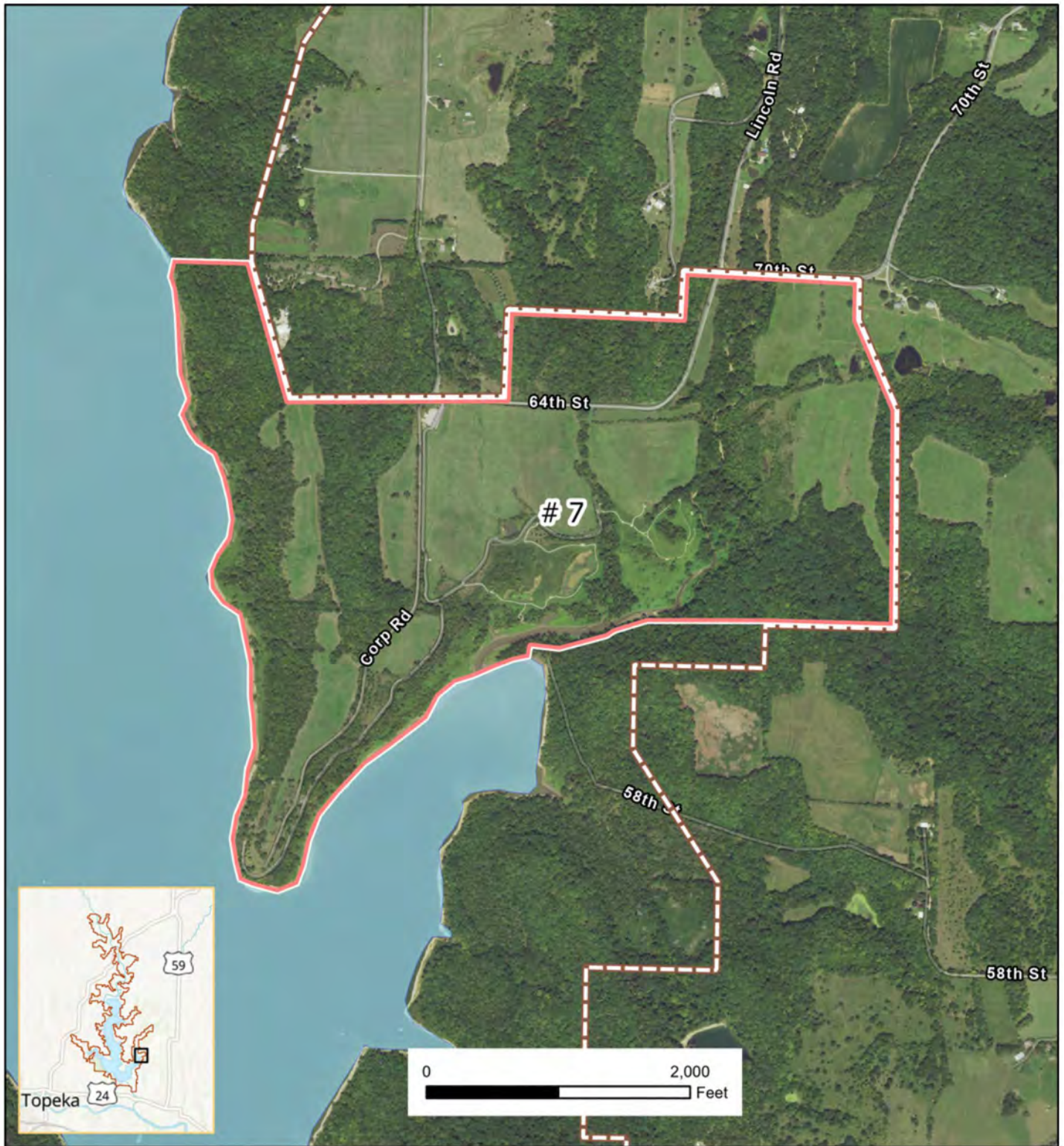
a Swimming Beach



! Marina

!! Boat Ramp



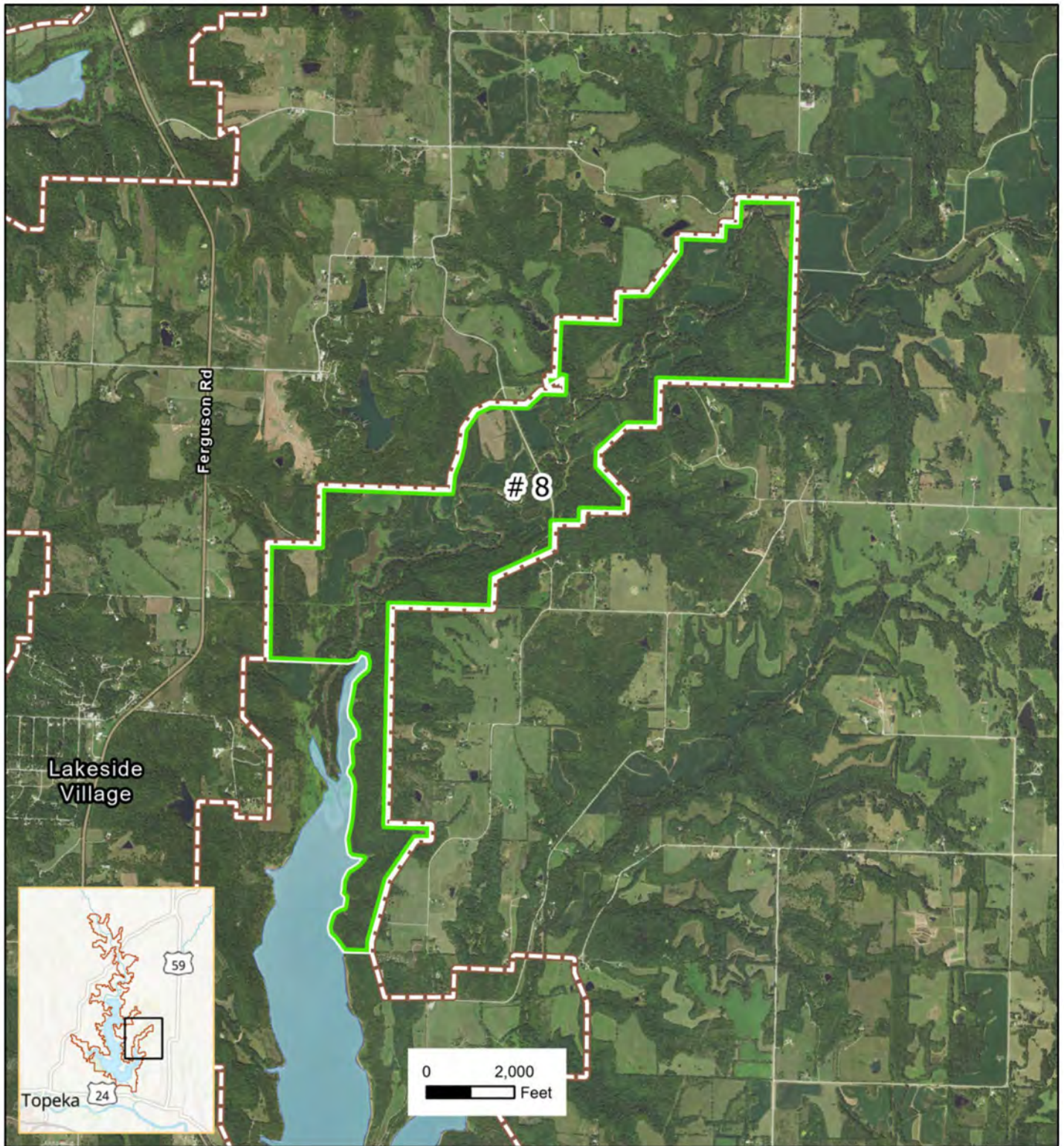
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LAND MANAGEMENT
COMPARTMENT #6
Ferguson & Slough Creek Bridge
ACRES: 999**



-  MRM: Low Density Recreation
-  Corps Boundary



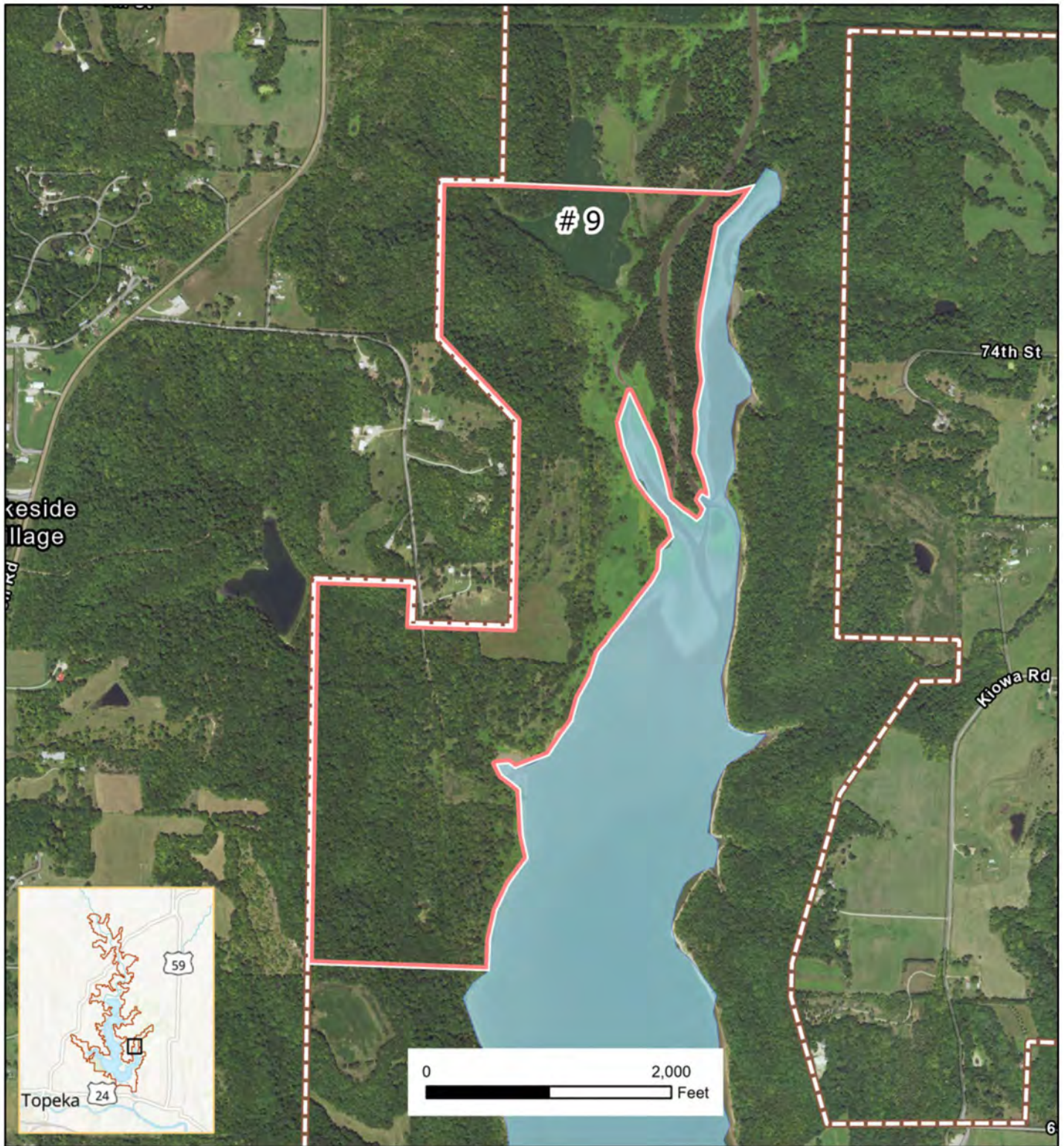
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LAND MANAGEMENT
COMPARTMENT #7
Slough Creek Education Area
ACRES: 325





-  MRM: Wildlife Management
-  Corps Boundary



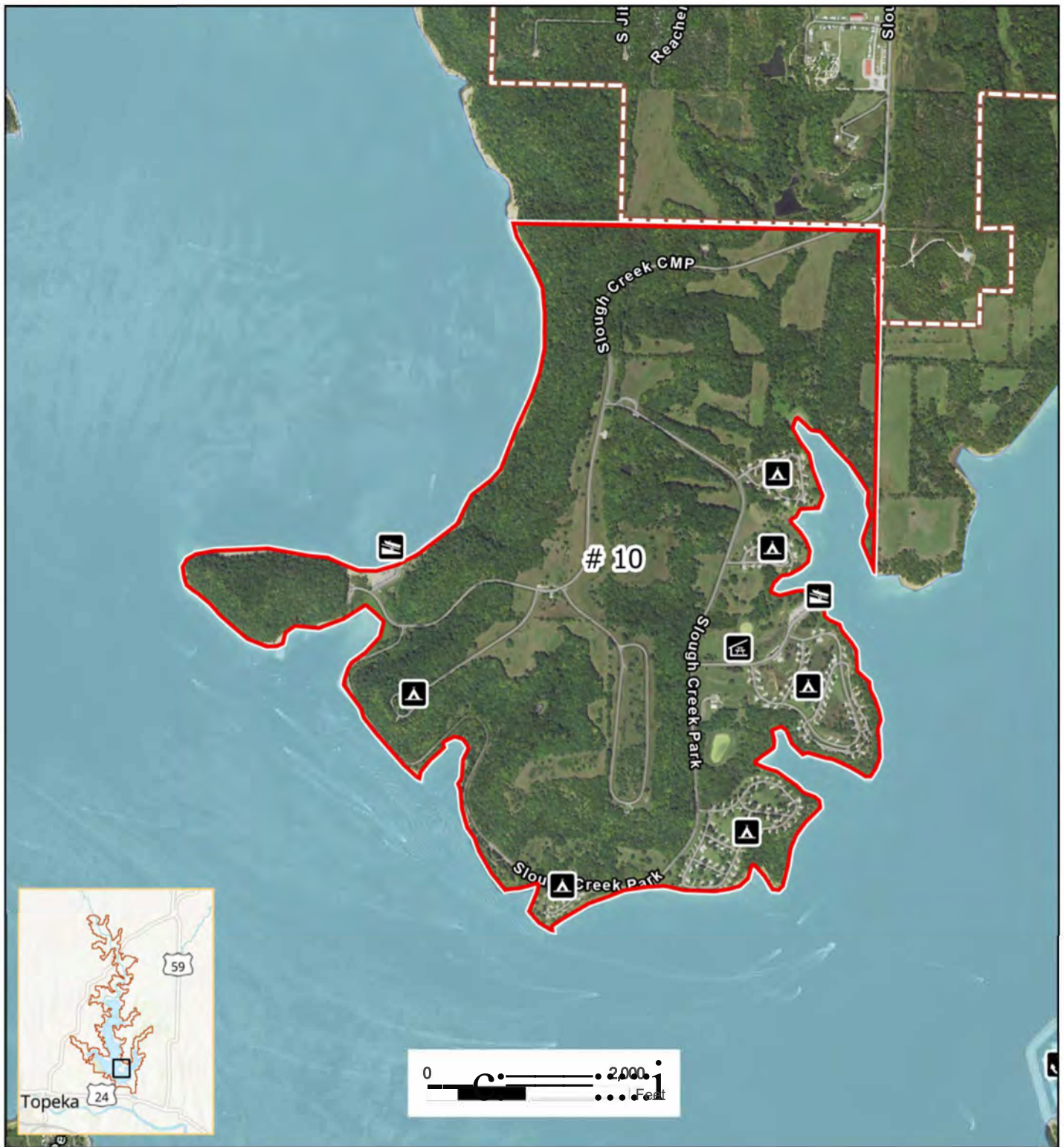
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LAND MANAGEMENT
COMPARTMENT #8
82nd & Kiowa
ACRES: 1,108



-  MRM: Low Density Recreation
-  Corps Boundary



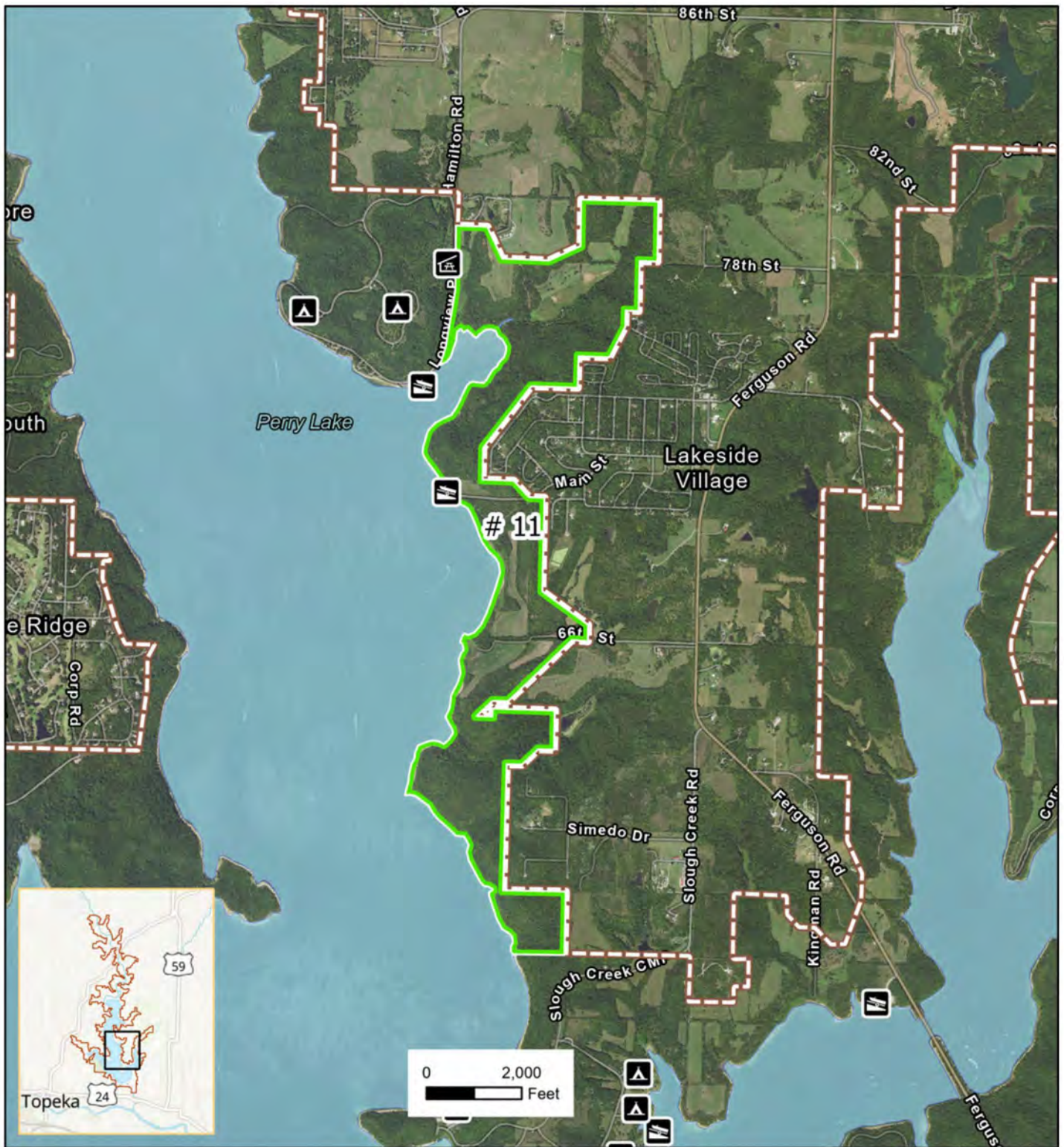
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LAND MANAGEMENT
COMPARTMENT #9
USD 501
ACRES: 264



-  High Density Recreation
-  Corps Boundary
-  Picnic Shelter
-  Campground
-  Marina
-  Boat Ramp



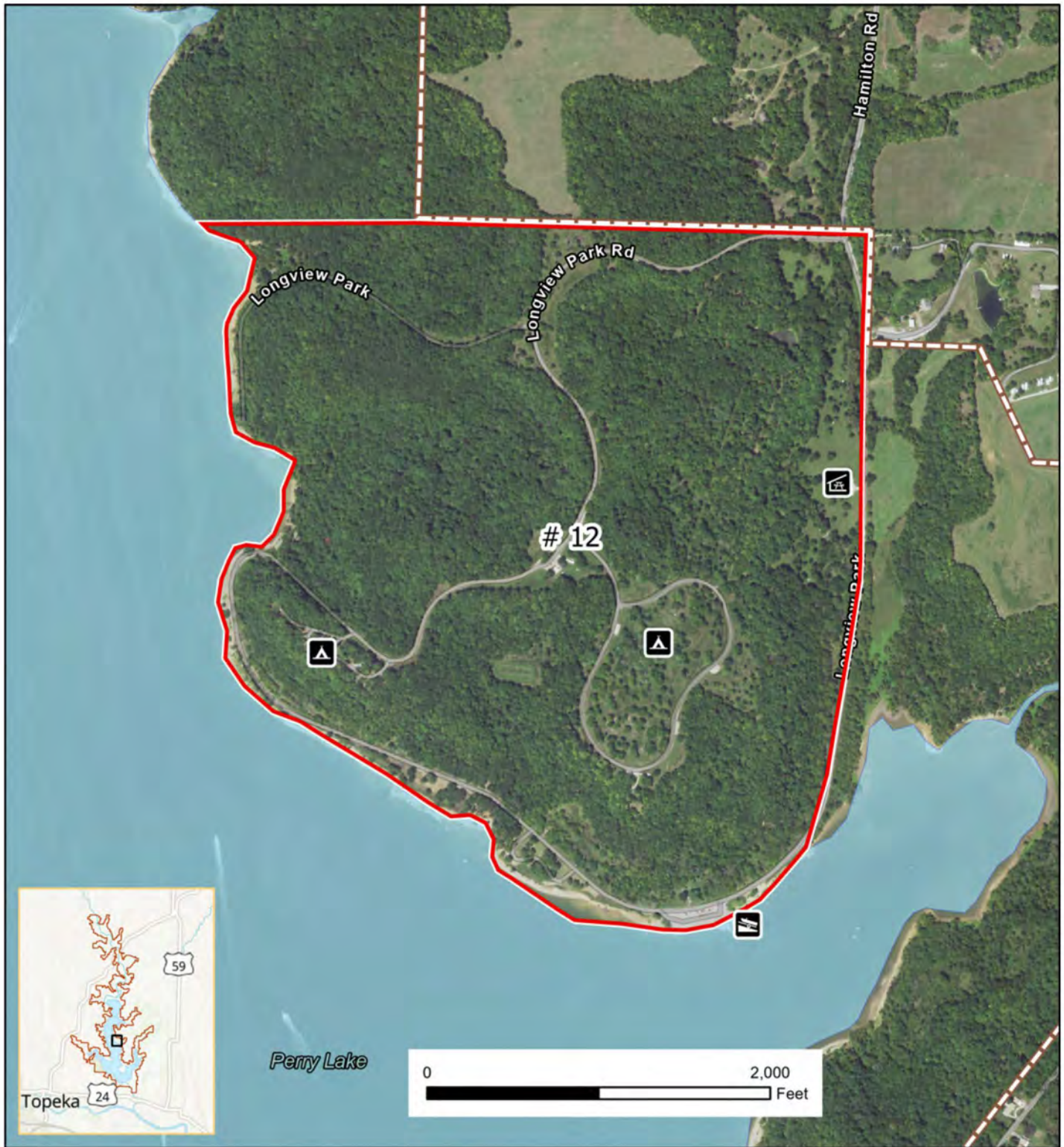
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 LAND MANAGEMENT
 COMPARTMENT #10
 Slough Creek Park
 ACRES: 621



- MRM: Wildlife Management
- Corps Boundary
- Picnic Shelter
- Campground
- Boat Ramp



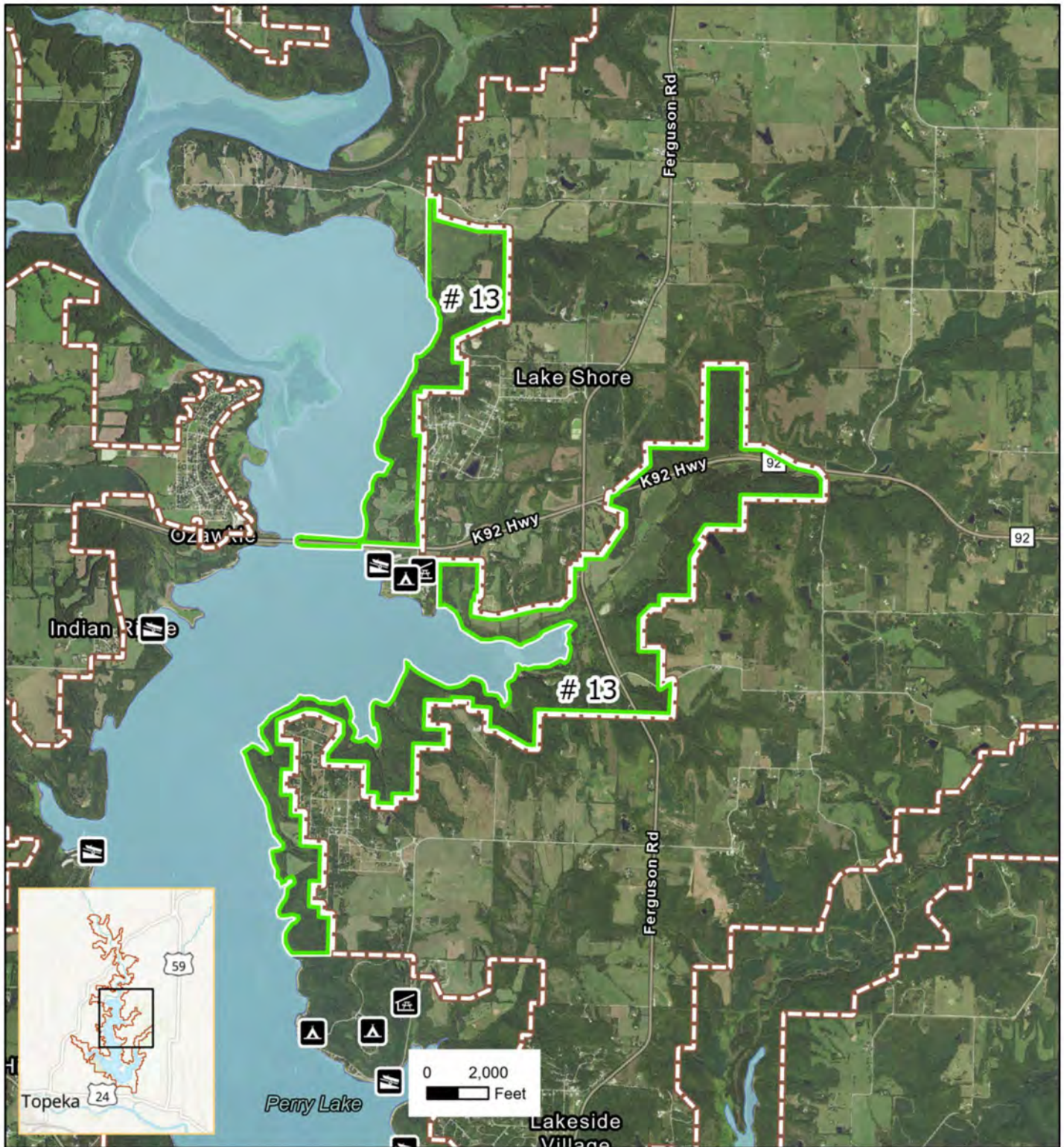
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LAND MANAGEMENT
COMPARTMENT #11
66th & Apple Valley
ACRES: 658**



-  High Density Recreation
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-  Picnic Shelter
-  Campground
-  Boat Ramp



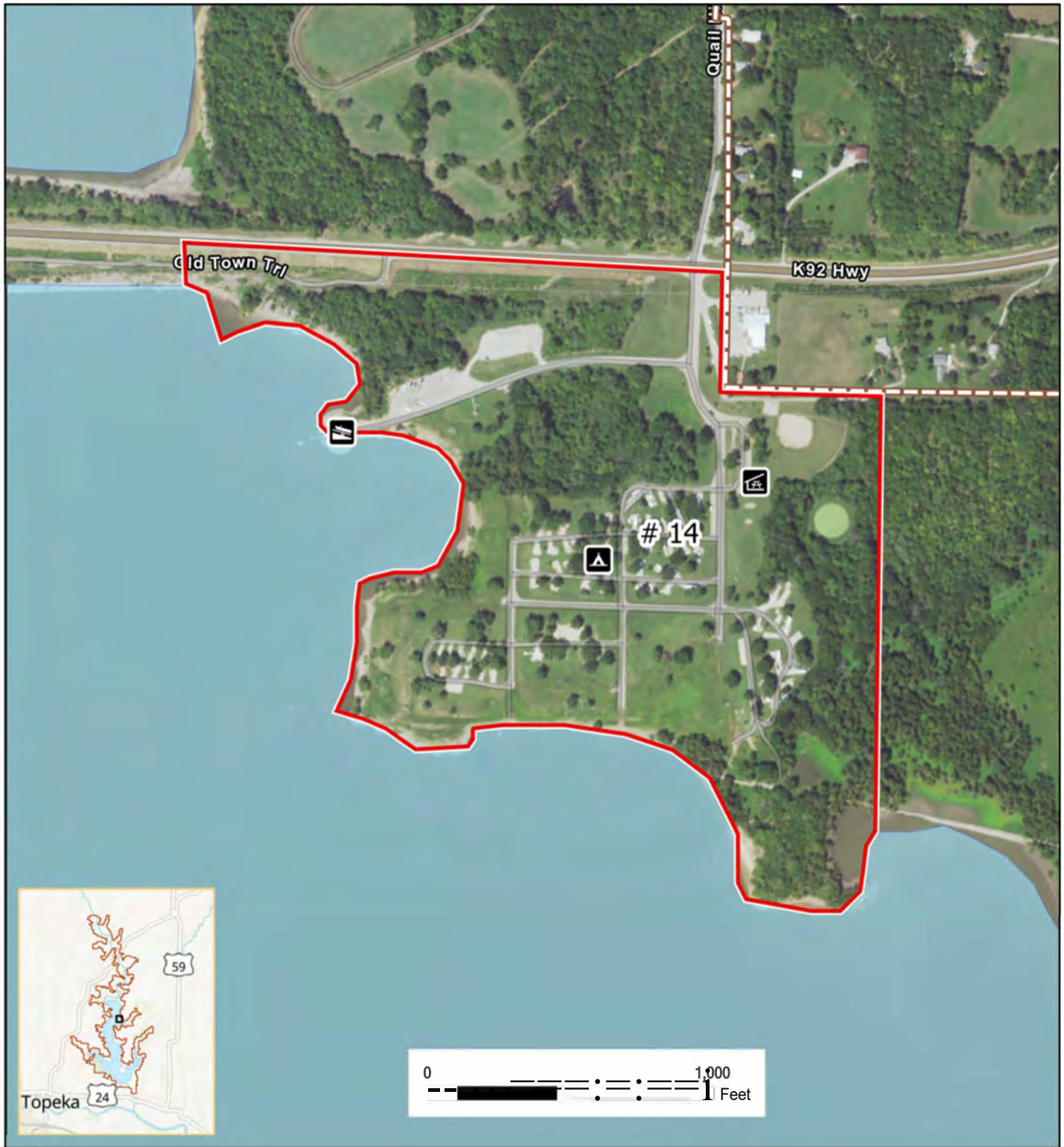
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 LAND MANAGEMENT
 COMPARTMENT #12
 Longview Park
 ACRES: 298





- MRM: Wildlife Management
- Corps Boundary
- Picnic Shelter
- Campground
- Boat Ramp



**PERRY LAKE MASTER PLAN
LAND MANAGEMENT
COMPARTMENT #13
Lakewood Hills & Lakeshore Estates
ACRES: 2,004**





-  High Density Recreation
-  Corps Boundary
-  Picnic Shelter
-  Campground
-  Boat Ramp



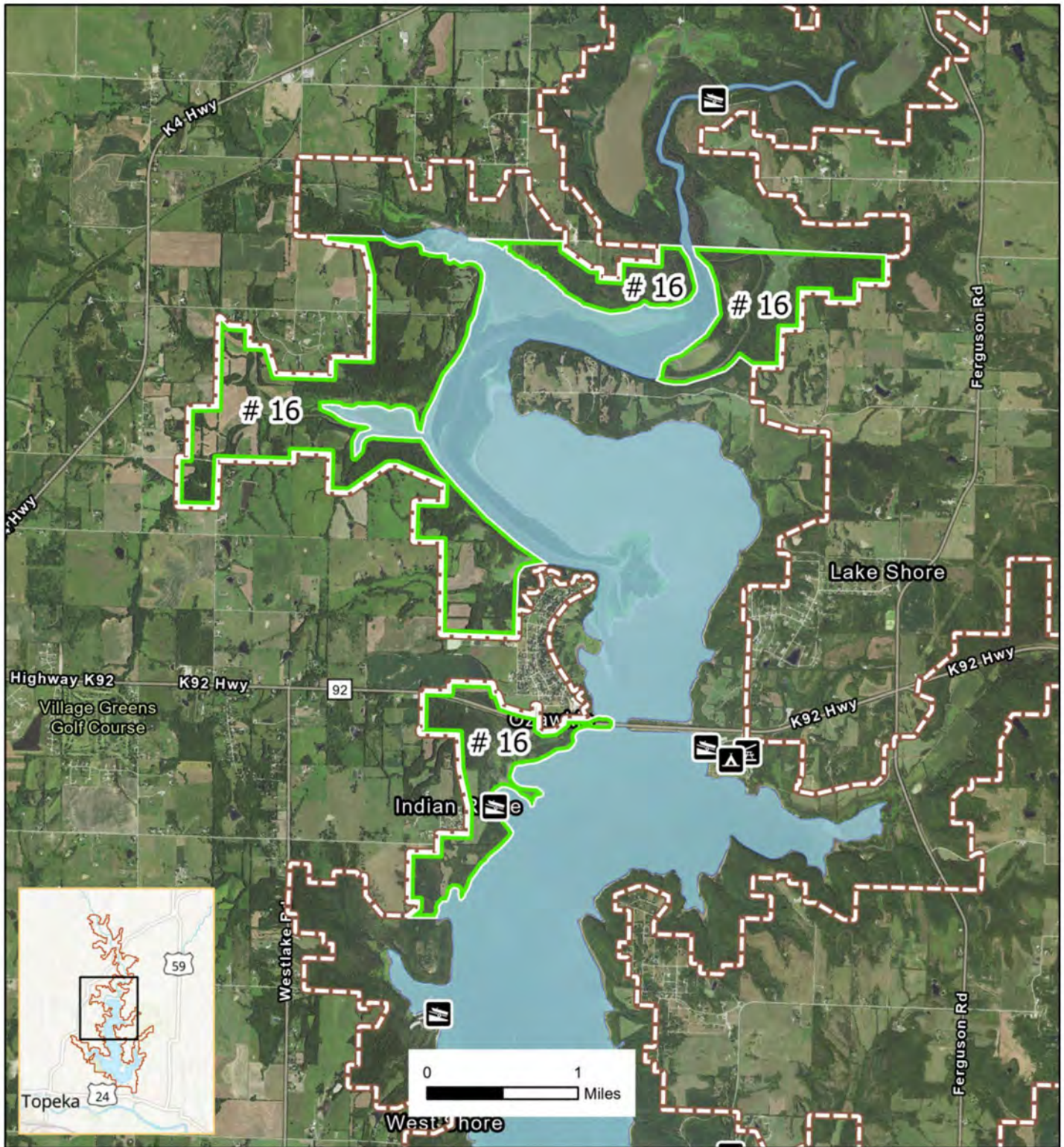
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LAND MANAGEMENT
COMPARTMENT #14
Old Town Park
ACRES: 73**



-  MRM: Low Density Recreation
-  Corps Boundary



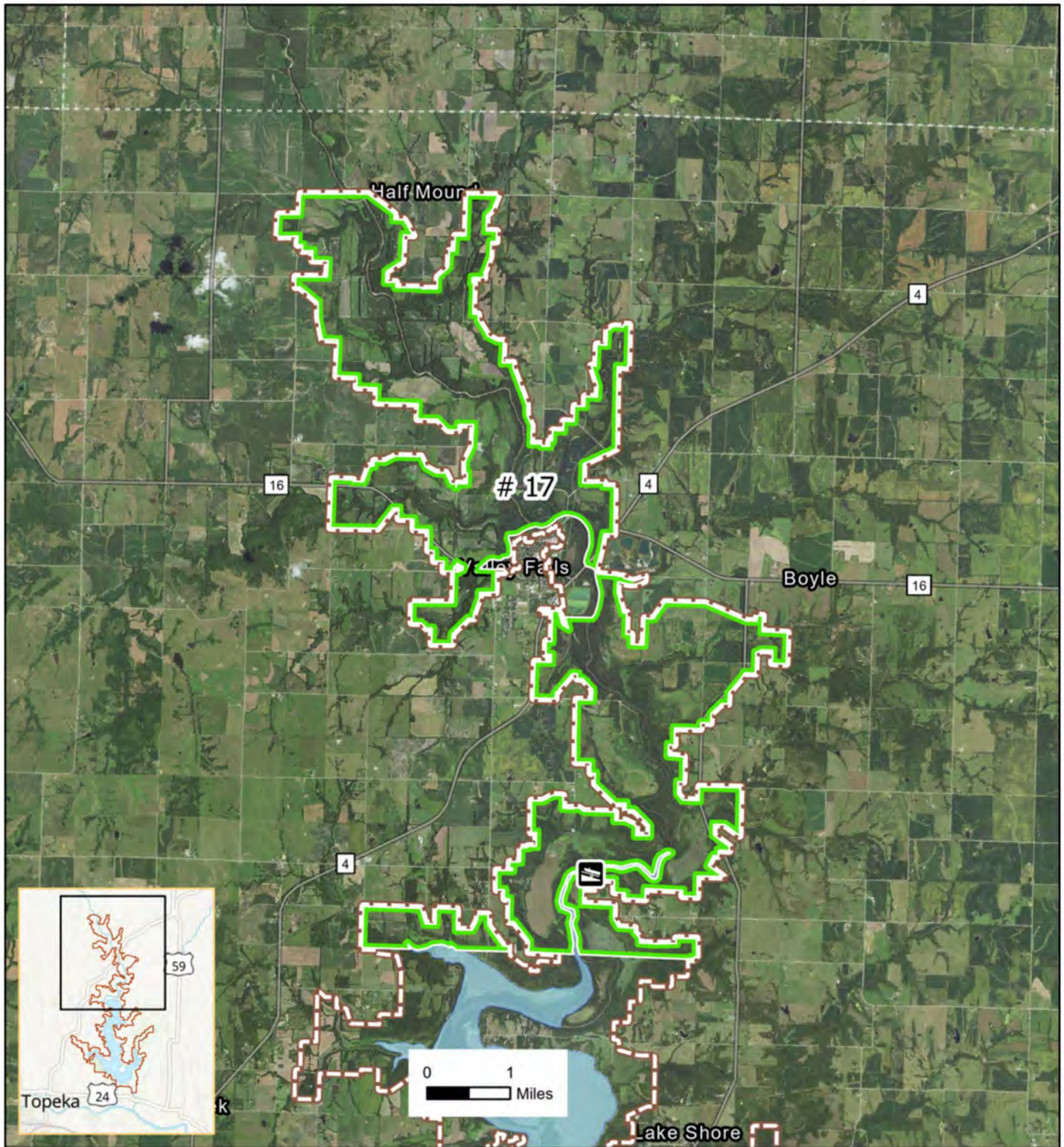
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LAND MANAGEMENT
COMPARTMENT #15
Paradise Point
ACRES: 456






- █ MRM: Wildlife Management
- Corps Boundary
- Picnic Shelter
- Campground
- Boat Ramp



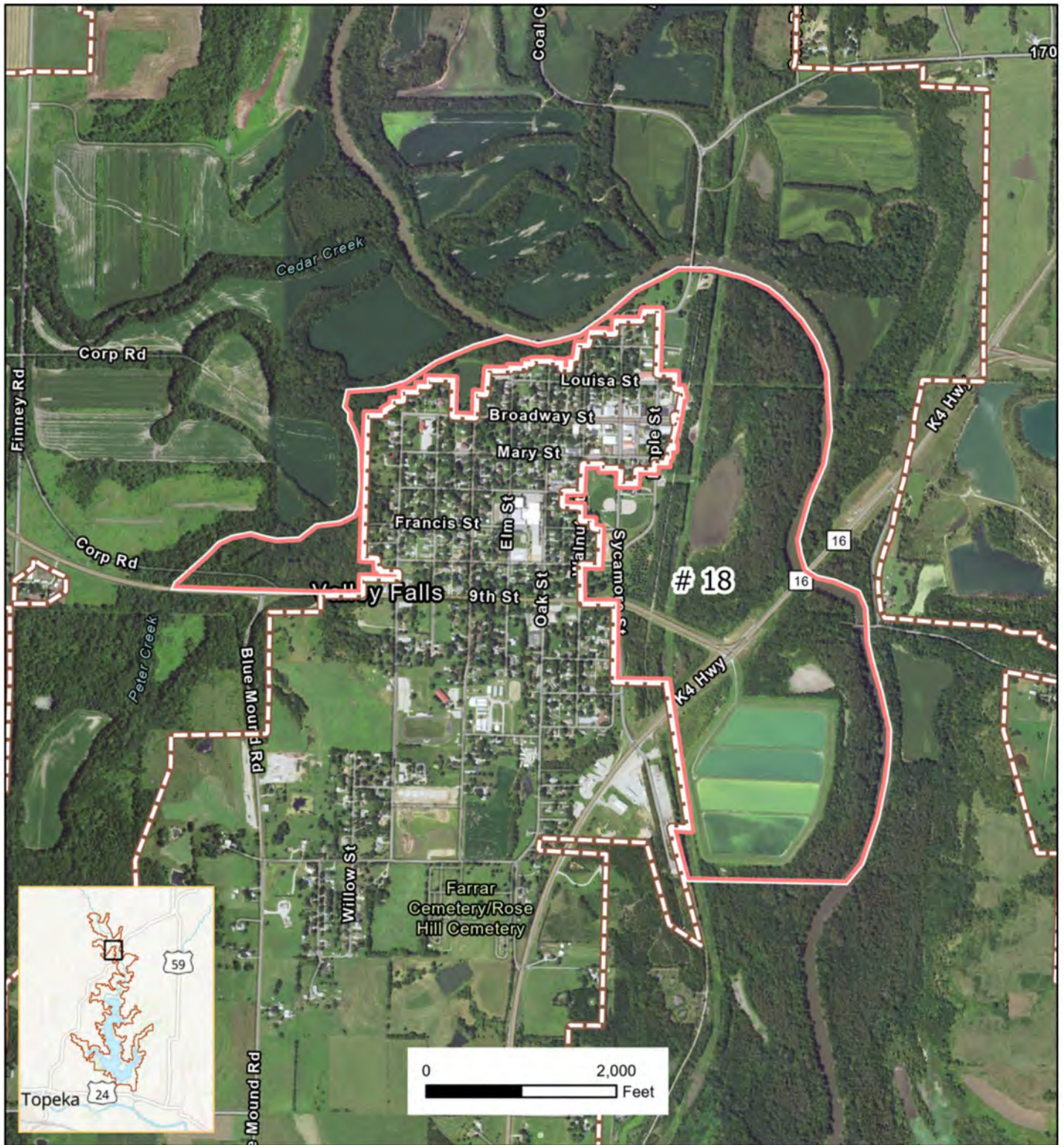
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LAND MANAGEMENT
COMPARTMENT #16
94th & Cheyenne
ACRES: 2,421**



-  MRM: Wildlife Management
-  Corps Boundary
-  Boat Ramp



PERRY LAKE MASTER PLAN
LAND MANAGEMENT
COMPARTMENT #17
Kansas Department of Wildlife & Parks
ACRES: 11,311



- MRM: Low Density Recreation
- Corps Boundary



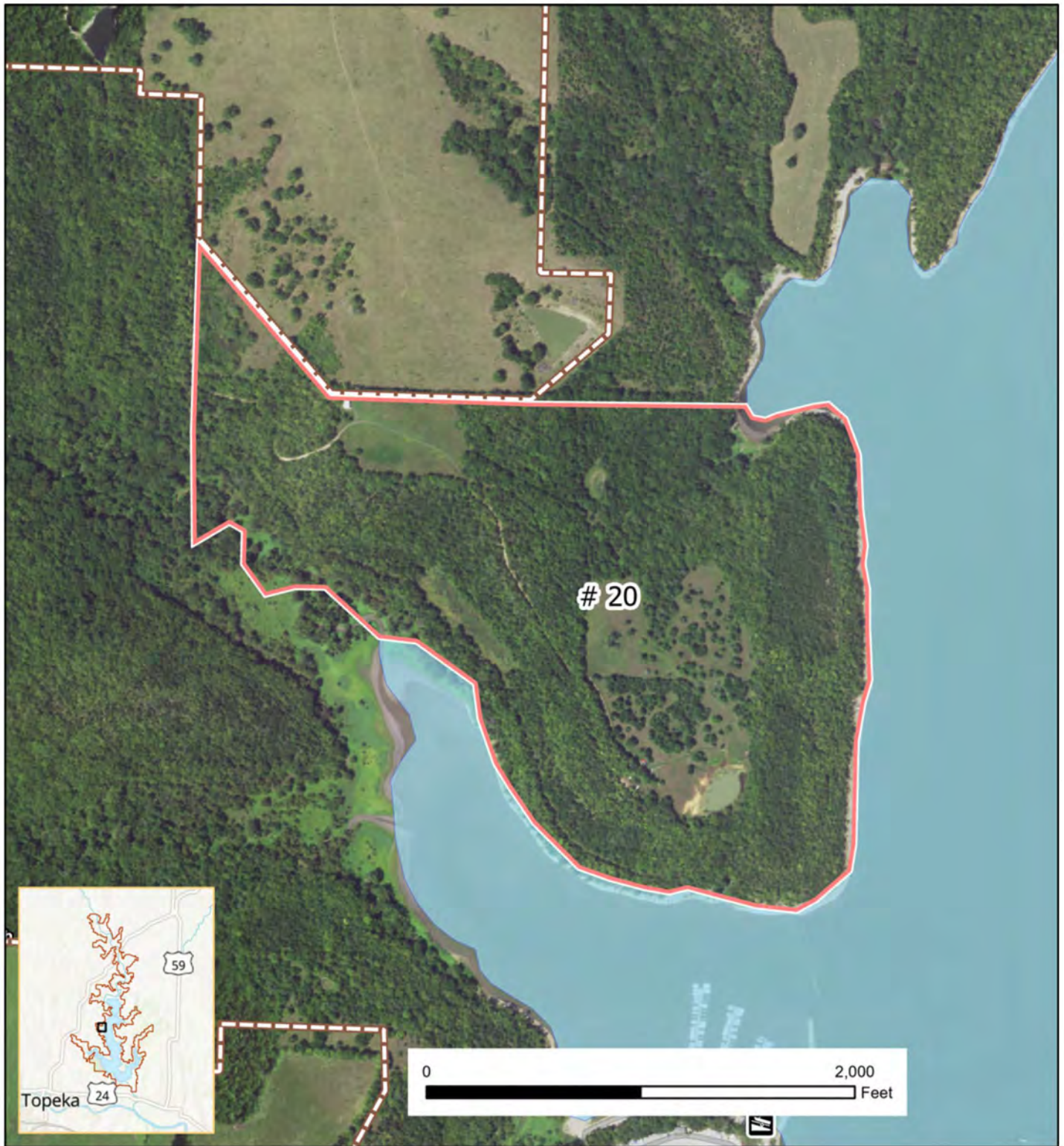
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LAND MANAGEMENT
COMPARTMENT #18
City of Valley Falls
ACRES: 356**






- MRM: Low Density Recreation
- Corps Boundary



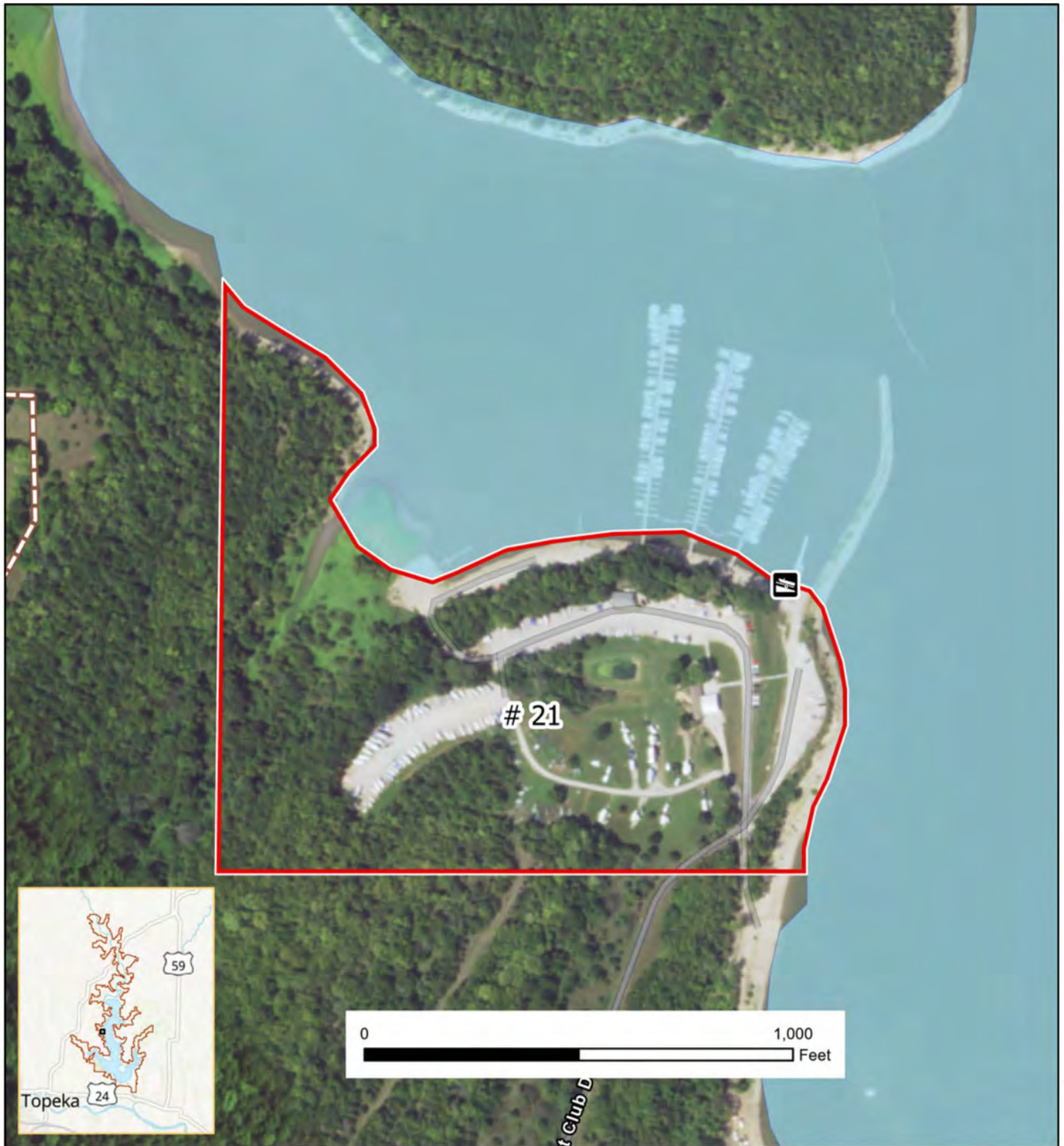
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 LAND MANAGEMENT
 COMPARTMENT #19
 City of Ozawie
 ACRES: 110






-  MRM: Low Density Recreation
-  Corps Boundary
-  Boat Ramp



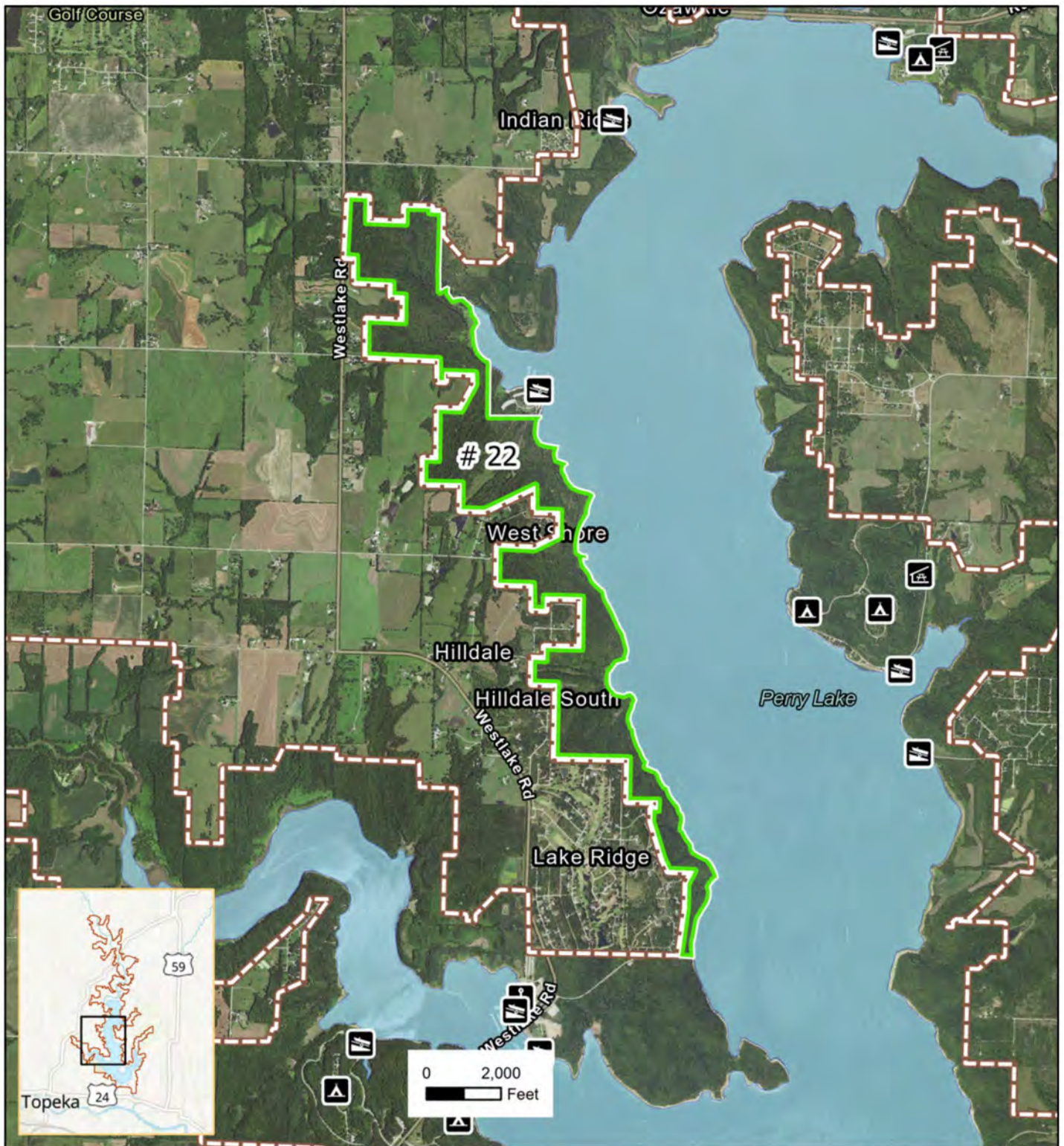
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COMPARTMENT #20
USD 345
ACRES: 126



-  High Density Recreation
-  Corps Boundary
-  Boat Ramp



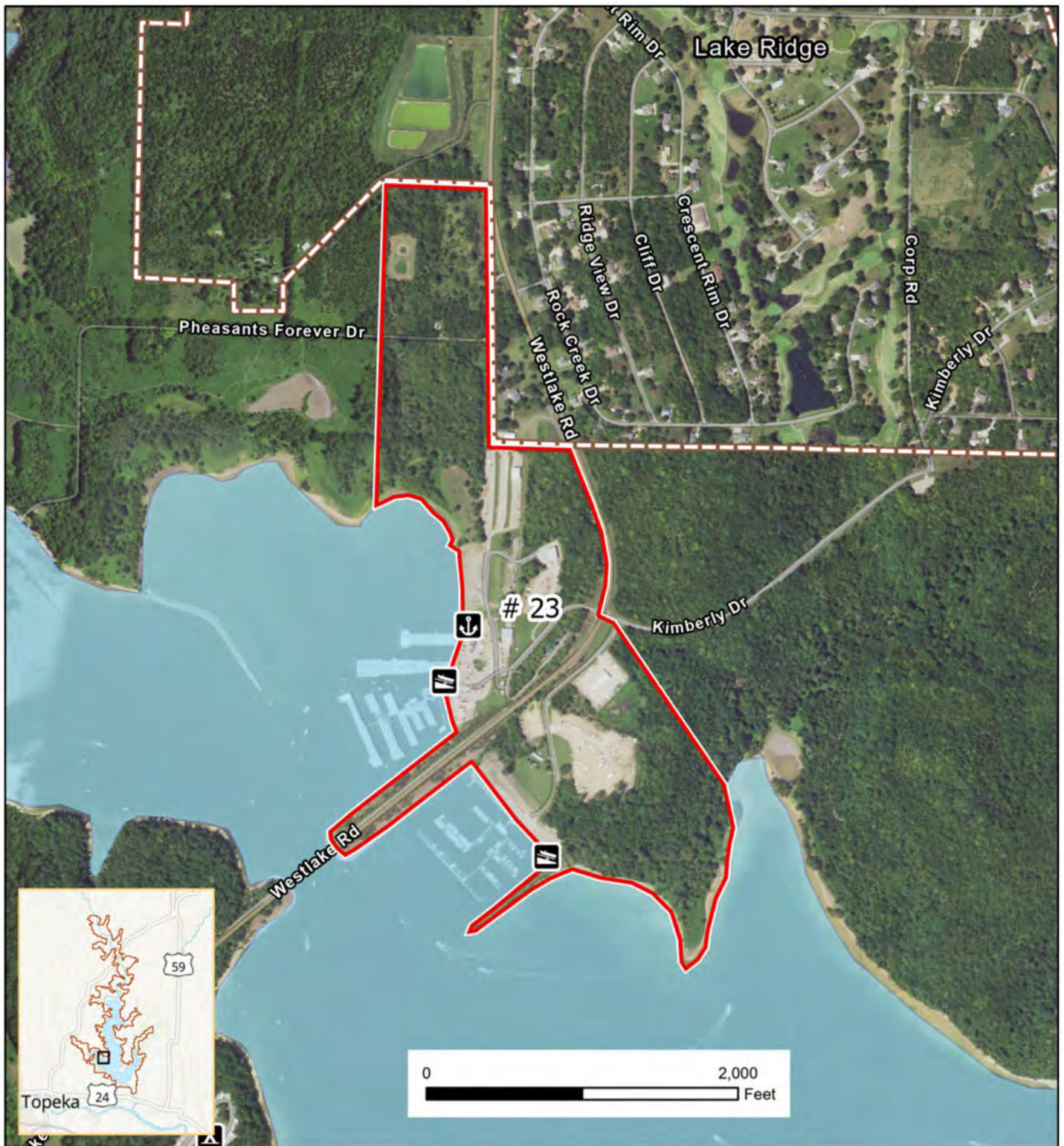
PERRY LAKE MASTER PLAN
 LAND MANAGEMENT
 COMPARTMENT #21
 Perry Yacht Club
 ACRES: 28



- MRM: Wildlife Management
- Corps Boundary
- Picnic Shelter
- Campground
- Marina
- Boat Ramp



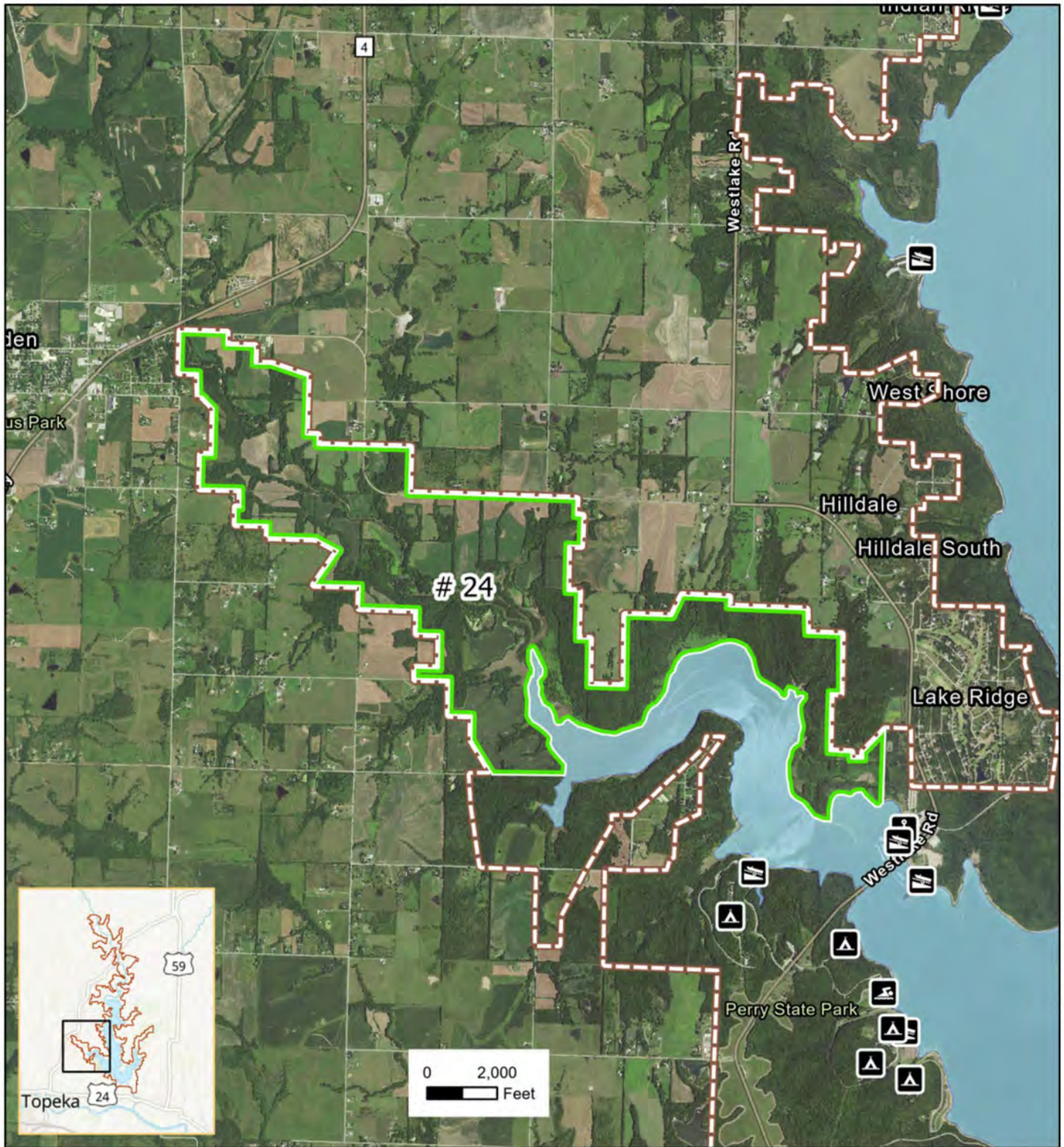
PERRY LAKE MASTER PLAN
 LAND MANAGEMENT
 COMPARTMENT #22
 West Lake
 ACRES: 785



- High Density Recreation
- Corps Boundary
- ▲ Campground
- ⚓ Marina
- ⚓ Boat Ramp



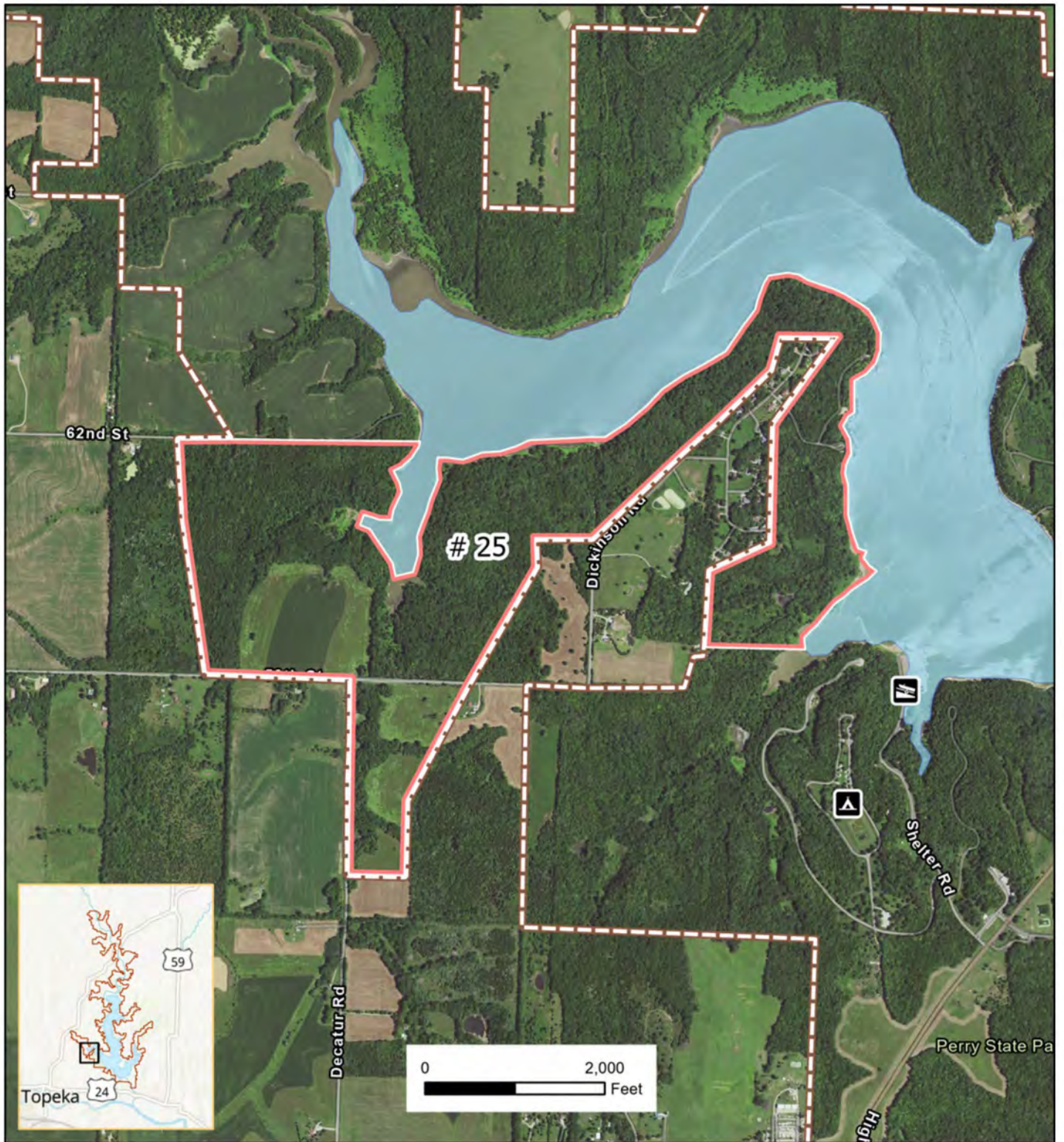
PERRY LAKE MASTER PLAN
 LAND MANAGEMENT
 COMPARTMENT #23
 Rock Creek Marina
 ACRES: 119



- MRM: Wildlife Management
- Corps Boundary
- Campground
- Swimming Beach
- Marina
- Boat Ramp



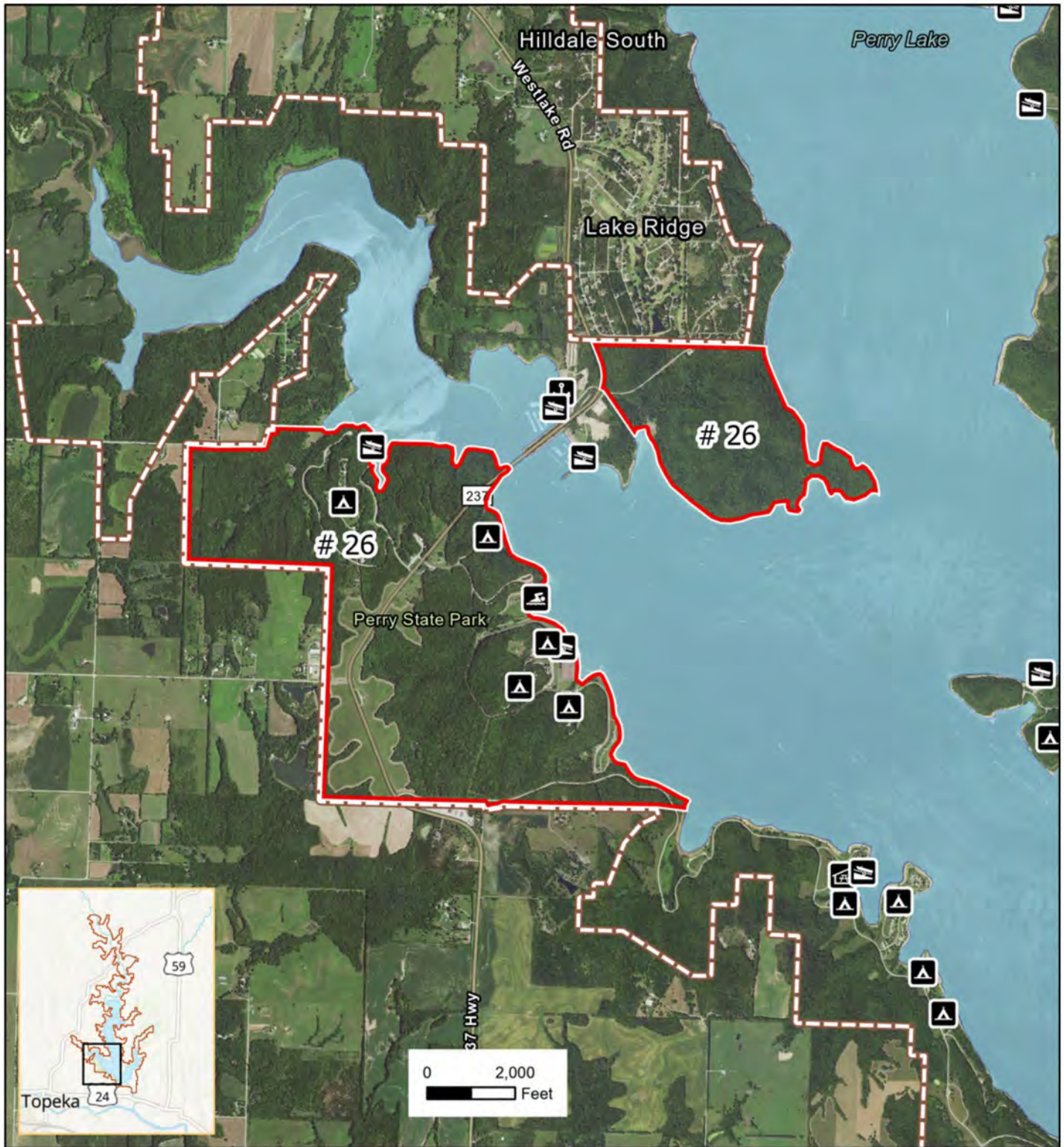
PERRY LAKE MASTER PLAN
 LAND MANAGEMENT
 COMPARTMENT #24
 Rock Creek Arm
 ACRES: 1,779



- MRM: Low Density Recreation
- Corps Boundary
- ▲ Campground
- ▤ Boat Ramp



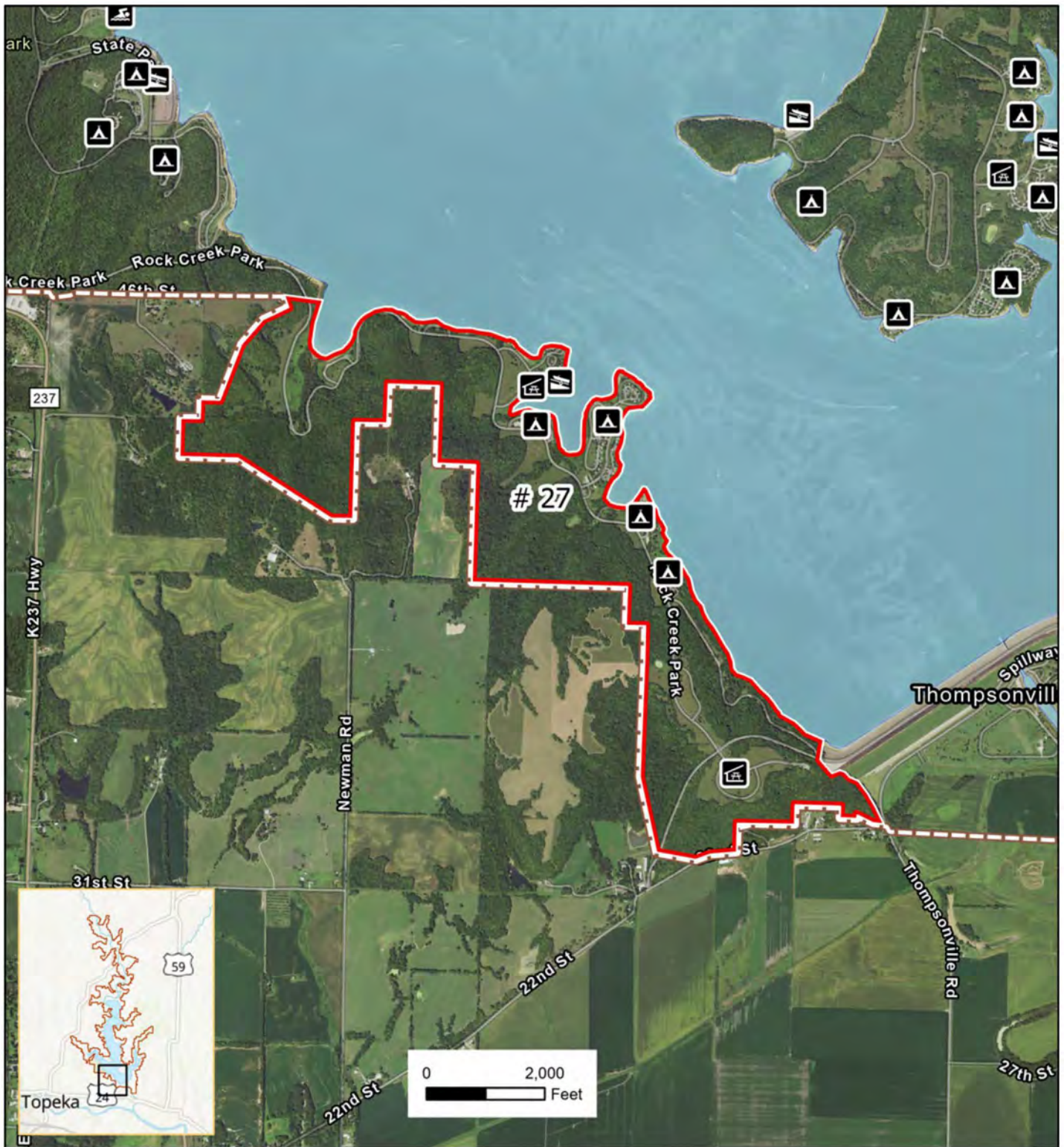
PERRY LAKE MASTER PLAN
 LAND MANAGEMENT
 COMPARTMENT #25
 Hickory Acres
 ACRES: 397



- High Density Recreation
- Corps Boundary
- Picnic Shelter
- Campground
- Swimming Beach
- Marina
- Boat Ramp



PERRY LAKE MASTER PLAN
 LAND MANAGEMENT
 COMPARTMENT #26
 Perry State Park
 ACRES: 1,595



-  High Density Recreation
-  Corps Boundary
-  Picnic Shelter
-  Campground
-  Swimming Beach
-  Boat Ramp



PERRY LAKE MASTER PLAN
 LAND MANAGEMENT
 COMPARTMENT #27
 Rock Creek Park
 ACRES: 704

Appendix C

Faunal Species occurring at or near Perry Lake

MAMMALS

The following species could occur on the management areas.

Opossums

-Virginia Opossum	(Didelphis virginiana virginiana)
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Armadillo

-Nine-banded Armadillo	(Dasypus novemcinctus)
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Shrews

-Southern Short-tailed Shrew	(Blarina carolinensis carolinensis)
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-Least Shrew	(Cryptotis parva parva)
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Moles

-Eastern Mole	(Scalopus aquaticus)
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Common Bats

-Little Brown Myotis	(Myotis lucifugus lucifugus)
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-Silver-haired Bat	(Lasionycteris noctiragens)
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-Eastern Pipistrelle	(Pipistrellus subflavus subflavus)
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-Big Brown Bat	(Eptesicus fuscus)
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-Red Bat	(Lasiurus borealis borealis)
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-Hoary Bat	(Lasiurus cinereus cinereus)
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-Evening Bat	(Nycticeius humeralis humeralis)
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-Northern Long-Eared Bat	(Myotis septentrionalis)
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Free-tailed Bats

-Brazilian Free-tailed Bat	(Tadarida brasiliensis mexicana)
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Hares & Rabbits

-Eastern Cottontail

(Sylvilagus floridanus)

-Black-tailed Jackrabbit

(Lepus californicus melanotis)

Squirrels

-Eastern Chipmunk

(Tamias striatus)

-Woodchuck

(Marmota monax bunkerii)

-13-lined Ground Squirrel

(Spermophilus tridecemlineatus)

-Franklin's Ground Squirrel

(Spermophilus franklinii)

-Gray Squirrel

(Sciurus carolinensis)

-Fox Squirrel

(Sciurus niger rufiventer)

-Southern Flying Squirrel

(Glaucomys volans volans)

Pocket Gophers

-Plains Pocket Gopher

(Geomys bursarius)

Beavers

-Beaver

(Castor Canadensis missouriensis)

New World Mice & Rats

-Plains Harvest Mouse

(Reithrodontomys montanus)

-Western Harvest Mouse

(Reithrodontomys megalotis)

-Deer Mouse

(Peromyscus maniculatus)

-White-footed Mouse

(Peromyscus leucopus)

-Hispid Cotton Rat

(Sigmodon hispidus texianus)

-Eastern Wood Rat

(Neotoma floridana)

-Prairie Vole

(Microtus ochrogaster)

-Woodland Vole

(Microtus pinetorum nemoralis)

-Muskrat

(Ondatra zibethicus cunnamominus)

-Southern Bog Lemming

(*Sunaptomys cooperi*)

Old World Mice & Rats

-Norway Rat

(*Rattus norvegicus norvegicus*)

-House Mouse

(*Mus musculus*)

Jumping Mice

-Meadow Jumping Mouse

(*Zapus hudsonius pallidus*)

Dogs

-Coyote

(*Canis latrans*)

-Red Fox

(*Vulpes vulpes fulva*)

-Gray Fox

(*Urocyon cinereoargenteus ocythous*)

Procyonids

-Raccoon

(*Procyon lotor hirtus*)

Weasels

-Long-tailed Weasel

(*Mustela frenata*)

-Mink

(*Mustela vison letifera*)

-Badger

(*Taxidea taxus taxus*)

-Striped Skunk

(*Mephitis mephitis*)

-Eastern Spotted Skunk

(*Spilogale putorius interrupta*)

Cats

-Bobcat

(*Lynx rufus*)

Deer

-White-tailed Deer

(*Odocoileus virginianus*)

AMPHIBIANS

The following species could occur on the management area.

Salamanders

- Small mouth Salamanders
- Tiger Salamanders
- Mud Puppy

Toads & Frogs

- Plains Spadefoot
- American Toad
- Great Plains Toad
- Woodhouse's Toad
- Blanchard's Cricket Frog
- Western Chorus Frog
- Grey Treefrog
- Northern Crawfish Frog (**Threatened Species**)
- Plains Leopard Frog
- Bullfrog
- Southern Leopard Frog
- Plains Narrow mouth Toad

REPTILES

The following species could occur on the management area.

Turtles

- Common Snapping Turtle
- Stinkpot
- Three-toed Box Turtle
- Ornate Box Turtle
- Ouachita Map Turtle
- Western Spiny Softshell
- Midland Smooth Softshell
- Red-eared Slider
- Western Painted Turtle

Lizards

- Eastern Fence Lizard
- Texas Horned Lizard
- Prairie-lined Racerunner
- Western Slender Grass Lizard
- Great Plains Skink
- Prairie Skink
- Ground Skink
- Southern Coal Skink
- Five-lined Skink

Snakes (Non-venomous)

- Eastern Hognose Snake
- Western Worm Snake
- Prairie Snake
- Rough Green Snake
- Eastern Yellowbelly Racer
- Great Plains Rat Snake
- Black Rat Snake
- Bullsnake
- Prairie Kingsnake
- Common Kingsnake

Snakes (venomous)

- Copperhead
- Massasauga
- Timber Rattlesnake

- Milksnake
- Western Ribbon Snake
- Western Plains Garter Snake
- Red-sided Garter Snake
- Lined Snake
- Western Earth Snake
- Texas Brown Snake
- Northern Redbelly Snake (SINC)
- Graham's Crayfish Snake
- Blotched Water Snake
- Diamondback Water Snake
- Northern Water Snake

BIRDS

The following species have been documented to have occurred on the management area (U.S. Army Corps of Engineers).

-LeConte's Sparrow	-Franklin's Gull
-Fox Sparrow	-Bonaparte's Gull
-Song Sparrow	-Herring Gull
-Lincoln's Sparrow	-Common Tern
-Swamp Sparrow	-Forster's Tern
-White-throated Sparrow	-Caspian Tern
-White crowned Sparrow	
-Harris' Sparrow	-Mourning Dove*
-Dark-eyed Junco (late-colored)	-Rock Dove*
-Dark-eyed Junco (Oregon)	-Eurasian Collared Dove
-Red-winged Blackbird*	-Black-billed Cuckoo*
-Eastern Meadowlark*	-Yellow-billed Cuckoo*
-Western Meadowlark	
-Yellow-headed Blackbird	-Eastern Screech-owl*
-Brewer's Blackbird	-Barred Owl*
-Rusty Blackbird	-Great Horned Owl*
-Great-tailed Grackle	-Northern Saw-whet Owl
-Common Grackle*	-Short-eared Owl
-Brown-headed Cowbird*	
-Orchard Oriole*	-Common Nighthawk
-Northern Oriole (Baltimore)*	-Whip-poor-will*
	-Chuck-will's-widow*
-Purple Finch	

-Pine Siskin

-American Goldfinch*

-Evening Grosbeak

-House Sparrow*

-Pectoral Sandpiper

-Dunlin

-Stilt Sandpiper

-Long-billed Dowitcher

-Common Snipe

-American Woodcock

-Wilson's Phalarope

-Yellow-bellied Flycatcher*

-Eastern Phoebe*

-Great Crested Flycatcher*

-Western Kingbird

-Eastern Kingbird*

-Common Loon

-Pied-billed grebe

-Horned Grebe

-Eared Grebe

-Western Grebe

-White Pelican

-Chimney Swift-

-Ruby-throated Hummingbird

-Belted Kingfisher*

-Red-headed Woodpecker*

-Red-bellied Woodpecker*

-Yellow-bellied Sapsucker

-Downy Woodpecker*

-Hairy Woodpecker*

-Pileated Woodpecker

-Northern Flicker (Yellow-shafted)*

-Olive-sided Flycatcher

-Eastern Wood-pewee*

-Scissor-tailed Flycatcher-

-Turkey Vulture*

-Osprey

-Bald Eagle*

-Northern Harrier

-Sharp-shinned Hawk

-Cooper's Hawk

-Broad-winged Hawk

-Double-crested Cormorant

-American Bittern

-Great Egret

-Snowy Egret

-Cattle Egret

-Great Blue Heron*

-Little Blue Heron

-Green-backed Heron*

-Black-crowned Night Heron

-Tundra Swan

-Trumpeter Swan

-Canada Goose*

-Snow Goose

-Greater White-fronted Goose

-Mallard*

-Wood Duck*

-Northern Pintail

-Black Duck

-Green-winged Teal

-Blue-winged Teal*

-Lesser Scaup

-Northern Shoveler

-Ring-necked Duck

-American Wigeon

-Pintail

-Northern Shoveler

-Red-tailed Hawk*

-Rough-legged Hawk

-American Kestrel*

-Merlin

-Prairie Falcon

-Northern Bobwhite*

-Ring-necked Pheasant

-Wild Turkey*

-Virginia rail

-Sora

-American Coot

-Semipalmated Plover

-Snowy Plover

-Piping Plover

-Killdeer*

-American Avocet

-Greater Yellowlegs

-Lesser Yellowlegs

-Solitary Sandpiper

-Spotted Sandpiper

-Upland Sandpiper

-Whimbrel

-Sanderling

-Semipalmated Sandpiper

-Western Sandpiper

-Least Sandpiper

-Gadwell
-Canvasback
-Redhead
-Common Goldeneye
-Bufflehead
-Ruddy Duck
-Hooded Merganser
-Common Merganser
-Red-breasted Merganser

-Blue Jay*
-American Crow*

-Black-capped Chickadee*
-Tufted Titmouse*
-Red-breasted Nuthatch
-White-breasted Nuthatch*
-Brown Creeper

-Carolina Wren*
-House Wren
-Winter Wren
-Sedge Wren
-Marsh Wren

-Golden-crowned Kinglet
-Ruby-Crowned Kinglet
-Blue-gray Gnatcatcher

-White-rumped Sandpiper
-Baird's Sandpiper

-Horned Lark*

-Purple Martin
-Tree Swallow
-Northern Rough-winged Swallow*
-Bank Swallow
-Cliff Swallow
-Barn Swallow*
-Prothonotary Warbler
-Tennessee Warbler
-Orange-crowned Warbler
-Nashville Warbler
-Northern Parula*
-Yellow Warbler
-Magnolia Warbler
-Black-throated Green Warbler
-Blackburnian Warbler
-Palm Warbler
-Blackpoll Warbler
-Black-and-white Warbler
-American Redstart
-Ovenbird*
-Northern Waterthrush
-Louisiana Waterthrush
-Kentucky Warbler*
-Mourning Warbler
-Common Yellowthroat*

-Eastern Bluebird*

-Veery

-Gray-checked Thrush

-Swainson's Thrush

-Hermit Thrush

-Wood Thrush*

-American Robin*

-Gray Catbird*

-Northern Mockingbird

-Brown Thrasher*

-Cedar Waxwing

-Loggerhead Shrike

-European Starling*

-White-eyed Vireo

-Bell's Vireo

-Solitary Vireo

-Warbling Vireo

-Philadelphia Vireo

-Red-eyed Vireo

-Wilson's Warbler

-Canada Warbler

-Yellow-breasted Chat*

-Summer Tanager*

-Scarlet Tanager*

-Northern Cardinal*

-Rose-breasted Grosbeak*

-Indigo Bunting*

-Painted Bunting

-Dickcissel*

-Rufus-sided Towhee*

-American Tree Sparrow

-Chipping Sparrow

-Clay-colored Sparrow

-Field Sparrow

-Vesper Sparrow

-Lark Sparrow*

-Savannah Sparrow

-Grasshopper Sparrow*

FISH

The following species have been documented to have occurred in Perry Lake.

- White Bass
- Striped Bass
- Wiper
- Largemouth Bass
- Smallmouth Bass
- Green Sunfish
- Bluegill
- Orangespotted Sunfish
- White Crappie
- Black Crappie
- Walleye
- Sauger
- Saugeye
- Channel Catfish
- Flathead Catfish
- Blue Catfish
- Logperch
- Johnny Darter
- Freshwater Drum
- Gizzard Shad
- Longnose Gar
- Carp
- Golden Shiner
- Suckermouth Minnow
- Red Shiner
- Stoneroller
- Bigmouth Buffalo
- River Carpsucker
- Paddlefish

Appendix D

Applicable Federal Statutes Checklist

16 USC 460d, Flood Control Act of 1944; Title 10 USC 2667; and 16 USC 4601-13. Leases: non excess property	Fully Compliant
16 USC 470, PL 89-665, 80 Stat. 915, National Historic Preservation Act of 1966, as amended	Fully Compliant
16 USC 469, PL 93-291, 88 Stat. 174, Archaeological and Historical Preservation Act of 1973	Fully Compliant
16 USC. 470aa - 470mm, PL 100-588; 102 Stat. 2983, Archaeological Resources Protection Act (ARPA) of 1979, as amended	Fully Compliant
PL 46 (Chapter 105) S.1006 69 Stat 66. Authority to enter into reciprocal agreements; waiver of claims; reimbursement; ratification of prior agreements	Fully Compliant
PL 85-624, Fish and Wildlife Coordination Act, (72 Stat. 563, 16 U.S.C. 661).	Fully Compliant
PL 86-532, Reservoir Salvage Act of 1960, as amended	Fully Compliant
PL 86-717, Forest Cover Act, (74 Stat. 817, 16 U.S.C. 580m et seq.), 6 September 1960	Fully Compliant
PL 89-72, as amended, Federal Water Project Recreation Act of 1965	Fully Compliant
PL 91-190, National Environmental Policy Act of 1969, as amended (42 USC 4231, et seq.), 1 January 1970	Fully Compliant
PL 92-516, Federal Insecticide, Fungicide, and Rodenticide Act of 1972, (86 Stat. 973), as amended	Not Applicable
PL 93-205, Endangered Species Act of 1973, as amended (87 Stat 884, 16 USC 1531(b))	Fully Compliant
PL 95-313. Cooperative Forestry Assistance Act of 1978 (92 Stat. 365, 16 U.S.C. 2101), as amended by PL 101-624, the Food, Agriculture, Conservation and Trade Act of 1990	Not Applicable
PL 95-341, American Indian Religious Freedom Act	Fully Compliant
PL 98-63. Supplemental Appropriations Act of 1983, ref. volunteers	Not Applicable
PL 99-662, Water Resources Development Act (WRDA) of 1986, Section 1134, ref: Private Use Facilities; Section 1135, ref: Project Modification for Improvement of the Environment	Not Applicable
PL 101-601, Native American Graves Protection and Repatriation Act (NAGPRA)	Fully Compliant
PL 101-640, Water Resources Development Act (WRDA) of 1990, Section 307(a)	Not Applicable
PL 103-141, Religious Freedom Restoration Act of 1993	Fully Compliant
33 CFR Part 328.3(b) U.S. Army Corps of Engineers 1987 Manual for Identifying and Delineating Jurisdictional Wetlands	Partial Compliance
36 CFR Part 60. National Register of Historic Places	Fully Compliant
36 CFR Part 79, Curation of Federally-Owned and Administered Archaeological Collections	Fully Compliant
36 CFR Part 327, Rules and Regulations Governing Public Use of Water Resources Development Projects Administered by the Chief of Engineers	Fully Compliant

36 CFR Part 800, Advisory Council on Historic Preservation, Protection of Historic Properties	Fully Compliant
40 CFR Parts 150-189, reference to Pesticides	Not Applicable
40 CFR Parts 1500-1508. Council on Environmental Quality Procedures for Implementing the National Environmental Policy Act (42 U.S.C. 4331 et seq.)	Fully Compliant
41 CFR Part 101 - 47.103-12, Federal Property Management Regulations	Fully Compliant
42 CFR 76.1 - 76.9, Performance Standards and Techniques of Measurement;" issued by the Department of Health and Human Services, to supplement Executive Order 11282	Not Applicable
EO 11990, Protection of Wetlands, 24 May 1977	Fully Compliant
EO 12512, Utilization Surveys	Fully Compliant
DOD 4150.7-M, Plan for Certification of Pesticide Applicators of Restricted-Use Pesticides, Armed Forces Pest Management Board, Defense Pest Management Analysis Center, Forest Glen Section, WRAMC, Washington, D.C. 20307-5001	Not Applicable
Technical Information Manuals (TIM)21, "Pesticide Disposal Guide for Pest Control Shops," Armed Forces Pest Management Board (AFPMB), Aberdeen Proving Ground, MD21010-5422, Tel. (301) 671-3773. U.S. Army Environmental Hygiene Agency, Guide for Medical Surveillance of Pest Controllers.	Not Applicable
ER 190-1-50, Law Enforcement Policy, U.S. Army Corps of Engineers	Not Applicable
ER 200-2-2, Procedures for Implementing the National Environmental Policy Act	Fully Compliant
ER 200-2-3, Environmental Compliance Operations and Maintenance Policies.	Fully Compliant
ER 385-1-90. Respiratory Prevention Program	Not Applicable
ER 405-1-12, Real Estate Handbook.al. ER 1105-2-100, Policy and Planning, Guidance for Conducting Civil Works Planning Studies	Fully Compliant
ER 1130-2-500, Work Management Policies	Fully Compliant
ER 1130-2-550, Recreation Operations and Maintenance Policies	Fully Compliant
ER 1165-2-131, Water Resources Policies and Authorities: Local Cooperation Agreements for New Start Construction Projects	Fully Compliant
EP 1130-2-540, Environmental Stewardship Procedures	Fully Compliant
EM 385-1-1, Safety and Health Requirements Manual	Fully Compliant
Multi-agency Memorandum of Understanding on Implementing the Endangered Species Act, dated 29 September 1994	Fully Compliant
North American Waterfowl Management Plan, developed by the U.S. Fish and Wildlife Service and Canada in 1986	Fully Compliant
Multi-Agency Memorandum of Understanding on Watchable Wildlife Program, dated Dec. 1990 (extended through Dec. 1998)	Fully Compliant