

# East Sidney Lake

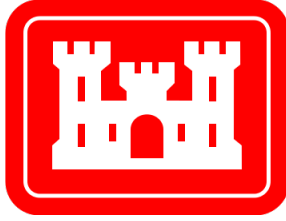
## Master Plan



Draft Submittal  
March 2019







# East Sidney Lake Master Plan Delaware County, NY

## Draft Submittal

March 2019

### For:

East Sidney Lake  
4659 State Highway 357  
Franklin, NY 13775

### Under Contract With:

U.S. Army Corps of Engineers—Baltimore District  
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# 2019 MASTER PLAN East Sidney Lake

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# 1 Introduction

## 1.1 PROJECT AUTHORIZATION

The East Sidney Lake Project on Ouleout Creek was authorized by the Flood Control Act of June 22, 1936 (Public Law 74-738, 74<sup>th</sup> Congress, 2<sup>nd</sup> Session) in order to control floods in the Upper Susquehanna River Basin. The East Sidney Lake project was one of the seven flood control projects included in the Definite Project Report for Flood Protection, Upper Susquehanna River Basin, approved by the Chief of Engineers in October 1939.

Congressional authority for the recreational program at reservoir projects under the control of the Department of the Army is contained in the Flood Control Act approved December 22, 1944 (Public Law 534, 78<sup>th</sup> Congress, 2<sup>nd</sup> Session) and amended by additional acts as follows: the Flood Control Act approved July 24, 1946 (Public Law 526, 79<sup>th</sup> Congress, 2<sup>nd</sup> Session), the Flood Control Act approved September 3, 1954 (Public Law 780, 83<sup>rd</sup> Congress, 2<sup>nd</sup> Session), and the Flood Control Act approved October 23, 1962 (Public Law 87-874, substantially in accordance with House Document 469, 87<sup>th</sup> Congress, 2<sup>nd</sup> Session).

This update to the East Sidney Lake Master Plan is required according to January 2013 updates to the Engineering Regulation (ER) and Engineering Pamphlet (EP) 1130-2-550. The United States Army Corps of Engineers (USACE) is also required to prepare the appropriate National Environmental Policy Act (NEPA) documentation to support the Master Plan.



East Sidney Lake, View from the Route 357 Overlook

## 1.2 PROJECT PURPOSE

East Sidney Lake was authorized and constructed for the primary purposes of controlling floods in the Upper Susquehanna River Basin as part of the Comprehensive Flood Control Plan. East Sidney Lake provides immediate flood protection for the valley downstream from the dam and assists in controlling floods on the Susquehanna River. A major secondary use of the project lands and waters is recreation and environmental stewardship of natural and cultural resources. The project area is heavily utilized by individuals and groups from near and far who participate in a variety of activities, like boating, fishing, picnicking, camping, and enjoying the great outdoors.

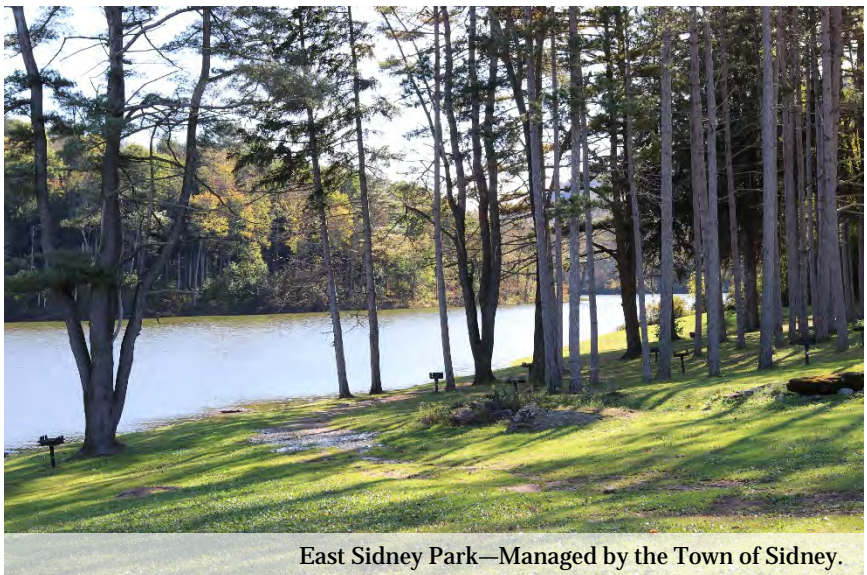
## 1.3 PURPOSE AND SCOPE OF MASTER PLAN

The purpose of this document is to update the Master Plan, written in 1961, and the Environmental Impact Statement for East Sidney Lake. The East Sidney Lake Master Plan is the strategic land use management document that guides the comprehensive management and development of all recreational, natural, and cultural resources throughout the life of the project. It is the basic document guiding Corps responsibilities pursuant to Federal Laws to preserve, conserve, restore, maintain, manage, and develop the project lands, waters, and associated resources.

Since the construction of the lake, the original objective of flood risk management continues to be achieved, allowing the increased opportunity for numerous recreation activities on and around the lake. This document updates the existing Master Plan, written in 1961. This Plan provides an analysis of and guidance for future development activities at East Sidney Lake.

This document presents a re-evaluation of the assets, needs, and potentials of East Sidney Lake. This Plan reflects changes that have occurred to the project site, in the region, in recreation trends, and in USACE policy, in the 58 years since the original Master Plan. It provides a management framework that balances the stewardship of natural resources and provision of high-quality recreation activities with the primary project purpose of flood risk management. The Plan addresses expressed public interest in the overall stewardship and management of all project resources and includes graphics showing the most feasible enhancements to existing facilities, as well as new land classifications that are compliant with current regulations.

Implementation of this Plan must recognize and be compatible with the primary project mission of flood risk management. Recreation facility development and natural resources management activities proposed in this Plan are dependent on the availability of appropriated funds, but may also be achieved through partnerships, donations and volunteer efforts.



East Sidney Park—Managed by the Town of Sidney.

## 1.4 DESCRIPTION OF PROJECT AND WATERSHED

East Sidney Lake is located on Ouleout Creek in Delaware County, New York, approximately 5 miles upstream of the confluence of the creek with the Susquehanna River near the village of Unadilla, as shown in Figure 1-1 on page 1-5. Project lands occupy approximately 1,267 acres of land with 590 fee simple acres and 677 flowage easement acres. The dam that created East Sidney Lake controls a drainage area of 102 square miles, about 5 percent of the Upper Susquehanna River Basin and 93 percent of the Ouleout Creek drainage area, and has prevented an estimated \$287 million in flood damages through 2014. Figure 1-2 is a site map of East Sidney Lake and can be found on page 1-6.

Construction of the project began in April 1947 and took 3 years to complete at a total federal cost of approximately \$6 million. Impoundment of water to form the lake was completed in June 1950. Recreational facilities administered by the Town of Sidney became available in May 1965.

## 1.5 DESCRIPTION OF LAKE

With a recreation pool, the lake, controlling a drainage area of 102 square miles, is about 2.5 miles long, has a surface area of 210 acres, has an elevation of 1,150 feet National Geodetic Vertical Datum (NGVD), and a shoreline of 6 miles. At recreation pool, the lake stores approximately 3,350 acre-feet of water, where 3,300 acre-feet is used for flood control and 50 acre-feet is used for conservation storage. If the reservoir reaches the designed flood control level, elevation 1,203 feet NGVD, it will cover 1,100 acres, store 33,550 acre-feet of water, and extend 5.5 miles upstream of the dam. The pool has a winter draw down every year. The winter pool has an elevation of 1,140 feet NGVD, surface area of 130 acres, and stores approximately 1,700 acre-feet of water.

### 1.5.1 Embankment

The dam at crest is 2,010 feet long, 130 feet above the streambed and 146 feet above firm rock. The rolled earth dam has a top elevation of 1,229 feet NGVD and consists of a main embankment made of concrete gravity type section with two compacted earth dike sections at the abutments. The main embankment is 750 feet long while the two dikes at each of the abutments total the other 1,260 feet.



View of the Dam from East Sidney Park

### **1.5.2 Spillway**

The concrete spillway is located in the center of the dam within the main embankment. It is ogee type, 240 feet long, with a crest elevation of 1,203 feet NGVD.

### **1.5.3 Dikes**

Both dikes are made of rolled earth. The right bank dike section is 1,140 feet long and the left bank dike section is 120 feet long.

### **1.5.4 Flood Control Outlet Works**

The outlet works are located within the main embankment. The outlet works consists of 5 rectangular conduits, each 3.5 feet by 5.83 feet by 105 feet long and each having a discharge capacity of 1,120 cubic feet per second (cfs). Flow through the conduits is regulated by 5 sluice gates, 3 feet 6 inches by 5 feet 10 inches.

### **1.5.5 Flood Control Outlet Works Stilling Basin**

A reinforced concrete horizontal stilling basin, with baffle blocks- and end gill is provided downstream from the exit portals to dissipate the energy of the high velocity conduit flow. The stilling basin is connected to the outlet tunnels with hydraulic jump. The basin is 240 feet wide with the floor at elevation 1,087 feet NGVD. The baffle blocks are located on the stilling basin floor in the downstream end of the basin and the end sill is 10 feet high.

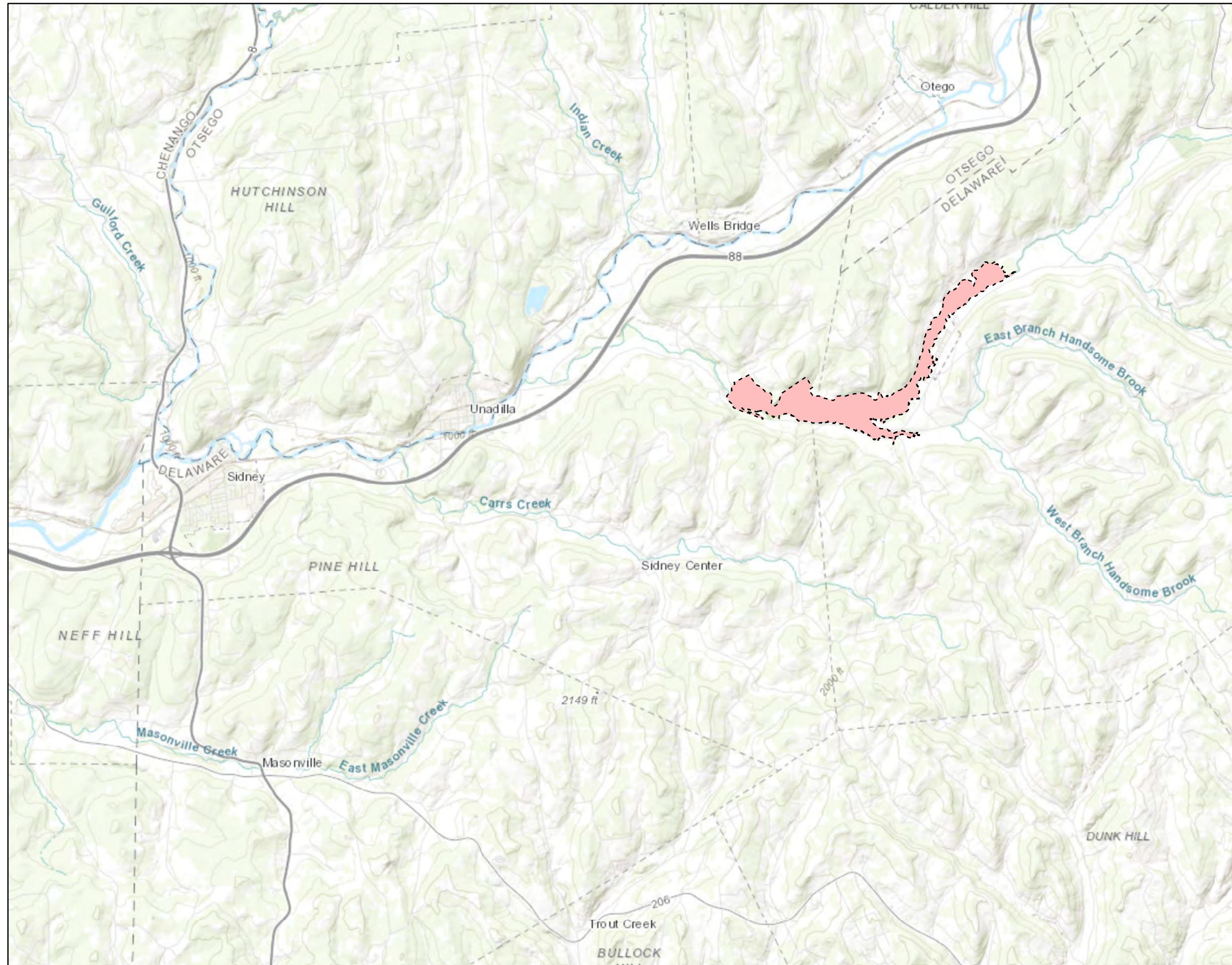
## **1.6 HYDROPOWER FACILITIES**

In 1986, The Taft Hydropower Project at East Sidney Lake was considered. A preliminary permit application was filed which estimated an average annual energy generation of 3.4 gigawatt hours. The project was found not to be feasible due to the variable water flow throughout the year. There would not be enough year-round water flow in order to pay for the system. Thus, Taft Hydro did not pursue the permit application process further.

## **1.7 PROJECT ACCESS**

The lake and recreation area are located off State Highway 357 which runs between Unadilla and North Franklin. State Highway 357 leads into State Highway 28 which leads to Oneonta to the north and Kingston to the south. State Highway 7 also skirts near East Sidney Lake and runs between Binghamton and the Schenectady and Albany areas. Interstate 88 runs directly north of the dam. This route also provides access from Schenectady to the north and Binghamton to the south.

Figure 1-1

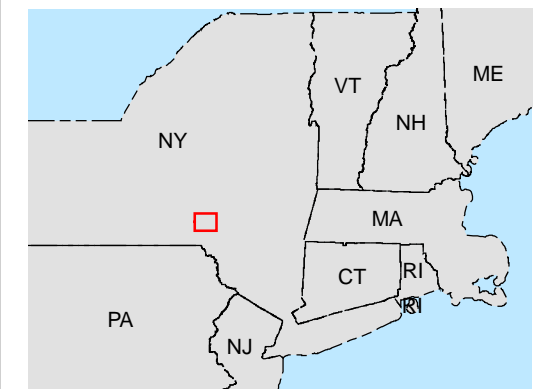


# East Sidney Lake Master Plan

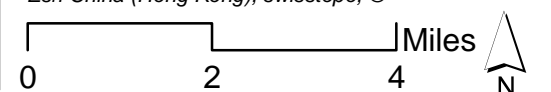
## Regional Map

### Legend

 ESL Boundary



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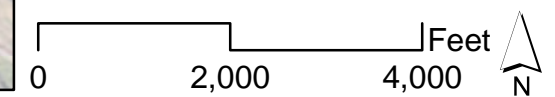
# East Sidney Lake Master Plan

## Site Map

### Legend

 ESL Boundary

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## 1.8 PERTINENT PRIOR REPORTS AND RELATED STUDIES

Documents and studies related to the Master Plan update are listed in this section with the dates of publication. The Bibliography section contains the full annotation for each report or study.

- *East Sidney Lake Hydropower Study, 1986*
- *East Sidney Lake Integrated Cultural Resources Management Plan, 2017*
- *East Sidney Lake Master Plan, 1961*
- *East Sidney Lake Operation and Maintenance Manual, 1977*
- *East Sidney Lake Regulation Manual, 1996*
- *Statewide Comprehensive Outdoor Recreation Plan (SCORP), 2014*

## 1.9 PERTINENT PROJECT INFORMATION

Table 1-1 below provides pertinent information regarding existing storage capacity at East Sidney Lake.

**Table 1-1: Water Storage Capacity and Related Pertinent Data at East Sidney Lake.**

	Elevation (Feet NGVD)	Storage (Acre-feet)	Acres
Top of Dam	1,229		
Maximum Pool (Spillway Surcharge)	1,223	58,350	1,600
Full Flood Control (Spillway Crest)	1,203	33,550	1,100
Recreation Pool (Summer)	1,150	3,350	210
Conservation Pool (Winter)	1,140	1,700	130
Inactive Pool (Dead Storage)	1,115	50	10

Source: 1961 East Sidney Lake Master Plan

Table 1-2 provides pertinent information regarding acreages by land use classifications at East Sidney Lake. Acreages were calculated by Geographical Information Systems (GIS) data.

**Table 1-2: Current Land Classifications at East Sidney Lake.**

Land Classifications	Acres
Project Operations	14
High-Density Recreation	50
Multiple Resource Management	993
Low Density Recreation	1
Vegetative Management	992
Water Surface	210
No Wake	3
Restricted	4
Open Recreation	203
Total	1,267

Source: ESL GIS Data

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## 2 Existing Conditions & Analysis

### 2.1 PHYSIOGRAPHIC SETTING

#### 2.1.1 Ecoregion Overview

East Sidney Lake is located within the High Allegheny Plateau Ecoregion which stretches from the Great Lakes Plains of Lake Ontario in the north to the ridge and valley region of the Central Appalachians to the south, and from the Lake Erie Plain in the west to the Hudson River Valley in the east. The ecoregion is defined by a broad series of mid elevation hills separated by numerous narrow stream-cut valleys. One of the main features of the ecoregion is an abundance of rivers and streams. Three major rivers, the Delaware, the Susquehanna, and the Allegheny, and their associated tributaries cover the entire ecoregion. The Delaware River flows into Delaware Bay, the Susquehanna River flows into the Chesapeake Bay, and the Allegheny River flows into the Ohio and, eventually, Mississippi Rivers.

#### 2.1.2 Climate

East Sidney Lake is located within a portion of the Upper Susquehanna River Basin which falls within the National Oceanic and Atmospheric Administration (NOAA) Climate Division 30-2 (New York – Eastern Plateau). This area is characterized by a temperate climate, with the average annual temperature in 2017 being approximately 47 degrees Fahrenheit and the average annual precipitation being approximately 47 inches. The greatest monthly precipitation in the basin occurs from May through August; the least occurs in the late fall and winter. The winters are not considered severe, but are vigorous, since there is usually heavy snowfall.

### **2.1.3 Topography**

East Sidney Lake falls within the Ouleout Creek watershed and the extreme northeastern part of the Appalachian Uplands physiographic province. The topography of the area consists of rolling hills with relatively deep valleys having moderately steep side slopes. Ouleout Creek has an average slope of 40 feet per mile. The streambed drops from elevation 2,250 feet NGVD in the headwaters to elevation 1,100 feet NGVD at the dam site. In the headwaters the tributary slopes approach 320 feet per mile. The Site Topography Map, Figure 2-1, on the following page shows the 10-foot contour lines and elevation changes within the site. The region surrounding East Sidney Lake is used largely for agricultural purposes with numerous open farms and pasturelands and scattered wooded and brush areas along the valley slopes.

Bedrock underlying the area consists of sedimentary rocks of the Devonian Age, composed of interbedded red and gray sandstones, shales, and siltstones. At the dam site, bedrock lies about 18 feet below the stream bed, which made it a suitable site for a concrete dam structure. Surficial geology in the valley floor consists of recent alluvium with areas of outwash sands and gravels. Kame deposits of coarse to fine gravels and sands occur along the valley floor margins. The uplands are largely covered by a mantle of till, although exposures of bedrock may occur on the steeper slopes. Elevations near East Sidney Lake and the lower Ouleout Creek Valley range from 1,020 feet NGVD at Ouleout Creek's confluence with the Susquehanna River, to 2,000 feet NGVD on the highest portions of the surrounding uplands. These uplands consist of steep-sided ridges with narrow, undulating crests that trend north-south. Between the ridges are relatively wide valleys and saddles that range in elevation between 1,300 and 1,500 feet NGVD. Broad level areas and poorly drained, marshy areas or ponds occur in some of these valleys. The entire ridge system is cut by the deep east-west defile containing lower Ouleout Creek. This roughly correlates with a late glacial margin, the Delhi, and suggests its origin.

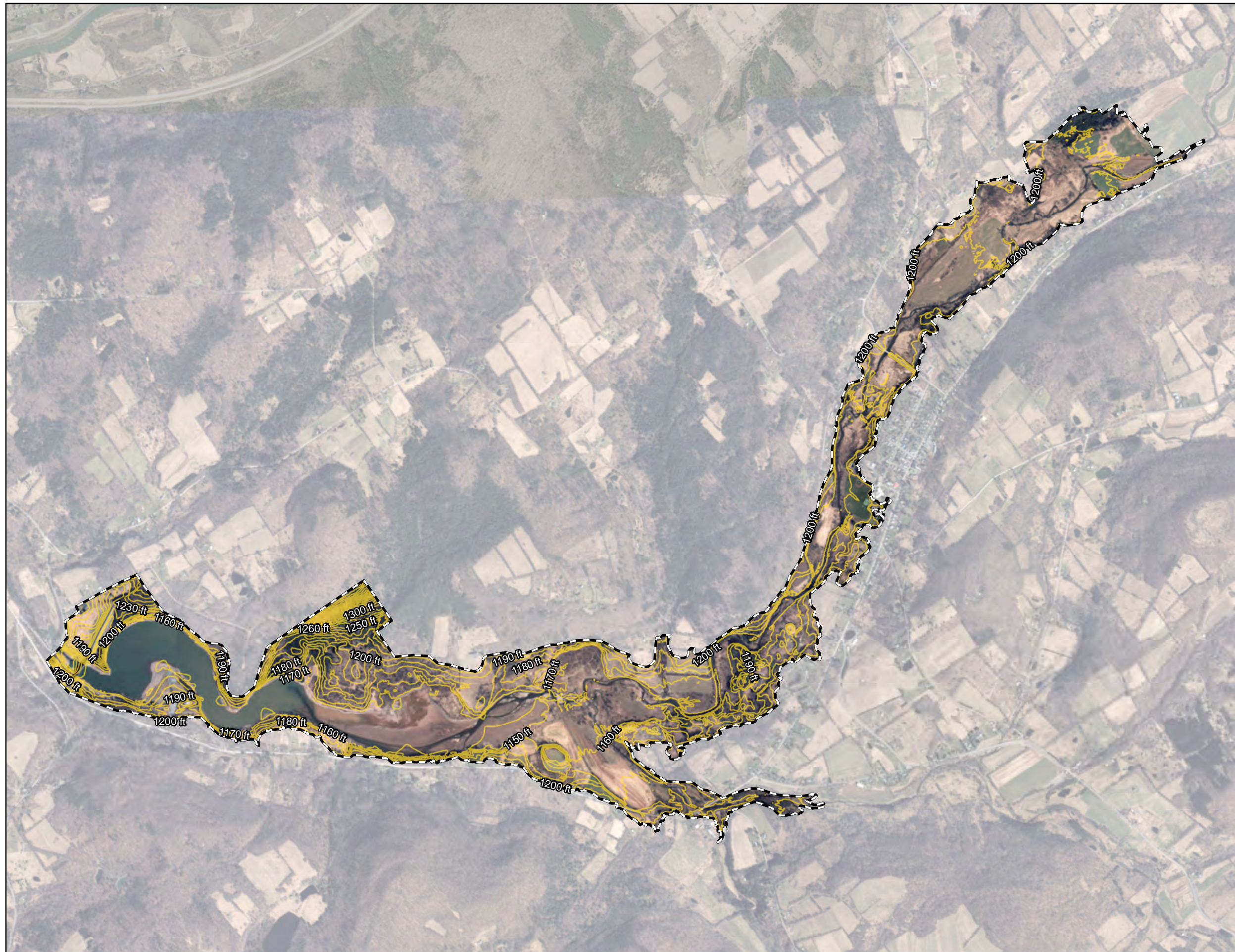
### **2.1.4 Hydrology and Groundwater**

Depositions of clays, sands, and gravels on the valley floors provided natural underground lakes for the storage of groundwater. Most of the unconsolidated surface deposits are a result of Pleistocene ice action during glacial stages and melt water flow from later ice sheets north of the study area.

Ouleout Creek is located within Delaware County, New York. It begins near Shackport, New York and meanders west where it eventually flows through East Sidney Lake before its confluence with the Susquehanna River 5 miles downstream. The watershed above the dam has a drainage area of 102 square miles, is about 4 miles long and 3/4 miles wide. The dam at Whitney Point Lake controls about 5 percent of the Upper Susquehanna River Basin and 93 percent of the Ouleout Creek drainage area.

East Sidney Lake falls within the Upper Susquehanna River Basin which has a total drainage area of 4,944 square miles. Major tributaries in the basin include the Chenango, Tioughnioga, and the Unadilla. Within the basin, USACE constructed and maintains local flood protection projects at 4 sites and 2 dams at East Sidney Lake and Whitney Point Lake. Whitney Point Lake is the only other man-made reservoir in the Upper Susquehanna River Basin and it is located within Broome County, New York along the Otselic River. It works in conjunction with the East Sidney Lake project in order to reduce flood damages in the Upper Susquehanna River Basin, specifically in



Figure 2-1



# East Sidney Lake Master Plan

## Site Topography Map

### Legend

-  ESL Boundary
-  10ft Contour Intervals

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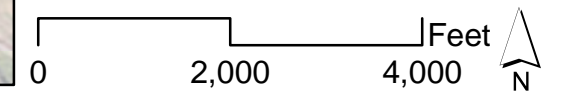


Figure 2-2



# East Sidney Lake Master Plan

## Soils Analysis and Extreme Slopes

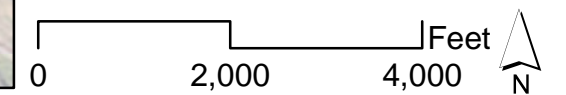
### Legend

ESL Boundary

### Soils and Associated Slopes

- LaD - Lackawanna flaggy silt loams, 15-25%
- LaE - Lackawanna flaggy silt loams, 25-40%
- LdE - Lackawanna & Bath soils, 15-35%
- LoD - Lordstown channery silt loams, 15-25%
- LoE - Lordstown channery silt loams, 25-40%
- OrF - Oquaga, Lordstown, & Arnot soils, 35-70%
- TkD - Tunkhannock gravelly loams, 15-25%
- TkE - Tunkhannock gravelly loams, 25-50%
- WeD - Wellsboro channery silt loams, 15-25%

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the city of Binghamton. Whitney Point Lake has a drainage area of 255 square miles, a recreation pool area of 1,200 acres, and a storage capacity of 86,460 acre-feet at spillway crest.

The nearby Delaware River Basin is also located within Delaware County. There are two manmade reservoirs located within the Delaware River Basin, the Pepacton and the Cannonsville, both built in the 1950s and 60s to supply drinking water to New York City by gravity flow through the underground Delaware aqueduct. The Pepacton Reservoir includes a 2,400-foot long dam and has a capacity to impound 140 billion gallons of water. It is 18 miles long, has a surface area of 5,760 acres, and has 55-miles of shoreline. The Cannonsville Reservoir has a capacity to impound 95 billion gallons of water.

### **2.1.5 Soils, Sedimentation, and Shoreline Erosion**

The majority of the soils in the area formed in unconsolidated glacial till. Spread over most of the area is a veneer of glacial till composed of a mixture of gravels, sands, silts, and clays variably intermixed. The predominant soil type within the project area is Barbour loam, Barbour-Trestle complex, and Tunkhannock gravelly loam, 8 to 15 percent slopes. Both Barbour varieties tend to be well drained and located on floodplains. Tunkhannock gravelly loams are also well drained but located along valley trains and terraces and have moderately steep slopes. According to the Natural Resources Conservation Service, there are 445 acres of land within project boundaries designated "Prime Farmland." This undeveloped land with high crop production potential includes soils: Barbour loam, Barbour-Trestle complex, Basher silt loam, Red Hook gravelly silt loam, Riverhead loam with 0 to 3 percent slopes, and Tunkhannock gravelly loam with 0 to 8 percent slopes. There are also numerous soils throughout project lands that have slopes greater than 15 percent. Soils with steep topography include Lackawanna flaggy silt loams, Lordstown channery silt loams, Tunkhannock gravelly loams, and Wellsboro channery silt loams. Figure 2-2 on page 2-4 shows project soils with slopes greater than 15 percent.

In the past, there were no serious sediment problems at East Sidney Lake. In the recent years, there has been an increase in siltation within the lake, which resulted in a loss of several acre-feet of water. The loss is still not enough to justify a dredging or construction project at the lake. Typically, sediment is not a major problem in the Northeastern United States, due to the overlay of glacial till on the glacial valleys of the basins.

## **2.2 ECOREGION AND NATURAL RESOURCES ANALYSIS**

Natural resources include the vegetation, wetland, wildlife, fisheries and aquatic resources, and the endangered and threatened species present near East Sidney Lake.

### **2.2.1 Vegetation**

The lands surrounding the lake are a mosaic of agricultural, residential, and forested lands. Forested areas are generally sparse and contained mainly to the upper valley slopes. The areas are dominated by successional northern hardwoods, like red and sugar maple, yellow birch, beech, and black cherry. With the exception of the riparian buffer, which includes the 40-acre East Sidney Recreation Area, the vegetation strands are of various ages depending on the time elapsed since the last disturbance. These habitats are very common throughout the site and the region.

### 2.2.2 Wetlands

A mix of forested and emergent wetlands can be found at East Sidney Lake concentrated around the confluence of Ouleout Creek and Handsome Brook and within the floodplain of Ouleout Creek. Emergent wetlands have become established downstream of the dam as a result of the dam construction and are fed by incidental seepage and runoff. Generally, wetlands located on the project lands are limited by the steep topography and are in relatively flat, low-lying areas along the lake at the mouths of tributary systems. These wetlands are also found in the seepage basins, along the river, and on the face of the emergency spillway.

### 2.2.3 Wildlife

The common species of mammals in the area are white-tailed deer, black bears, gray, red, flying and fox squirrels, gray and red foxes, skunks, beavers, raccoons, opossums, groundhogs, bobcats, and cottontail rabbits. Birds such as woodcock, grouse, and a variety of songbirds inhabit the area. Bald eagles have also been breeding at East Sidney Lake for many years.

East Sidney Lake is home to a small, warm water fishery. It is one of the only walleye fisheries in the region. About 4,000 yearling walleyes have been stocked every year since 2015. The natural habitat of walleye occurs within the watershed south of the dam, so introduction to the lake is feasible. There is also a very strong diversity of bait fish present in the lake which can support long term success of a walleye fishery. Specific bait fish found at East Sidney Lake include common carp, bluntnose minnow, golden shiner, emerald shiner, spot-tail shiner, and white sucker. The lake is also a viable site for both a large and small mouth black bass fishery. Trout are found within the inlet area. Other fish species inhabit the lake and waters surrounding the site, including brown bullhead, rock bass, pumpkinseed, and yellow perch.

### 2.2.4 Threatened and Endangered Species

As of 2018, there are two federally listed endangered or threatened species known to exist within or near the project impact area, the Northern Long-eared Bat (*Myotis septentrionalis*) and the Dwarf Wedge Mussel (*Alasmidonta heterodon*). The Northern Long-eared bat is a small bat associated with mature, interior forest environments. Unlike most other bats, the Northern Long-eared forages along wooded hillsides and ridgelines — not above valley-bottom streams and along the edges of riparian forests. Of the seven species known to be affected by white nose syndrome, the deadly bat disease, the northern long-eared is among the hardest hit. In the U.S. Northeast, where white-nose syndrome has been killing bats since 2006, the Northern Long-eared bat has declined by a shocking 99 percent. Forest fragmentation and logging/forest conversion are also major threats to the species due to its' strong association with large blocks of older forests. The Dwarf Wedge



Mussel is a small freshwater mussel that rarely exceeds 1.5 inches in length. The mussel was once found at 70 locations in 15 major Atlantic Coast Drainages, but numbers have declined drastically and can now only be found at 17 locations in 7 Atlantic Coast drainages. Water pollution, including sediments and chemicals from agriculture and other development projects have been implicated in the mussel's decline. Impoundments and channelization may have also eliminated the mussel from former habitat. A small population of mussels can be found downstream of East Sidney Lake.

Bald eagles (*Haliaeetus leucocephalus*) can be found within project lands as well as along Ouleout Creek. Bald eagles are currently characterized as a threatened species in the State of New York. They were previously listed as a federally endangered species but were removed from the Federal list in August 2007. The species is also protected under the Bald and Golden Eagle Protection Act, as noted by USFWS.

### 2.2.5 Invasive Species

Invasive species are defined as non-native species whose introduction into an ecosystem is likely to cause environmental, human, or economic harm. Non-native, or exotic, species have not evolved the natural checks and balances that normally keep population growth in check, thus they can spread rapidly and completely take over natural areas. These species are often difficult and expensive to control. Like almost all ecosystems, there is the potential for these invasive species to threaten East Sidney Lake project lands which can lead to major ecological and economical problems. There are currently no invasive species reported within project boundaries, but there is reason to believe that there are some present due to the presence of invasive species in the surrounding area. These species could pose a future threat to the site. Japanese Knotweed (*Polygonum cuspidatum*) and Purple Loosestrife (*Lythrum salicaria*) are common invasive species found in Delaware County. Japanese Knotweed is a flowering, bamboo stemmed plant that is indigenous to Eastern Asia. It was introduced to the United States in the late 1880s as an ornamental on estates as well as for erosion control. It was quickly seen as a vigorous pest since each stem can reach heights of 10 to 15 feet and it can quickly form dense thickets that crowd and shade out native vegetation. Once established, it is nearly impossible to eradicate. Long term negative impacts include reducing species diversity, altering natural ecosystems, and negatively impacting wildlife habitats. Purple Loosestrife arrived in eastern North America in the early 1800s to be used in settlers flower gardens. It is a very hardy perennial which can rapidly degrade wetlands and agricultural lands and destroy their wildlife habitats and crops. Luckily, even when loosestrife takes over more than 75% of an area, it can successfully be eradicated using a combination of techniques (digging and pulling, chemical control, cutting, and biological control). Biological control is the most effective technique and uses five species of



*Polygonum cuspidatum*, Japanese Knotweed



*Lythrum salicaria*, Purple Loosestrife

beetles to feed off the leaves, shoots, root tissues, and flowers which severely reduces seed production.

### **2.2.6 Mineral and Timber Resources**

As stated earlier, the primary rock types of the project lands include shale, siltstone, sandstone, and conglomerate. The primary timber type of the project lands is northern hardwoods.

The forest resources at the project are not particularly well suited to timber production. This is due primarily to steep slopes and potential aesthetic impacts. Slopes on the project lands range up to 65 percent. The erosion potential at slope sites is moderate to severe, making timbering an unfavorable option. Many forest sites are also clearly visible from the lake and recreation areas, making these sites unfavorable for timbering due to aesthetic impacts. The forest management program is aimed at protecting and enhancing forest lands for wildlife and recreation. Vegetation, either living or dead, is removed only for disease control, pest control, fire hazard reduction, flood clean-up, construction, or dam maintenance.

In accordance with ER 1130-2-550, all forest products generated through clearing, salvage operations, sanitation cuts, or operation and maintenance, and not required for USACE use, will be sold after approval of a disposal plan. Currently, there are no plans for the sale of timber from the East Sidney Lake project.

### **2.2.7 Water Quality**

Overall, water quality is judged to be relatively good, but due to high nutrient concentrations from nearby agricultural uses, the lake is characterized as eutrophic. During the hottest summer months, the lake suffers from algal blooms, thermal stratification, and oxygen depletion at the bottom of the lake. During the spring and fall months recovery occurs as is evident by no thermal stratification and oxygen being found at the bottom of the lake.

In a 1984 Lake Classification and Inventory study by the New York State Department of Environmental Conservation (NYSDEC), occasional algal blooms, reduced clarity and high nutrient loads were noted. USACE also conducted a watershed study in the late 1980s that found high nutrient loads, algal blooms and low dissolved oxygen in the lake. USACE installed a bubbler system during the summer of 1989 to try to relieve hypolimnetic anoxia. At that time agricultural runoff and inadequate on-site septic systems upstream were thought to be the primary sources of impact. However, the Delaware County farm management program has helped reduce nonpoint effects from farms in the recent years.

## **2.3 CULTURAL RESOURCES**

### **2.3.1 Prehistoric**

Settlement in the lower central portion of New York State began about 12,000 years ago, with

Paleo-Indian hunters arriving almost immediately after the glacial ice retreated. By 8,000 B.C, the large game began to disappear, and the megafauna were replaced by smaller animals. Only a few pre-Late Archaic sites have been documented in New York State, suggesting that population levels were very low.



By the Late Archaic period, circa 4000 B.C, the area apparently became more attractive to settlement, and numerous campsites have been found associated with Lamoka, Brewerton and Frontenac cultural groups. As agriculture became more important in the Woodland period, there was a continued expansion of the population, specifically Hopewell, Point Peninsula, Hunter's Home and finally Owasco cultures. Owasco groups, which emerged about 900 B.C, developed the cultivation of maize, beans and squash, and lived in fortified settlements. By the period of the first European traders, the area was dominated by the Seneca Nation of the Iroquois, who generally maintained control of central New York until the French and Indian War.

### **2.3.2 Historic**

The first Europeans are reported to have entered the Delaware County area in 1615, when two Dutch explorers traced the Delaware River to its source. During the eighteenth century, colonial land transactions and settlement began to shape the county. In 1708, Queen Anne of England granted a patent to Johannes Hardenbergh of Kingston in what was then Ulster County. The area that is now the Towns of Sidney and Franklin were patented in 1770, in a variety of long lots along and perpendicular to the Susquehanna. The details of these early land patents in Delaware County were complicated by transfers between multiple non-resident land holders, and by the transfer from Colonial to Federal control during and after the war. Regardless, the region's rugged terrain prevented substantial European settlement until the 1760s.

After the 1768 Treaty of Fort Stanwix, the Upper Delaware Valley and adjacent portions of the Susquehanna Drainage Basin became the frontier for settlement. The earliest settlers at Sidney arrived in 1773, William Johnston and sons Hugh and Witter and their families. Around the same time, settlement occurred along the northern edge of Delaware County. Communication between Sidney and areas to the north and east followed existing Native American trails along the Ouleout Valley. Early settlement of the lower Ouleout Creek Valley was focused on the hamlet of East Sidney that lies partially under East Sidney Lake, and in the village of Franklin. The first recorded settlers were Sluman Wattles and members of his family, who are said to have built the first cabin in the area in 1784. Nathaniel Wattles operated the ferry located at what is now Unadilla, allowing passengers and freight to cross the Susquehanna near the mouth of Ouleout Creek. The earliest villages and farmsteads were built along the transportation routes provided by the margins of river and stream valleys – out of the way of the most frequent flooding, but not expanding into the steep uplands.

Although most occupants of the region focused on subsistence farming, Delaware County's earliest industry was the timber harvested in its vast hardwood and pine forests. Large tracts of land were opened to agriculture after the timber was harvested. However, farmers quickly discovered that the land was too rocky and the soil too poor to make wheat, rye, oats, or profitable crops. Instead, farmers turned to pasturing sheep, then beef and dairy cattle, only growing crops for feed and family subsistence. The lumber industry did not wane until the 1880s. By that time, most of the large pine, oak, and hemlock trees had been cut.

The Susquehanna (aka Catskill) Turnpike was chartered by the State in 1800. This turnpike followed existing paths down the Ouleout Valley, through Franklin, and ended at Wattles Ferry on the Susquehanna. Present-day SR 357 follows the route of the approximate route of this turnpike, though part of it has been shifted to accommodate East Sidney Lake. As originally designed, toll gates were located approximately every 10 miles along this route. This interval was later shortened to 5 miles, to thwart "shunpikers" who often went as far as building new roads around toll gates

rather than paying tolls. The village of Franklin, though established as a settlement in 1785, expanded substantially alongside the turnpike. Franklin's first tavern was licensed in 1797, a post office was established in 1801, and by 1798 there were 8 licensed taverns. Commercial stages were running along the turnpike by 1805. In 1835, the Delaware Literary Institute was formed to provide secondary education and gained regional prominence for the excellence of that education.

Late in the nineteenth century, railroads would again impact the county economy by providing access to Delaware County's natural resources for the tourism industry. Grand hotels and resorts sprang up across the county during the last quarter of the century. Due to the ease of access to the eastern city belt, Delaware County also maintained its prominence as a dairy producer into the twentieth century and expanded into growing vegetables for truck farming. These industries persist into the present. The 1920 completion of Route 4 along the southern edge of Delaware County, later designated as Route 17, made the area accessible by automobile to city markets and tourists. After the Great Depression of the 1930s, the leisure industry of the Catskills region was dramatically changed. The vast grand resort complexes that catered to the very wealthy were replaced by small scale, often family owned camps situated around a lake or pond. Many of these camps were built 1940s and 1950s as summer residences for urbanites. Most are still used for that purpose today. Route 17's conversion to the four-lane limited access "Quickway" in 1969 expanded the potential for new residential development. The mid- to late twentieth century is represented throughout the county in numerous examples of the ranch house. The twentieth century has also brought alterations to the historic architectural fabric of the county as many nineteenth century buildings are now clad in asbestos, aluminum or vinyl siding.

### **2.3.3 Previous Investigations at Lake**

There have been no previous recorded cultural resources investigations or archaeological surveys within the project boundary. Only two previous archaeological surveys included in the online New York Cultural Resources Information System (NYCRIS) fall within 1 mile of East Sidney Lake. This number may be incorrect due to the fact that the dam was completed before the passage of the National Historic Preservation Act of 1966. Any archaeological work before 1966 is not recorded in NYCRIS. Thus, future evaluation and testing should be pursued to determine if significant properties and archaeological sites within the East Sidney Lake project boundary are eligible for National Register of Historic Places (NRHP) status.

In 2001, the Public Archaeology Facility (PAF) at the State University of New York (SUNY) Binghamton conducted an archaeological reconnaissance survey for the repair of slope failure and realignment of NY 357 in the nearby Towns of Sidney & Franklin. The reconnaissance survey was conducted in July of 2001 in the immediate vicinity of the southeast boundary of East Sidney Lake. No archaeological sites were identified. Additionally, background research provided information on the locations of 13 historic archaeology sites within 2 miles of that project area. No previously recorded prehistoric sites were documented within that radius.

### **2.3.4 Recorded Cultural Resources**

There are no known historic structures or archaeological sites in the project boundary that are eligible for or listed on the NRHP. The nearby Village of Franklin remains little unchanged from its 19<sup>th</sup> century character, allowing it to be listed as a district on the NRHP.

### 2.3.5 Long-term Objectives for Cultural Resources

In 2017, an Integrated Cultural Resources Management Plan (ICRMP) was developed and incorporated into the Operational Management Plan. This ICRMP was developed in accordance with ER 1130-2-540 and complies with section 110 of the National Historic Preservation Act. This plan includes an inventory of cultural resources on project lands and develops administrative and maintenance procedures for cultural resource management. Main objectives of the ICRMP are as follows: 1) Update the ICRMP as substantial changes occur; 2) Inventory and evaluate areas that have medium to high potential of containing archaeological resources, as funds permit; and 3) Increase public awareness and education.

## 2.4 DEMOGRAPHIC AND ECONOMIC RESOURCES

### 2.4.1 Current Demographics, Economics, Trends and Analysis

Delaware County makes up the entire zone of interest for the socio-economic analysis of East Sidney Lake. The lake and flow easements reside fully within Delaware County.

### 2.4.2 Population

According to the 2016 American Community Survey (ACS) 5-year Population estimate, the total population for the zone of interest is 46,480, down from 48,220 in 2010. The population in the zone of interest makes up approximately 0.2 percent of the total population of New York (19,697,457). From 2016 to 2030, the population in the zone of interest is expected to decrease to 42,076. Table 2-1 below shows the population estimates and projections for New York and the zone of interest.

**Table 2-1: Population Estimates and 2030 Projections**

<b>Geographical Area</b>	<b>2010 Population Estimate</b>	<b>2016 Population Estimate</b>	<b>2030 Population Projection</b>
New York	19,229,752	19,697,457	20,604,030
<b>Delaware County (Zone of Interest)</b>	<b>48,220</b>	<b>46,480</b>	<b>42,076</b>

Source: U.S. Bureau of Census, Population Division (2010 & 2016 Estimates); Cornell University Program on Applied Demographics, Preliminary Population Projections for New York State and 62 Counties (2030 Projection).

The distribution of the population among gender, as shown in Table 2-2 below, is close to 50/50 distribution of male and female populations. There are slightly more males (23,356) than females (23,124), which is different than New York who has a slightly larger female population (10,142,327) than male population (9,555,130).

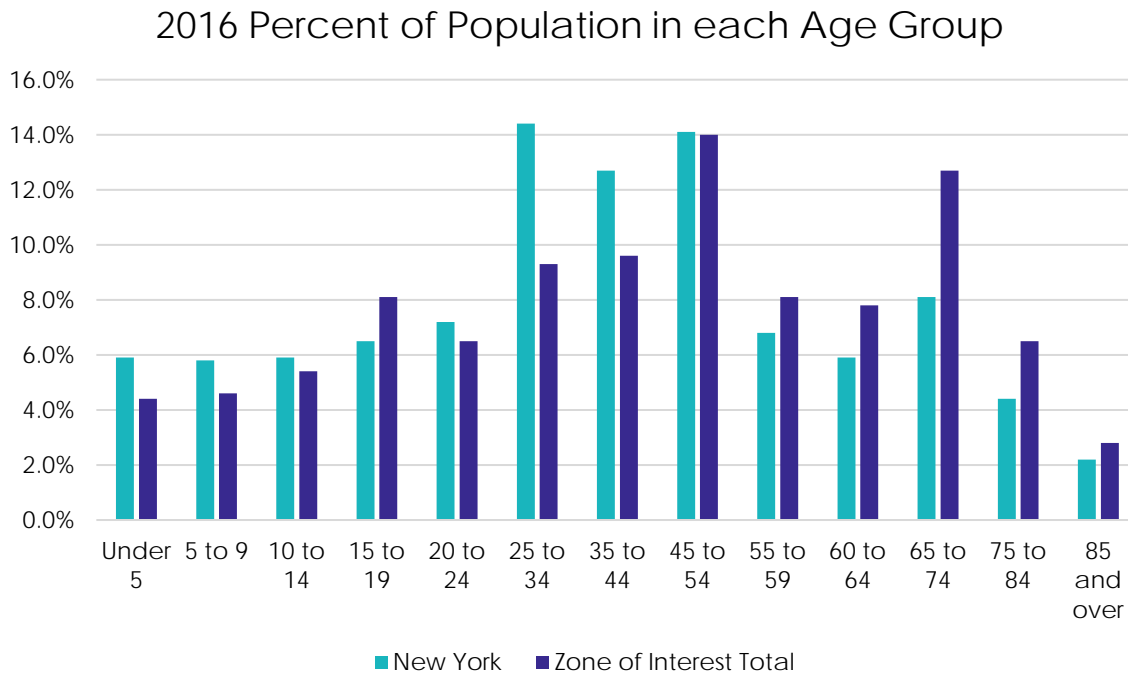
**Table 2-2: 2016 Percent of Population Estimate by Gender**

Geographical Area	Male	Female
New York	9,555,130	10,142,327
<b>Delaware County (Zone of Interest)</b>	<b>23,356</b>	<b>23,124</b>

Source: U.S. Bureau of Census, 2012-2016 ACS 5-Year Estimates (2016 Estimate).

Table 2-3 below shows the population by age group. The distribution by age group is relatively similar among Delaware County and the state of New York in terms of percentages of the respective population. The population in the zone of interest trends older compared to the entire state of New York. The two largest age groups in the zone of interest are the 45 to 54 group (14.0 percent of the population) and the 65 to 74 (12.7 percent of the population). The rest of the age groups all share less than 10 percent of the total population in the zone of interest. This trend is different than in the state of New York where the largest age group in the state is the 25 to 34 group (14.4 percent of the population).

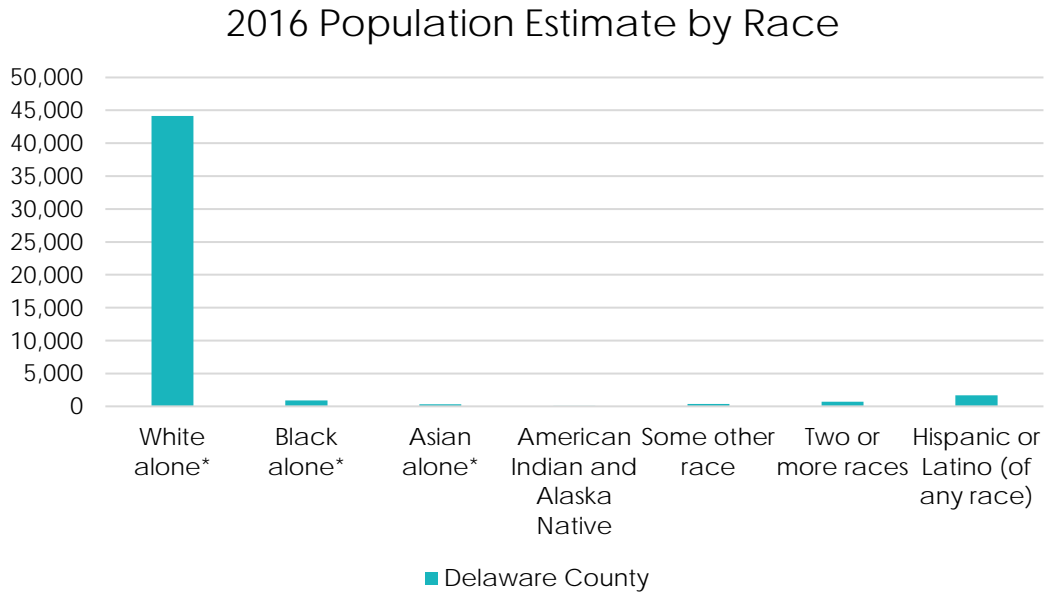
**Table 2-3: 2016 Percent of Population by Age Group in Zone of Interest and State**



Source: U.S. Bureau of Census, 2012-2016 American Community Survey 5-Year Estimates (2016 Estimates)

Population by race is displayed in Table 2-4 below. For the zone of interest, approximately 95 percent of the population is White, 2 percent Black, 0.7 percent Asian, and 1.5 percent Two or more races. 4 percent of persons within the zone of interest also identified as Hispanic/Latino.

**Table 2-4: 2015 Population Estimates by Race**



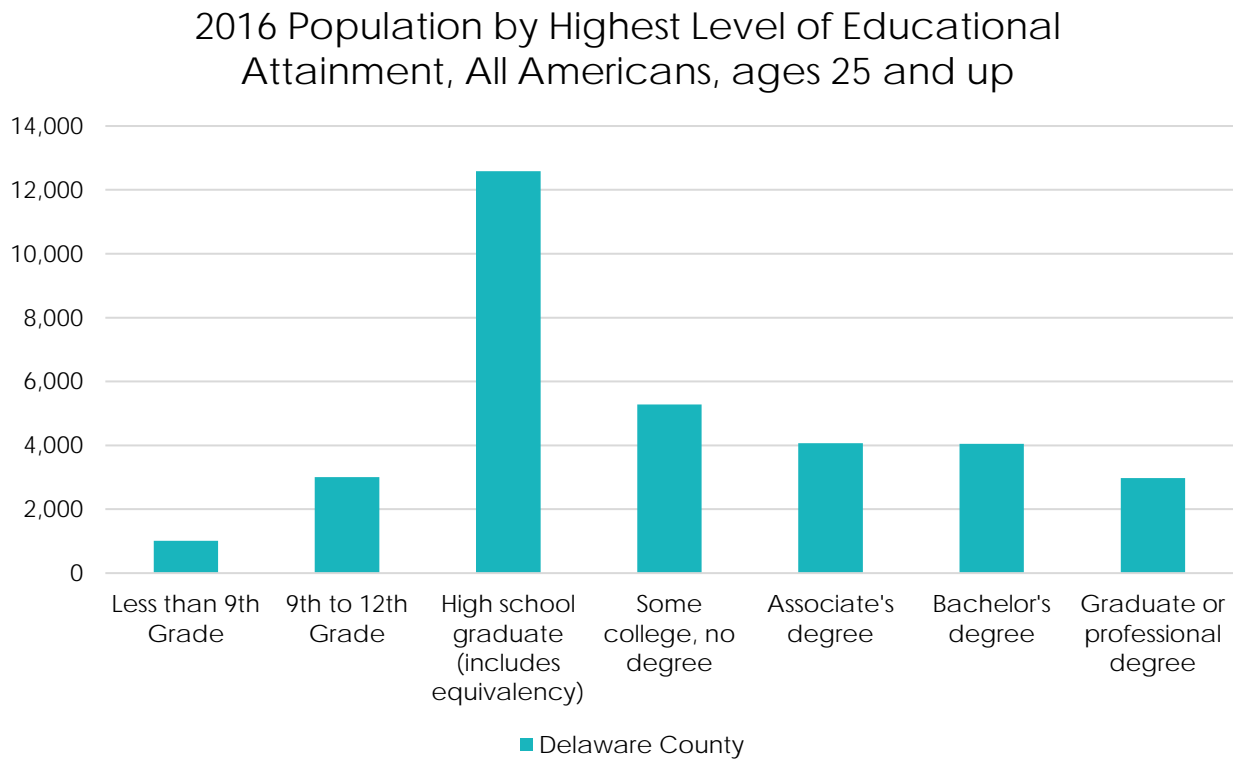
Source: U.S. Bureau of Census, 2012-2016 American Community Survey 5-Year Estimates (2015 Estimates)

\* Note that alone in this case means only one race and does not say anything about ethnicity. There may be some overlap with the Hispanic or Latino category.

### 2.4.3 Education and Employment

In the zone of interest, for approximately 38 percent of the population age 25 and older, the highest level of education attained is a high school diploma or equivalent. Approximately 16 percent have some college education, but no degree, 13 percent have an Associate’s degree, 12 percent have a Bachelor’s degree, 9 percent have a 9<sup>th</sup> to 12<sup>th</sup> grade education, 9 percent have a graduate or professional degree, and 3 percent have less than a 9<sup>th</sup> grade education. Table 2-5 below shows the level of education attained for persons residing in Delaware County.

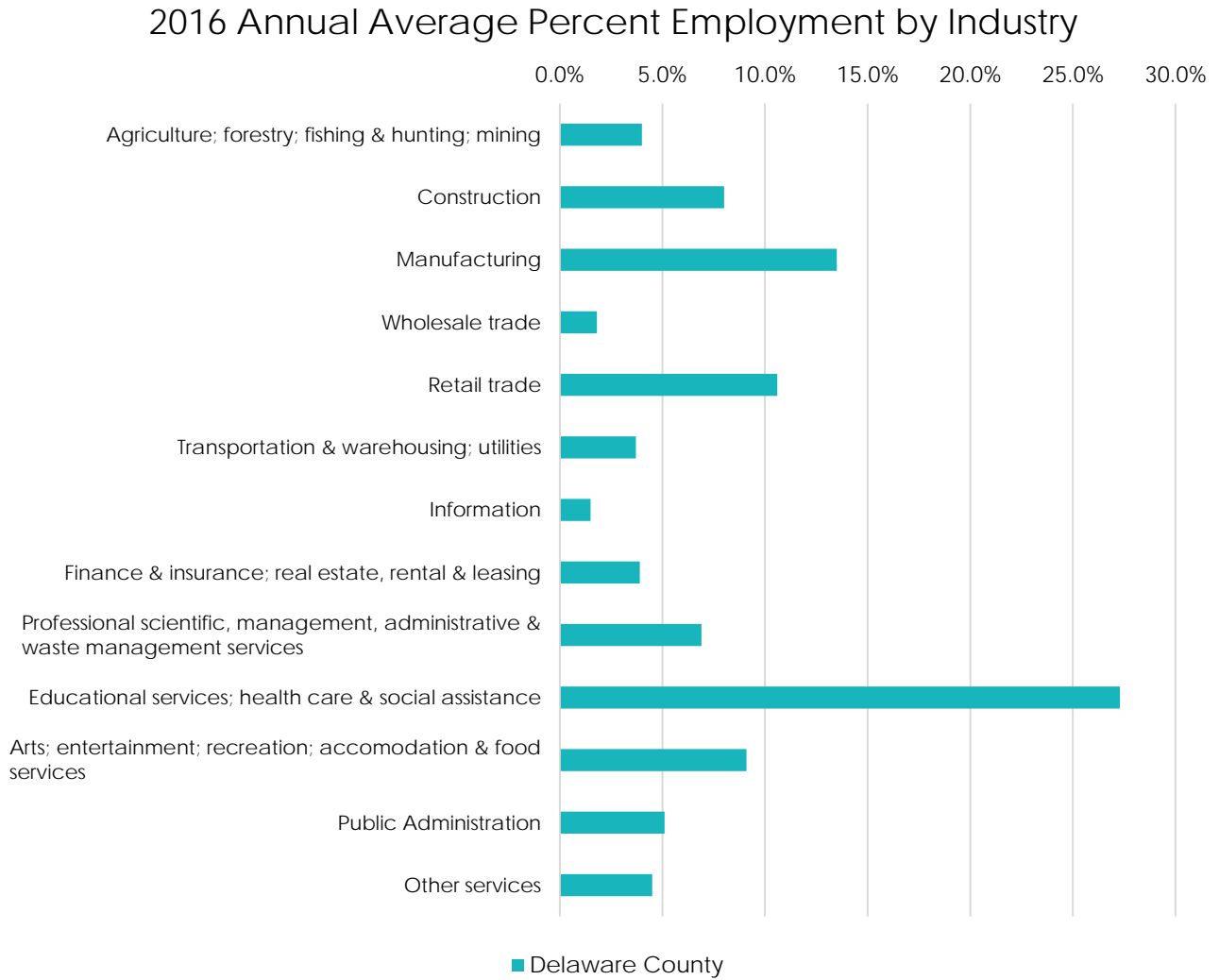
**Table 2-5: 2016 Population by Highest Level of Educational Attainment, Population 25 Years of Age and Older**



Source: U.S. Bureau of Census, 2012-2016 American Community Survey 5-Year Estimates (2016 Estimates)

The majority of the zone of interest is employed in the Educational Services, Health Care and Social Assistance industry at approximately 27 percent, followed by 14 percent in Manufacturing, 11 percent in Retail Trade, 9 percent in Arts, Entertainment and Recreation, and Accommodation and Food Service, 8 percent in Construction, and 5 percent in Public Administration. The remaining industries employed less than 5 percent each of the zone of interest's civilian workforce. Table 2-6 below shows the distribution of employment by industry for the zone of interest.

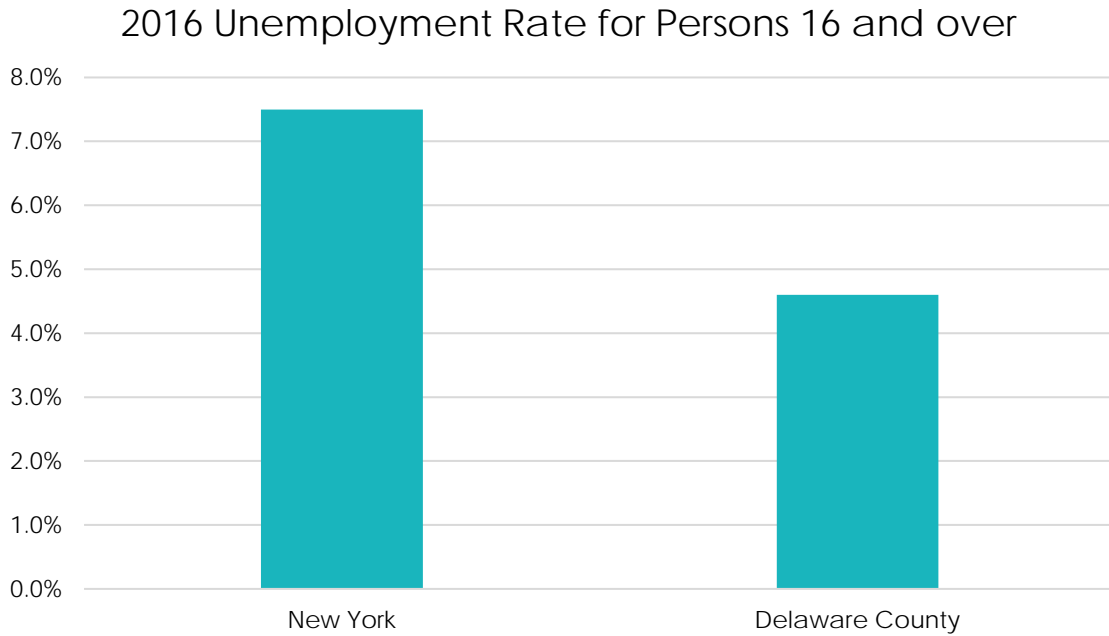
**Table 2-6: 2016 Annual Average Percent Employment by Industry**



Source: U.S. Bureau of Census, 2012-2016 American Community Survey 5-Year Estimates (2016 Estimates)

The unemployment rate for persons age 16 and over, within the zone of interest is approximately 4.6 percent. Table 2-7 shows that Delaware County has a significantly lower unemployment rate than the state of New York for persons age 16 and over (4.6 percent and 7.5 percent respectively).

**Table 2-7: 2016 Unemployment Rate in County and State**



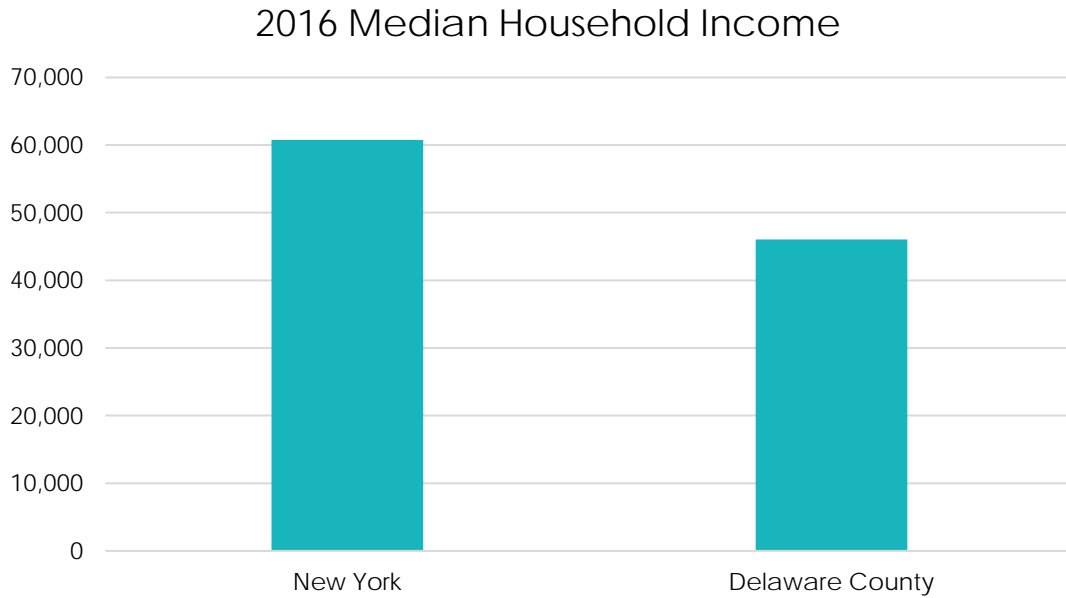
Source: U.S. Bureau of Census, 2012-2016 American Community Survey 5-Year Estimates (2016 Estimates)

#### **2.4.4 Households and Income**

There are approximately 7,266,187 households in New York. Within the zone of interest, there are approximately 18,817 households. The median household income is lower in Delaware County, \$46,055, than in New York, \$60,741. This relationship is also seen for per capita income with Delaware County clocking in at \$24,753. Once again, the state of New York has a much higher per capita income than the county within the zone of interest, clocking in at \$34,212. Tables 2-8 and 2-9 show the respective incomes for Delaware County and the state of New York.

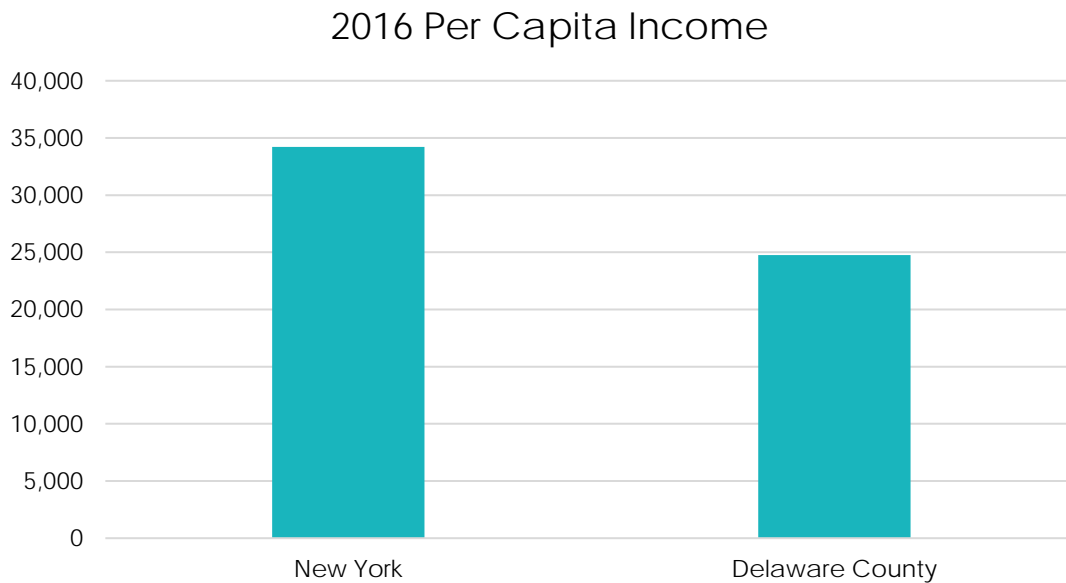


**Table 2-8: 2016 Median Household Income in Delaware County and New York**



Source: U.S. Bureau of Census, 2012-2016 American Community Survey 5-Year Estimates (2016 Estimates)

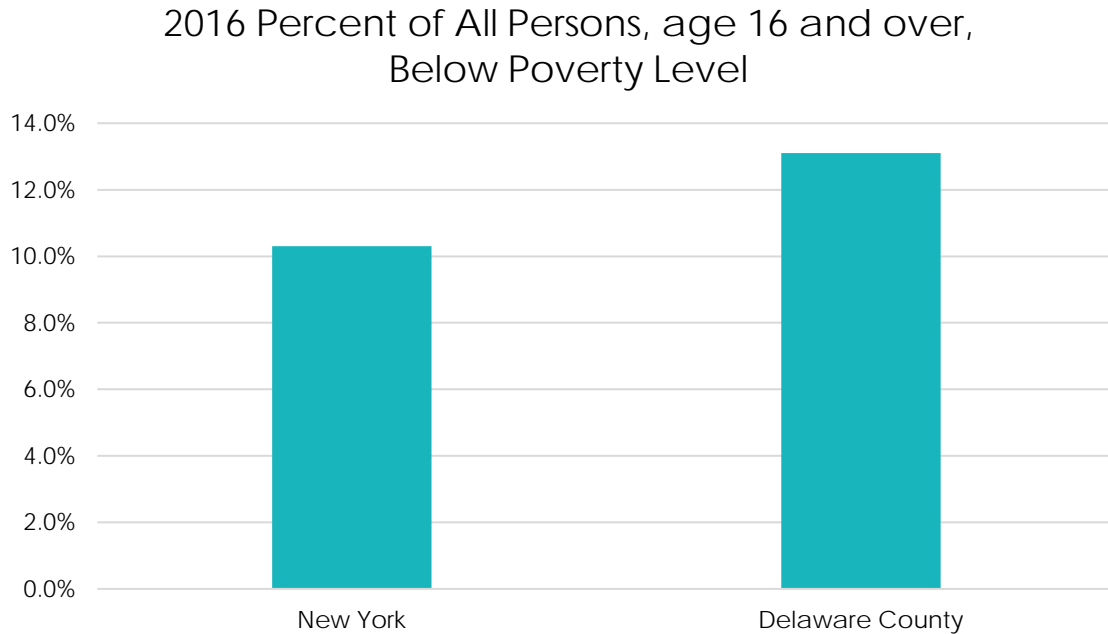
**Table 2-9: 2016 Per Capita Income in Delaware County and New York**



Source: U.S. Bureau of Census, 2012-2016 American Community Survey 5-Year Estimates (2016 Estimates)

The percent of persons, age 16 and over, whose income was below the poverty level is very similar in the State of New York and the county within the zone of interest. Delaware County has the highest percent of persons, age 16 and over, below the poverty level at 13.1 percent. The state of New York has 10.3 percent of its population, age 16 and over, living below the poverty level. Table 2-10 shows the distribution of persons with incomes below the poverty level within the zone of interest's county and the state of New York.

**Table 2-10: 2016 Percent of All Persons Below Poverty Level in Delaware County and New York**



Source: U.S. Bureau of Census, 2012-2016 American Community Survey 5-Year Estimates (2016 Estimates)

## **2.5 RECREATION FACILITIES, ACTIVITIES, AND NEEDS**

### **2.5.1 Zone of Influence**

The primary area of influence for East Sidney Lake encompasses Delaware County in central New York. Data from this county provides the basis for summarizing the population characteristics of East Sidney Lake as shown above and the recreation analysis in the following sub-sections.

### **2.5.2 Visitation Profile**

The majority of visitors to East Sidney Lake are local, coming from Delaware County. These visitors come with a wide variety of interests, with camping and boating being the two most popular recreation activities. Other popular activities include fishing, canoeing/kayaking, picnicking, hunting, and wildlife viewing. East Sidney Lake is the primary location for water-related recreation in the area, providing the public with a location for boating, sailing, canoeing/kayaking, paddle boarding, waterskiing, and swimming in the area. East Sidney Lake has consistently provided high quality fishing opportunities for multiple fish species and is regarded as a premier fishing destination in the region.

Camping is the number one source of visitation and profit for the East Sidney Lake Recreation Area, leased and managed by the Town of Sidney. The average occupancy rate for the electric RV sites is over 95%. The electric campsites are run by individual meters. These meters are a major source of profit, earning \$5,000 in 2017. The total 2018 profits are projected to exceed \$10,000. The pavilion and primitive camping spots are also a source of revenue and visitation, but not nearly as high as the electric RV sites. Other popular attractions within the park include the newly installed RC Derby Track and the Gaga Ball Pit.

### 2.5.3 Recreation Facilities

Although the primary functions of the lake are to provide flood risk management, the project has a secondary mission of supporting recreation opportunities above and below the dam. Recreation facilities with the project area are mostly nature-based, including picnic areas, boat ramps, camp sites, overlook sites, and natural areas. Public lands, like East Sidney Lake, have allowed nature-based recreation to become an important and growing segment of the regional economy. Maintaining and enhancing the recreational opportunities at East Sidney Lake is of great importance within the project's zone of influence.

USACE maintains a recreation pool at 1,150 feet NGVD during the summer season to provide visitors boating, fishing, and swimming opportunities. USACE also maintains all forested lands surrounding the lake, besides the East Sidney Lake Recreation Area. Hunting is permitted throughout these lands as long as state game regulations are followed. Hunters cannot enter private property and must stay out of the recreation area and 500 feet from the dam and office. The USACE property line on the north side of the lake is very close to the shoreline at points. Thus, many hunters choose to park along Triverfield Road, near the dam offices, and hike along the narrow parts of the property to the "hunting hole." Shoreline fishing and kayak access is also permitted, though steep slopes along the banks of the lake are a deterrent. An old access road near the dam embankment is the most popular lake access outside of the recreation area. Visitors can park along Triverfield Road and hike down to the water. Visitors must stay off the embankment and other restricted areas. Fishing is also permitted downstream of the dam but is restricted within the stilling basin. Another downstream recreation activity is kayaking and canoeing. Since 2007, USACE has administered a controlled water release every year for the Memorial Day Weekend Canoe Regatta Event.



Looking towards the lake from the Overlook.

USACE also maintains an overlook facility on the south side (left embankment) of the dam. It has space for 10 to 12 cars and provides visitors with a panoramic view of the lake, the downstream area, and dam operations. Visitors are also able to walk on top of the dam itself. There is a steep slope between the overlook and the lake. This area is mowed and maintained by USACE and is open to the public. Many visitors to the overlook will also use this grassy hill for picnicking or relaxing.



Looking downstream from the Overlook.

The rest of the recreation opportunities and facilities at the lake are operated and maintained by the Town of Sidney. The 40-acre East Sidney Lake Recreation Area is outleased to the Town of Sidney who operates and manages the entire site. The park is only open during the summer recreational season. The 25-year lease was renewed in 2015 which included a recreation development plan. The recreation area provides 86 electric RV sites, 13 primitive camping sites, 20 picnic sites, a boat ramp and dock, a kayak intake area, 3 bathroom facilities, 1 shower facility, a water spicket, a rentable picnic shelter/event space, a dedicated beach area, a RC Derby track, a gaga ball pit, a playground, and a basketball hoop. There are fees to enter the park, use the boat dock, rent the pavilion, and camp on site. Discounted seasonal passes are also offered. The New York Department of Environmental Conservation recently authorized ice fishing at East Sidney Lake. There is the possibility to allow off-season individual gate access to the boat dock and parking within the park. In order for this to occur, a new gate will need to be constructed and the Town of Sidney will need to plow the access road. Currently, ice fishing can be accessed by parking along State Highway 357 and hiking in.



RV Camping Sites overlooking East Sidney Lake and Dam at East Sidney Lake Recreation Area.

#### 2.5.4 Recreation Analysis

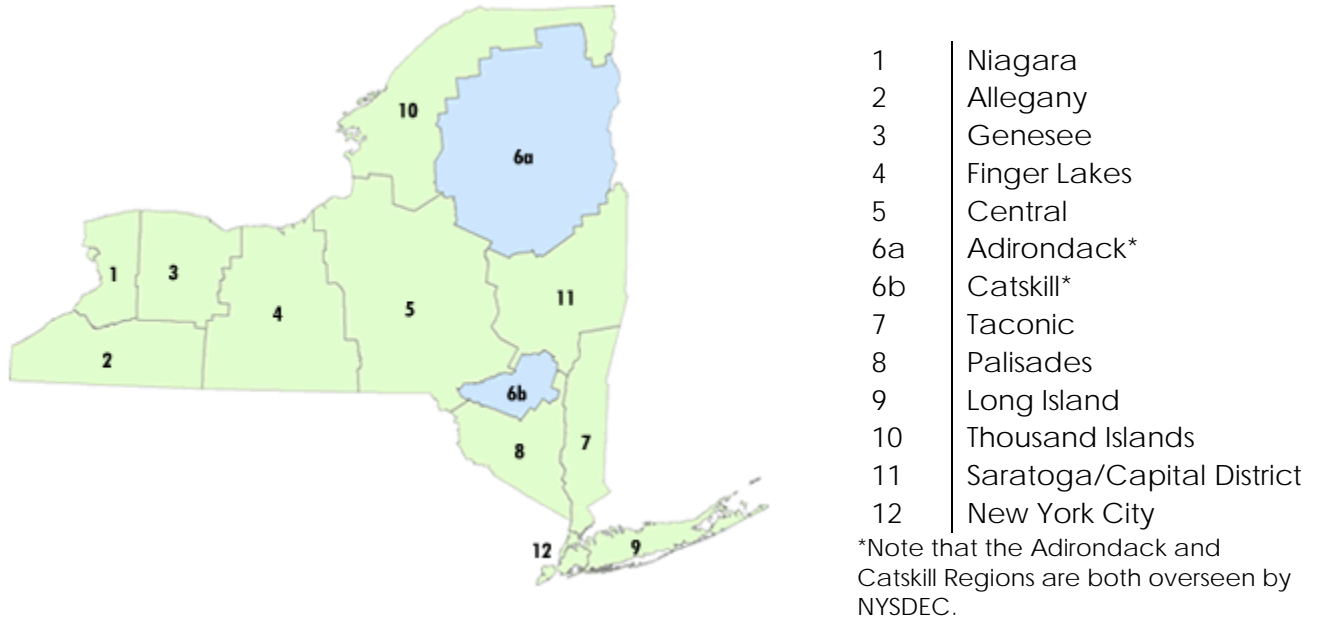
East Sidney Lakes' recreation areas and water add to the attractiveness, vitality, and increased appreciation for the outdoors by users. These areas provide a sense of place and allow nearby urban populations to enjoy outdoor recreation opportunities in a rural, natural setting. Outdoor recreation at East Sidney Lake generally falls within two broad categories; land-based or water-based recreation. The lake provides recreational opportunity for swimming, boating, fishing, and other water sports. The area around the lake provides picnicking and camping for the casual, overnight, or vacationing visitors. Additionally, hunting, wildlife viewing, and bird watching are encouraged throughout the project lands.

Management objectives for each type vary depending on the location and the intensity of use. Recreation management objectives in this Plan project future direction and actions necessary to meet the public's needs for land and/or water-based recreation.

The most recent recreational trends for the State of New York were summarized in the Statewide Comprehensive Outdoor Recreation Plan (SCORP) 2014-2019, produced by the New York State

Office of Parks, Recreation, and Historic Preservation (OPRHP). OPRHP divided the state into thirteen different regions, shown below in Table 2-11, with Whitney Point Lake falling within the Central Region. Although the Whitney Point Lake site does not fall under OPRHP jurisdiction, the SCORP recreational trends and analysis for the state of New York, specifically the Central Region, are a good representation of recreational trends for the site.

**Table 2-11: OPRHP Recreational Regions of New York**



Source: OPRHP.

According to SCORP, in 2012, there were over 15,500 public and private recreation sites within the state of New York. These sites offered a wide range of recreational activities for users. Table 2-12 below breaks down the most popular recreational activities of 2012 by number of participants and the overall percentage of state residents for each activity.

**Table 2-12: 2012 Activity Participation among New York Residents, All Ages**

<b>Activity</b>	<b>Number of Participants</b>	<b>Percent Participating</b>
Walking for Enjoyment – including jogging & day hiking	12,892,228	20.25
Relaxing in the Park – picknicking & visiting nature areas	12,497,573	19.63
Swimming – ocean, lake, & river swimming, & pools	9,463,546	14.87
On and off-road biking – including mountain biking	5,231,355	8.22
Motorboating, Sailing, Canoeing, Kayaking, etc.	4,435,908	6.97
Field Sports – baseball, soccer, football, etc.	3,357,543	5.27
Court Games – tennis, racquetball, basketball, etc.	3,332,135	5.23
Local Winter Activities – ice skating, snowshoeing, etc.	3,067,683	4.82
Camping – tenting, backpacking, & RV usage	2,831,970	4.45
Fishing – all types	2,721,649	4.28
Golfing	1,888,807	2.97
Downhill Skiing or Snowboarding	1,422,305	2.23
Snowmobiling	513,080	0.81

Source: SCORP 2014-2019, produced by the New York State OPRHP. Data from a 2013 outdoor recreation survey asking New York residents about their participation in 2012.

Although New York’s population is projected to increase slightly over the projected period, as seen by Table 2-1 in the previous section, the number of senior citizens is expected to increase substantially. This shift in the overall age of outdoor recreation participants will have a dramatic effect on the quantity and types of outdoor recreation taking place within New York State. An aging population will require greater adherence to the Americans with Disabilities Act (ADA) standards in order to be able to enjoy these facilities and services. Table 2-13 breaks down the most popular activities, with participation rates, among New Yorkers, ages 65 to 85.

**Table 2-13: Most Popular Activities among New York Residents in 2012, Ages 65 to 85**

<b>Activity</b>	<b>Percent Participating</b>
Walking for Enjoyment – including jogging & day hiking	80.6
Relaxing in the Park – picnicking & visiting nature areas	75.4
Swimming – ocean, lake, & river swimming, & pools	52.7
Motorboating, Sailing, Canoeing, Kayaking, etc.	26.1
On and off-road biking – including mountain biking	17.1
Fishing – all types	17.0
Golfing	14.7
Camping – tenting, backpacking, & RV usage	10.2
Court Games – tennis, racquetball, basketball, etc.	8.7
Local Winter Activities – ice skating, snowshoeing, etc.	8.4
Downhill Skiing or Snowboarding	8.4
Field Sports – baseball, soccer, football, etc.	6.2
Snowmobiling	1.3

Source: SCORP 2014-2019, produced by the New York State OPRHP. Data from a 2013 outdoor recreation survey asking New York residents about their participation in 2012.

SCORP broke down recreation need by county through a Relative Index of Needs (RIN) chart, see Table 2-14 below. Recreation need considers the supply of recreation facilities and the level of participation (demand) in estimating how this level of participation will change, both geographically and quantitatively in the future. The RIN translates this need by county into a numerical scale, +10 refers to the highest level of need and +1 refers to the least level of need, where +5 refers to the statewide average. The RIN was calculated by estimating what percentage of the population engages in the activities being evaluated and how many days per year they participate. It also takes into account the fact that people travel for recreation by using available information on the location of parks and other recreation facilities. The RIN is a valuable tool to determine need for facilities at geographic areas over the next twenty years, but other factors can and should be considered for any final decisions. In Delaware County, most of the recreation needs fall around the statewide average, with slightly higher needs for park (+6), camp (+6), fish (+6), and snowmobiling (+6) opportunities. These higher needs represent both the popularity of these outdoor recreation activities within each county as well as the need for more facilities/amenities to fulfill these demands.

**Table 2-14: SCORP Relative Index of Needs for Zone of Interest**

	Park	Swim	Bike	Court	Field	Walk	Camp	Fish	Boat	LocW	SnM
Delaware County	6	5	5	5	4	3	6	6	5	4	6

Source: SCORP 2014-2019, produced by the New York State OPRHP.

**Park** – Relaxing in the park, picnicking, playground use, and other generic day use.

**Swim** – Outdoor swimming, either pool, lake, ocean, river, or other.

**Bike** – Non-motorized use of bicycles whether on trails, established paths, off-road or on highways for recreational purposes.

**Court**– Court Games includes basketball, handball, and other similar sports.

**Field** – Field Games includes baseball, football, soccer, and other similar sports.

**Walk** – Walking/Jogging on paths and trails. Walking for pleasure, generally requiring less equipment than hiking.

**Camp** – Camping including tent, RV camping, and backpacking.

**Fish** – Fishing, Salt and Fresh Water fishing from either shore or a boat, but not ice fishing.

**Boat** – Boating including canoeing, sailing, motorboating, kayaking, and row boating.

**LocW** – Miscellaneous local winter activities including ice skating, ice fishing, sledding, and hockey.

**SnM**– Snowmobiling.

The Outdoor Industry Association also reported that in 2017, 52% of New York residents participated in some form of outdoor recreation, with New York residents being more likely to participate in snowmobiling than the average American. Communities across the state continue to recognize that outdoor recreation supports health, increases quality of life, and attracts and sustains employers and families. In New York alone, outdoor recreation generated \$41.8 billion in consumer spending annually, 313,000 direct jobs, \$14.0 billion in wages and salary, and \$3.6 billion in state and local tax revenue. Consumer spending on snow sports and wildlife watching alone totaled \$6.7 billion.

### 2.5.5 Recreation Carrying Capacity

Recreational carrying capacity is considered by USACE to ensure that visitors have a high quality and safe recreational experience, and that natural resources are not compromised at East Sidney Lake.

The plan formulated herein proposes to provide a variety of activities and to encourage optimal use of present public use areas, where possible, based on the carrying capability of the land. The



carrying capability of the land is determined primarily by the distinct characteristics of the site. These characteristics, both natural and manmade, are development constraints that often determine the type of facilities that should be provided.

Having facilities that cater to a variety of tastes and different members of the family will encourage visitors to enjoy the lake. Presently, USACE and the Town of Sidney manage recreation areas using historic visitation data combined with best professional judgment to address recreation areas considered to be overcrowded, overused, underused, or well balanced. The partnership will continue to identify possible causes and effects of overcrowding and overuse and apply appropriate best management practices including: site management, regulating visitor behavior, and modifying visitor behavior.

## **2.6 REAL ESTATE**

Originally, fee acquisition for East Sidney Lake was limited to lands necessary for the construction and maintenance of the dam and the permanent pool. In 1947, 490 acres were acquired in fee. Between this time and 1961, when the original master plan was written, 88 acres were declared excess and sold to other interests. When the original master plan was written, project lands totaled 1,265 acres, 402 acres of which were acquired in fee and 863 of which were under flowage easements. Today, project lands occupy approximately 1,267 acres of land with 590 fee simple acres and 677 flowage easement acres.

Since completion of the dam in June 1950, project lands continue to be outleased for agriculture, grazing, and recreation purposes. Since adding recreation as an additional authorized purpose, recreational outleases have also been supported. There are currently 11 outleases located within project lands; one to the Town of Sidney for the East Sidney Recreation Area and 10 for private agricultural uses.

## **2.7 PERTINENT PUBLIC LAWS**

The following public laws are applicable to East Sidney Lake.

### Federal Law

*Public Law 59-209, Antiquities Act, 1906.* The first Federal law established to protect what are now known as "cultural resources" on public lands. It provides a permit procedure for investigating "antiquities" and consists of two parts: An act for the Preservation of American Antiquities and Uniform Rules and Regulations.

*Public Law 74-292, Historic Sites Act, 1935.* Declares it to be a national policy to preserve for (in contrast to protecting from) the public, historic (including prehistoric) sites, buildings, and objects of national significance. This act provides both authorization and a directive for the Secretary of the Interior, through the National Park Service, to assume a position of national leadership in the area of protecting, recovering, and interpreting national archeological historic resources. It also establishes an "Advisory Board on National Parks; Historic Sites, Buildings, and Monuments, a committee of eleven experts appointed by the Secretary to recommend policies to the Department of the Interior".

*Public Law 78-534, Flood Control Act, 1944.* Section 4 of the act as last amended in 1962 by Section 207 of Public Law 87-874 authorizes the Corps to construct, maintain, and operate

public parks and recreational facilities in reservoir areas and to grant leases and licenses for lands, including facilities, preferably to Federal, State or local governmental agencies.

*Public Law 85-624, Fish and Wildlife Coordination Act, 1958.* This act as amended in 1965 sets down the general policy that fish and wildlife conservation shall receive equal consideration with other project purposes and be coordinated with other features of water resource development programs. Opportunities for improving fish and wildlife resources and adverse effects on these resources shall be examined along with other purposes which might be served by water resources development.

*Public Law 86-717, Forest Conservation, 1960.* This act provides for the protection of forest and other vegetative cover for reservoir areas under this jurisdiction of the Secretary of the Army and the Chief of Engineers.

*Public Law 87-874, Rivers and Harbors Act, 1962.* This act authorizes the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes.

*Public Law 88-578, Land and Water Conservation Fund Act, 1965.* This act established a fund from which Congress can make appropriations for outdoor recreation. Section 2(2) makes entrance and user fees at reservoirs possible by deleting the words "without charge" from Section 4 of the 1944 Flood Control Act as amended.

*Public Law 89-90, Water Resources Planning Act, 1965.* This act established the Water Resources Council and gives it the responsibility to encourage the development, conservation, and use of the Nation's water and related land resources on a coordinated and comprehensive basis.

*Public Law 90-483, River and Harbor and Flood Control Act, Mitigation of Shore Damages, 1968.* Section 210 restricted collection of entrance fee at Corps lakes and reservoirs to users of highly developed facilities requiring continuous presence of personnel.

*Public Law 91-190, National Environmental Policy Act (NEPA), 1969.* NEPA declared it a national policy to encourage productive and enjoyable harmony between man and his environment, and for other purposes. Specifically, it declared a "continuing policy of the Federal Government... to use all practicable means and measures...to foster and promote the general welfare, to create conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans." Section 102 authorized and directed that, to the fullest extent possible, the policies, regulations and public law of the United States shall be interpreted and administered in accordance with the policies of the Act.

*Public Law 91-611, River and Harbor and Flood Control Act, 1970.* Section 234 provides that persons designated by the Chief of Engineers shall have authority to issue a citation for violations of regulations and rules of the Secretary of the Army, published in the Code of Federal Regulations.

*Public Law 92-500, Federal Water Pollution Control Act Amendments, 1972.* The Federal Water Pollution Control Act of 1948 (PL 845, 80th Congress), as amended in 1956, 1961, 1965 and 1970 (PL 91- 224), established the basic tenet of uniform State standards for water quality. Public Law 92-500 strongly affirms the Federal interest in this area. "The objective of this act is to restore and maintain the chemical, physical and biological integrity of the Nation's waters."

*Public Law 92-516, Federal Environmental Pesticide Control Act, 1972.* This act completely revises the Federal Insecticide, Fungicide and Rodenticide Act. It provides for complete regulation of pesticides to include regulation, restrictions on use, actions within a single State, and strengthened enforcement.

*Public Law 93-81, Collection of Fees for Use of Certain Outdoor Recreation Facilities, 1978.* This act amends Section 4 of the Land and Water Conservation Act of 1965, as amended to require each Federal agency to collect special recreation use fees for the use of sites, facilities, equipment, or services furnished at Federal expense.

*Public Law 93-291, Archeological Conservation Act, 1974.* The Secretary of the Interior shall coordinate all Federal survey and recovery activities authorized under this expansion of the 1960 act. The Federal construction agency may transfer up to one percent of project funds to the Secretary with such transferred funds considered non-reimbursable project costs.

*Public Law 93-303, Recreation Use Fees, 1974.* This act amends Section 4 of the Land and Water Conservation Act of 1965, as amended, to establish less restricted criteria under which Federal agencies may charge fees for the use of campgrounds developed and operated at Federal areas under their control.

*Public Law 93-523, Safe Drinking Water Act, 1974.* The act assures that water supply systems serving the public meet minimum national standards for protection of public health. The act (1) authorizes the Environmental Protection Agency to establish Federal standards for protection from all harmful contaminants, which standards would be applicable to all public water systems, and (2) establishes a joint Federal-State system for assuring compliance with these standards and for protecting underground sources of drinking water.

*Public Law 94-422, Amendment of the Land and Water Conservation Fund Act, 1965.* Expands the role of the Advisory Council. Title 2 - Section 102a amends Section 106 of the Historical Preservation Act of 1966 to say that the Council can comment on activities which will have an adverse effect on sites either included in or eligible for inclusion in the NRHP.

*Public Law 99-662, The Water Resources Development Act, 1986.* Provides the conservation and development of water and related resources and the improvement and rehabilitation of the Nation's water resources infrastructure.

### State Law

*State of New York, Agricultural Environmental Management (AEM) Plan.* This article supports a program that assists farmers in managing their farm operations in a way that protects the environment and helps maintain the economic viability of the farm.

*State of New York, Environmental Conservation Law (ECL).* This law established the New York State Department of Environmental Conservation (NYDEC) and authorizes all of its programs.

*State of New York, ECL, Article 3, State Energy Policy.* This article encourages the conservation of energy by setting performance metrics and using renewable energy sources.

*State of New York, ECL, Article 6, State Smart Growth Public Infrastructure Policy Act.* This article supports maximizing the social, economic, and environmental benefits from public infrastructure development through minimizing unnecessary costs of sprawl development.

*State of New York, ECL, Articles 11 & 13, Fish and Wildlife Law.* This act prohibits the taking, wounding, killing, selling, or buying of any protected fish or other wildlife species.

*State of New York, ECL, Article 16, Flood Control.* This article declares that the state participates in the federal flood control program.

*State of New York, ECL, Article 17, Water Pollution Control Act.* This article safeguards the waters of the state from pollution by preventing any new pollution and abating pre-existing pollution.

*State of New York, ECL, Article 49, Protection of Natural and Man-made Beauty.* This article gives NYSDEC the power to develop, assist, and encourage policies and programs that preserve and enhance the natural and man-made beauty of the state.

# 3 RESOURCE OBJECTIVES

## 3.1 INTRODUCTION

This chapter sets forth goals and objectives necessary to achieve the USACE vision for the future of East Sidney Lake. The terms “goals” and “objectives” are often defined as synonymous, but in the context of this Plan, goals express the overall desired end state of the cumulative land and recreation management programs at East Sidney Lake. Resource objectives specify task-oriented actions necessary to achieve the master plan goals.

## 3.2 MANAGEMENT GOALS

The following goals are the priorities for consideration when determining management objectives and development activities. Implementation of these goals is based upon time, manpower, and budget. The objectives provided in this chapter are established to provide high levels of stewardship to USACE managed lands and resources while still providing a high level of public service. These goals will be pursued using a variety of mechanisms such as: assistance from volunteer efforts, hired labor, contract labor, permit conditions, remediation, and special lease conditions. It is the intention of East Sidney Lake staff to provide a realistic approach to the management of all resources.

- **Goal A** Provide the best management practices to respond to regional needs, resource capabilities and capacities, and expressed public interests consistent with authorized project purposes.
- **Goal B** Protect and manage project natural and cultural resources through sustainable environmental stewardship programs.
- **Goal C** Provide public outdoor recreation opportunities that support project purposes and public interests while sustaining project natural resources.
- **Goal D** Recognize the unique qualities, characteristics, and potentials of the project.
- **Goal E** Provide consistency and compatibility with national objectives and other state and regional goals and programs.

In addition to the above goals, USACE management activities are guided by USACE-wide Environmental Operating Principles (EOPs) as follows:

- Strive to achieve environmental sustainability. An environment maintained in a healthy, diverse and sustainable condition is necessary to support life.
- Recognize the interdependence of life and the physical environment. Proactively consider environmental consequences of USACE programs and act accordingly in all appropriate circumstances.
- Seek balance and synergy among human development activities and natural systems by designing economic and environmental solutions that support and reinforce one another.
- Continue to accept corporate responsibility and accountability under the law for activities and decisions under our control that impact human health and welfare and the continued viability of natural systems.
- Seek ways and means to assess and mitigate cumulative impacts to the environment; bring systems approaches to the full life cycle of our processes and work.
- Build and share an integrated scientific, economic and social knowledge base that supports a greater understanding of the environment and impacts of our work.
- Respect the views of individuals and groups interested in USACE activities; listen to them actively and learn from their perspective in the search to find innovative win-win solutions to the nation's problems that also protect and enhance the environment.

### 3.3 RESOURCE OBJECTIVES

Resource objectives are defined as clearly written statements that respond to identified issues and that specify measurable and attainable activities for resource development and/or management of the lands and waters under USACE jurisdiction. The objectives stated in this Master Plan support the Plan's goals, USACE EOPs, and applicable national performance measures. They are consistent with authorized project purposes, Federal laws and directives, regional needs, resource capabilities, and they take public input into consideration.

The objectives in this master plan are intended to provide project benefits, meet public needs, and foster environmental sustainability for East Sidney Lake to the greatest extent possible.

**OBJECTIVE 1.** Improve infrastructure and utilities.

Supporting Objectives:

- Improve reliability of electrical infrastructure
- Improve reliability of communications infrastructure
- Address key safety concerns

**OBJECTIVE 2.** Enhance existing recreation sites and amenities.

Supporting Objectives:

- Support any additions, enhancements, or improvements within the East Sidney Lake Recreation Area and the Overlook Area.
- Support enhancements for hunting and shoreline fishing activities.

**OBJECTIVE 3.** Expand recreational opportunities in key areas.

Supporting Objectives:

- Provide off season access for ice fishing

# 4 Land Details

## 4.1 LAND ALLOCATION

All project lands at USACE water resource development projects are allocated by USACE into one of four categories in accordance with the congressionally authorized purpose for which the project lands were acquired. There are four possible categories of allocation identified in USACE regulations including Operations, Recreation, Fish and Wildlife, and Mitigation. When East Sidney Lake was established, the only land allocation category that applied to the project was Operations, which includes lands required to operate the dam and accomplish the primary authorized purposes of the project.

## 4.2 LAND CLASSIFICATION

The objective of classifying project lands is to identify how a given parcel of land shall be used now and in the foreseeable future. Land classification is a central component of this plan, and once a particular classification is established any significant change to that classification would require a formal process including public review and comment. Ongoing and planned management practices for each classification are set forth in Chapter 5 – Resource Plan.

### 4.2.1 Prior Land Classifications

Land classification was completed when the project was originally constructed. The classification process refines the land allocations to fully utilize project lands and must consider public desires, legislative authority, regional and project specific resource requirements, and suitability.

The 1961 Master Plan for East Sidney Lake did not include a formal land classification summary. In the 57 years since the previous Master Plan was published, surrounding land use, recreational opportunities, and regional recreation trends have experienced changes, thus classification revisions are necessary. A summary of prior land use classifications and newly proposed land uses is provided in Table 4-1.

**Table 4-1 Land Classification Summary**

<b>Prior (1961) Land Classifications</b>	<b>Acres</b>	<b>New Land Classifications</b>	<b>Acres</b>
Project Operations	TBD	Project Operations	14
Recreation	TBD	High-Density Recreation	50
Multiple Resource Management	TBD	Multiple Resource Management	993
Low Density Recreation	TBD	Low Density Recreation	1
Wildlife Management	TBD	Vegetative Management	992
		Water Surface	210
		Restricted	3
		No Wake	4
		Open Recreation	203
<b>Total</b>	<b>1,265</b>	<b>Total</b>	<b>1,267</b>

*\*Note: Awaiting real estate information to populate land-ownership data.*

#### **4.2.2 Current Land Classifications**

Land Classification indicates the primary use for which project lands are managed. There are 4 categories of classification identified in USACE regulation EP 1130-2-550, Chapter 3, including: Project Operations, High Density Recreation, Multiple Resource Management Lands, and Water Surface. Figure 4-1 on page 4-3 shows the break down of land classifications at Jennings Randolph Lake. Figure 4-2 on page 4-4 shows the three categories of land ownership for the project: in fee, under flowage easement, or outleased. Note that, some of the outleases are not portrayed on this map. Awaiting real estate information to accurately represent them.

##### **4.2.2.1 Project Operations**

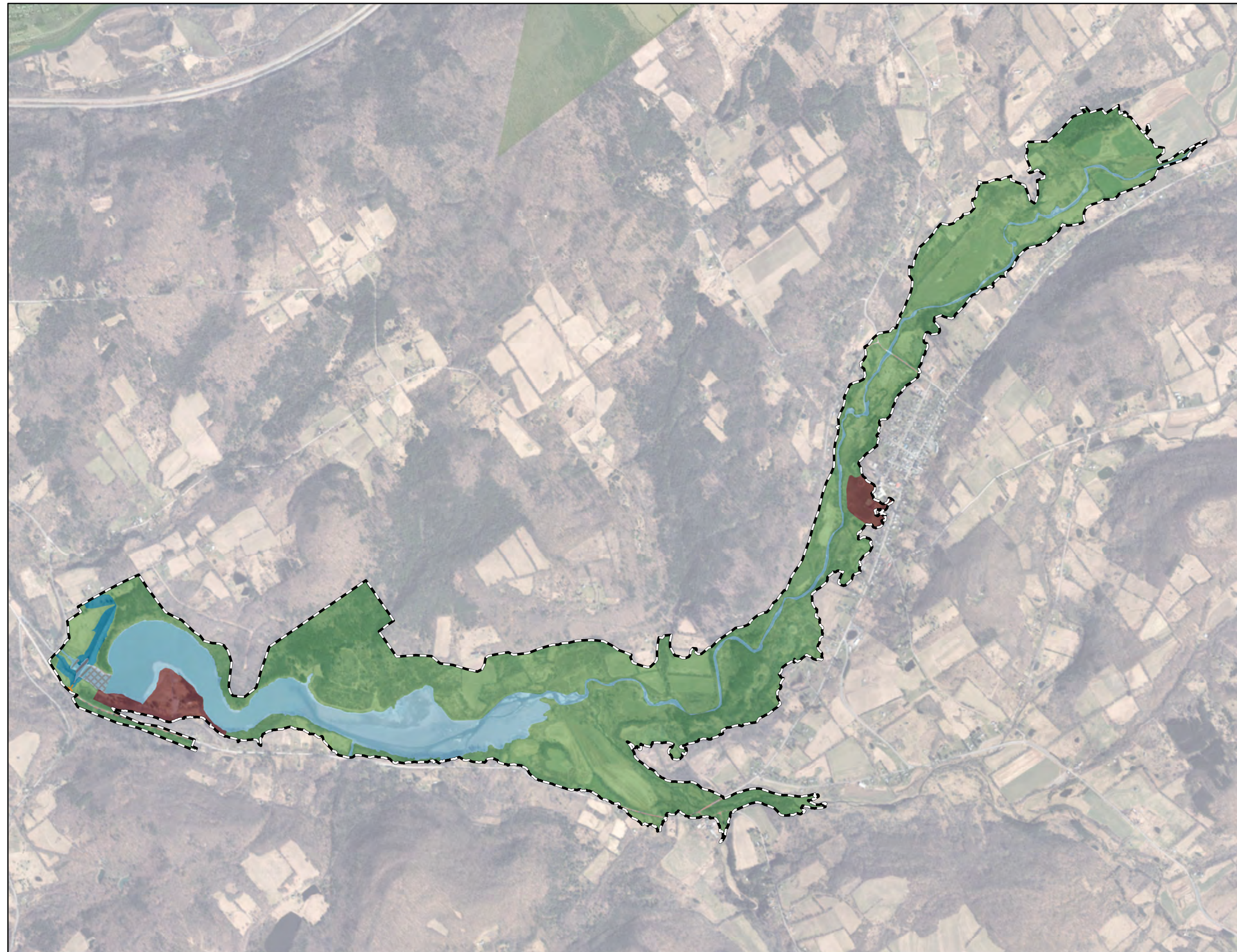
This classification category includes all project land required for the structure, operation, administration, or maintenance of the project and which must be maintained to carry out the authorized purpose of flood risk management. Approximately 14 acres at East Sidney Lake are allocated to project operations, including the dam, control tower, maintenance facility, spillway, restricted access roads, and dam operator offices.

##### **4.2.2.2 High Density Recreation**

These are lands developed for intensive recreational activities for the visiting public. The 40-acre East Sidney Recreation Area, outleased to the Town of Sidney, includes all of the high-density public recreation opportunities on project lands. The Franklin School District have recreation fields within flowage easements in the upper reaches of project lands. These fields are for private use only and total about 10 acres. There are approximately 50 acres of land classified as High Density Recreation.












Figure 4-1



# East Sidney Lake Master Plan

## Land Classification

### Legend

-  ESL Boundary
- Land Classification**
-  High Density Recreation
-  MRML - Low Density Recreation
-  MRML - Vegetative Management
-  Owned by Other Entities
-  Project Operations
-  Water Surface - No Wake
-  Water Surface - Open Recreation
-  Water Surface - Restricted

*Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community*

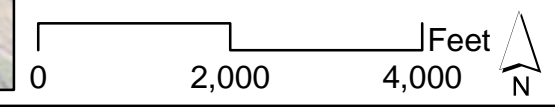
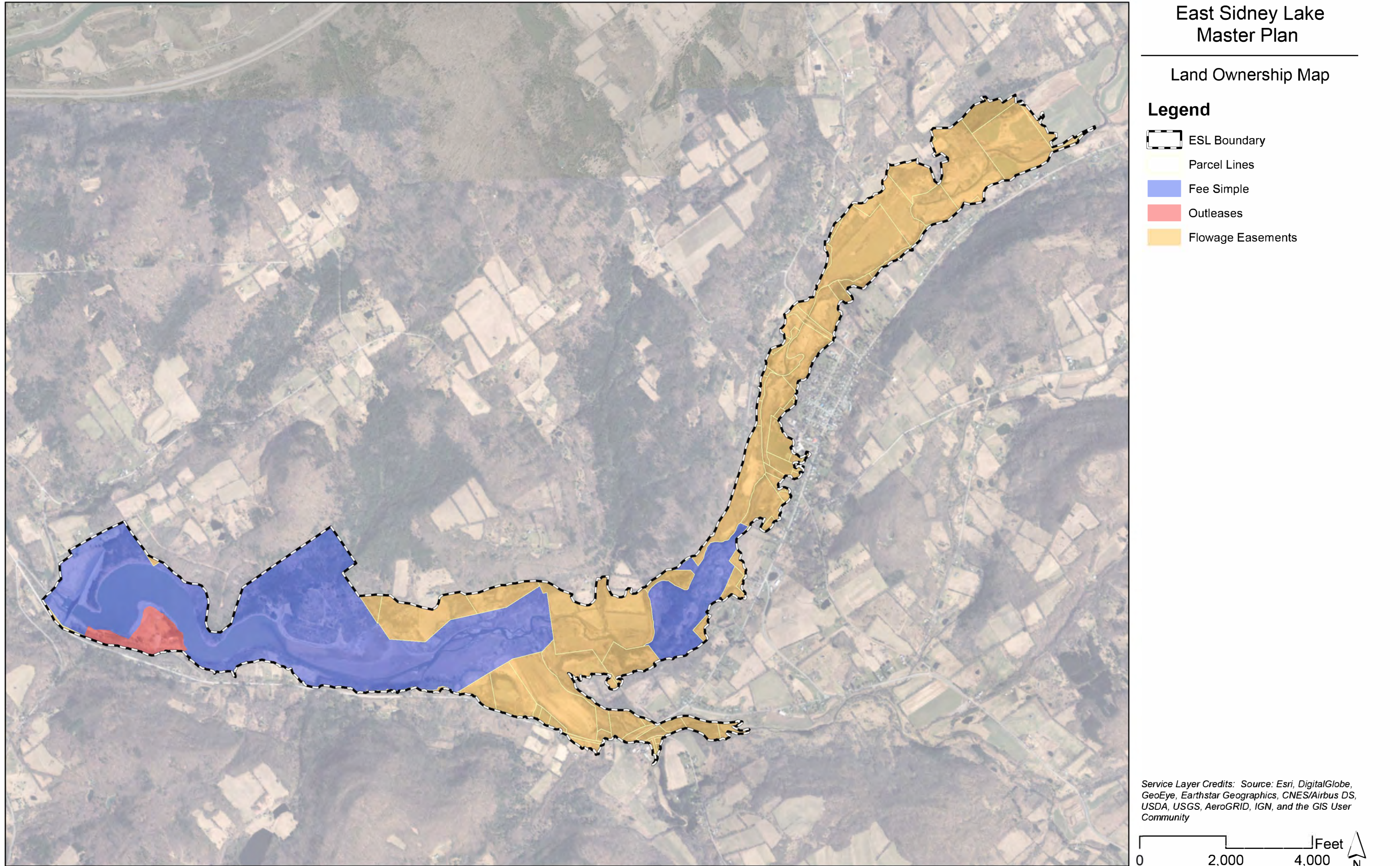


Figure 4-2



#### **4.2.2.3 Multiple Resource Management**

This classification category identifies the predominant use of an area with the understanding that the other compatible uses can occur within the area. This classification is divided into two sub-classifications identified as: Low Density Recreation and Vegetative Management. A given tract of land may be classified using one or more of these sub-classifications. There are 993 acres of land that are under this classification. The following identifies the amount contained in each sub-classification of Multiple Resource Management Lands.

##### Low Density Recreation

These are lands with minimal development or infrastructure that support passive public recreation use, like fishing, hunting, wildlife viewing, or hiking. The overlook is the only designated low density recreation area on project lands. It includes informational signage, a walking path on top of the dam, and approximately 12 parking spots. There is less than 1 acre within project lands that falls under this classification.

##### Vegetative Management

These are lands designated for stewardship of forest, prairie, and other native vegetative cover. The primary objective for these lands is to manage the forest to ensure a healthy, diverse, and visual aesthetic continuous forest canopy throughout the East Sidney Lake property. The provision and protection of wildlife habitat and the availability of these lands for passive recreation activities are also important objectives. There are 992 acres under Multiple Resource Management Lands - Vegetative Management.

#### **4.2.2.4 Water Surface**

In accordance with national USACE guidance set forth in EP 1130-2-550, the water surface of the lake at the conservation pool elevation may be classified using the following 3 classifications: Restricted, No-Wake and Open Recreation.

At the recreation pool elevation of 1,150 feet NGVD, East Sidney Lake has a water surface of 210 acres. The following water surface classifications are designated at East Sidney Lake.

##### Restricted

Restricted water surface includes those areas where recreational boating is prohibited or restricted for project operations, safety and security purposes. The Restricted water surface at East Sidney Lake include a small area around the dam and intake tower as well as the area within the stilling basin. The total acreage of Restricted water surface is approximately 3 acres.

##### No Wake

No wake water surface includes those areas which are intended to protect environmentally sensitive shorelines and improve overall boating safety. The No Wake water surface at East Sidney Lake includes the area in front of the dam and the area around the designated beach area. The total acreage of No Wake water surface is approximately 4 acres. These areas are typically marked with standard USCG regulatory buoys.

##### Open Recreation

Open Recreation includes all water surface areas available for year-round or seasonal water-based recreational use. With the exception of the Restricted and No Wake areas described in the above paragraphs, the remaining water surface of approximately 203 acres at East Sidney Lake is designated as Open Recreation.

#### **4.3 PROJECT EASEMENT LANDS**

Easement lands include all lands for which USACE holds an easement interest but not fee title. This could describe a situation in which USACE agreed to easement rights on fee title property, or pursued easement rights on land outside the original fee simple purchase. Public roads and private rail lines within the project property total approximately 6 acres. The Town of Sidney leases approximately 40 acres of land for the East Sidney Recreation Area and the proposed primitive camping site. There are also 10 private agricultural outleases scattered throughout project lands. Additionally, USACE has the right to flood 677 acres of lands that are within flowage easements at East Sidney Lake.

# 5 Resource Plan

## 5.1 RESOURCE PLAN OVERVIEW

This chapter sets forth a resource plan describing, in broad terms, how each land classification within the Master Plan will be managed. All management goals described in Section 3.2 apply to each land classification but the primary goal(s) for each classification is listed below for emphasis. Refer to Section 3.2 for a listing of management objectives applicable to each management goal.

Management of all lands, recreation facilities and related infrastructure must take into consideration the effects of pool fluctuations associated with the authorized flood risk management mission. Management actions are dependent on congressional appropriations, the financial capability of lessees and other key stakeholders, and the contributions of labor and other resources by volunteers. The land classifications and applicable management goals for each classification for East Sidney Lake include the following:

- Project Operations: Goal A, D
- High Density Recreation: Goal A, B, C
- Multiple Resource Management Lands for:
  - Low Density Recreation: Goal B, C
  - Vegetative Management: Goal B
- Water Surface:
  - No Wake: B, C
  - Restricted Area: A, D
  - Open Recreation: B, C

A more descriptive and detailed plan for managing project lands can be found in East Sidney Lake – Operations Management Plan (OMP) which is an annually-updated, task and budget-oriented plan identifying tasks necessary to implement the Resource Plan and achieve the goals and objectives of the Master Plan.

## **5.2 PROJECT OPERATIONS**

This land is associated with the dam and spillway structures that are operated and maintained for the purpose of fulfilling the flood risk management mission of East Sidney Lake. There are 14 acres of lands under this classification all of which are managed by USACE.

## **5.3 HIGH DENSITY RECREATION**

Lands classified for High Density Recreation are currently developed for intensive recreational activities. East Sidney Lake has only 1 distinct area included in this classification. Depending on available space, funding, and public demand, lands classified for High Density Recreation may support additional outdoor recreation development in the future. These areas include boat launches, day use areas, and campgrounds. These areas have been developed to support concentrated visitation and use of the recreational facilities they host.

The only high-density public recreation area within project lands, East Sidney Recreation Area, is not managed by USACE. The 40-acre park is leased to the Town of Sidney who maintains, manages, and programs the activities and amenities within the park. USACE does not provide direct maintenance within this area, but does review requests and ensure compliance with applicable laws and regulations for proposed activities. USACE works with the Town of Sidney to ensure that the recreation area is managed and operated in accordance with the goals and objectives prescribed in Chapter 3. A description of the park is provided as follows.

### East Sidney Recreation Area

The recreation area is located on the west side of the lake off of state highway 357. The 40-acre park is managed by the Town of Sidney and offers recreational amenities during the summer season. The area includes electric RV camping sites, primitive camping sites, 3 restrooms, 1 shower facility, potable 1 water spicket, a boat launch, a kayak intake area, a designated beach area, 20 picnic sites, 1 large picnic shelter, a Gaga ball pit, a RC Derby track, a playground, and a basketball court. Future projects and improvements are stated within the Town of Sidney's 2015 East Sidney Lake Development Plan.

The Franklin School District also developed recreation fields in the flowage easements within project lands. These fields are for private use only and total approximately 10 acres.

Figure 5-1 on page 5-5 calls out all existing recreational interests, including the high-density recreation amenities stated above and the low density recreation amenities discussed in the next section. Figure 5-2 on page 5-6 is a zoomed-in graphic of the recreation assets located within East Sidney Recreation Area.

## **5.4 MULTIPLE RESOURCE MANAGEMENT LANDS**

Multiple Resource Management Lands are, as the name implies, lands that serve multiple purposes, but that are sub-classified and managed for a predominant use. The following paragraphs describe the various sub-classifications of Multiple Resource Management Lands at

East Sidney Lake, the number of acres in each sub-classification, and the management plan for these lands.

### Low Density Recreation

Future management of these lands calls for maintaining a healthy, ecologically adapted vegetative cover to reduce erosion and improve aesthetics while also supporting low impact recreational opportunities. The general public may use these lands for bank fishing, hiking, wildlife viewing, and for access to the shoreline. Hunting is allowed in select areas that are a reasonable and safe distance from high density recreational areas, dam operations, and adjacent residential properties. The only designated low density recreation area currently at East Sidney Lake is the USACE managed overlook area on the left bank of the dam. It includes informational signage, a walking path on top of the dam, and approximately 12 parking spots. There is currently less than 1 acre of MRML – Low Density Recreation at East Sidney Lake.

### Vegetative Management

In general, vegetative resources on USACE lands are managed for multiple purposes including wildlife habitat, recreational activities in parks, landscape aesthetics, and timber. Management of forest on USACE lands nationwide is guided, in part, by policy set forth in Public Law 86-717, the Forest Cover Act, which states that "...project lands shall be developed and maintained to assure a future supply of timber through sustained yield programs to the extent that such management is practicable and compatible with other uses of the project." Additional forest management guidance is set forth in USACE regulations ER & EP 1130-2-540, which specifies that stewardship of project land shall be ecosystem based.

Current recreational use of these lands includes, but is not limited to hunting, bank fishing, wildlife viewing, and hiking. Future uses include all existing uses with the possibility of enhancing these uses with amenities like signage or new primitive access trails. There are 992 acres of Multiple Resource Management Land – Vegetative Management at East Sidney Lake.

## **5.5 WATER SURFACE**

In accordance with national USACE policy set forth in EP 1130-2-550, the water surface of the lake at the conservation pool elevation may be classified using the following 3 classifications:

- Restricted
- No Wake
- Open Recreation

At the recreation pool elevation of 1,150 feet NGVD, Whitney Point Lake has a water surface area of 210 acres. The following water surface classifications are designated at East Sidney Lake:

### Restricted

Restricted water surface includes those areas where recreational boating is prohibited or restricted for project operations, safety and security purposes. The Restricted water surface at East Sidney Lake includes a small area around the dam and intake tower and in the area within the stilling basin. The total acreage of Restricted water surface is approximately 3 acres.

### No Wake

No wake water surface includes those areas which are intended to protect environmentally sensitive shorelines and improve overall boating safety. The No Wake water surface at East Sidney Lake includes the area in front of the dam and the area around the designated beach area. The total acreage of No Wake water surface is approximately 4 acres. These areas are typically marked with standard USCG regulatory buoys.

### Open Recreation

Open Recreation includes all water surface areas available for year-round or seasonal water-based recreational use. With the exception of the Restricted and No Wake areas described in the above paragraphs, the remaining water surface of approximately 203 acres at East Sidney Lake is designated as Open Recreation.

## **5.6 PROJECT EASEMENT LANDS**

Future management of the approximate 677 acres of easement Lands at East Sidney Lake includes routine inspection of these areas to ensure that the Government's rights specified in the easement deeds are protected. Placement of any structure that may interfere with USACE flood risk management mission may be prohibited.

## **5.7 DEVELOPMENT COURSE OF ACTION**

After the planning team met with East Sidney Lake staff as well as USACE, NYSDEC, and Town of Sidney Parks and Recreation Department representatives during a site visit conducted 16-17 October 2018, there were no future development actions for the project lands. Any proposed future development courses of action will remain in the outleased portions of the property. Low density recreation opportunities, like hunting and shoreline fishing, will continue to be pursued on project lands as well. A majority of the lands will remain classified as Multiple Resource Management Lands – Vegetative Management and any enhancements will be minimal.














Figure 5-1



# East Sidney Lake Master Plan

## Recreation Assets

### Legend

-  ESL Boundary
- Recreation Assets**
-  Beach
-  Boat Launch
-  Overlook
-  Parking
-  Picnic
-  Playground
-  Primitive Camping Area
-  RV Campsite
-  Restroom Facility
-  Shower House

*Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community*

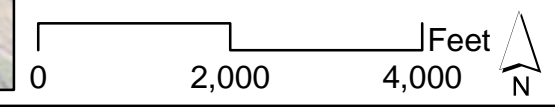


Figure 5-2













# East Sidney Lake Master Plan

## Recreation Assets

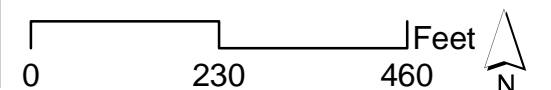
### Legend

 ESL Boundary

### Recreation Assets

-  Beach
-  Boat Launch
-  Overlook
-  Parking
-  Pavilion
-  Playground
-  Primitive Camping Area
-  RV Campsite
-  Restroom Facility
-  Shower House

*Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community*



# 6 Special Topics, Issues, Considerations

## 6.1 COMPETING INTERESTS ON THE NATURAL RESOURCES

East Sidney Lake is a multi-purpose project. The authorized purposes accommodate the needs of federal, state and municipal users that have developed over time and have contractual rights that must be honored. The benefits provided are critical to the local and regional economies and are of great interest to the public. Aside from operating the lake to meet the needs of those entities with contractual rights, there are many competing interests for the utilization of federal lands including recreational users, adjacent landowners, utility providers, and all entities that provide and maintain public roads. A major challenge is balancing the interests of each of these groups to ensure that valid needs are met while simultaneously protecting natural and cultural resources. The purpose of this Plan is to guide management into the foreseeable future to ensure the responsible stewardship and sustainability of the project's resources for the benefit of present and future generations.

## 6.2 HYDROPOWER

In 1986, The Taft Hydropower Project at East Sidney Lake was considered. A preliminary permit application was filed which estimated an average annual energy generation of 3.4 gigawatt hours. The project was found not to be feasible due to the variable water flow throughout the year. There would not be enough year-round water flow in order to pay for the system. Thus, Taft Hydro did not pursue the permit application process further.

### 6.3 ICE FISHING

NYSDEC recently included ice fishing as a permitted use at East Sidney Lake. Ice fishing is a very popular activity in the area and off-seasonal use of the lake is expected to increase. With this increase in visitation, there are numerous concerns regarding access and safety. Currently, there is no formal access to the water during the winter months. The gate to East Sidney Recreation Area is closed from September to May and the informal water access point across the lake has steep terrain that can be quite dangerous during the winter months. The Town of Sidney is considering providing off-season access through the recreation area with individual gate access. The boat launch area and the parking lot would be the only amenities accessible. The Town of Sidney would also have to plow the access road. There are no plans to update or develop the informal water access location across the lake. This spot will remain a hike-in, primitive kayak intake area. It's proximity to dam operations as well as its steep terrain hinder the construction of a formal boat launch and access road. Although ice fishing is now an allowable activity at the lake, there are still major safety concerns. During the off season, the water level can fluctuate tremendously. Ice can also break off and line the banks during low water events which can make water access very dangerous.

# 7 Public and Agency Coordination

## 7.1 PUBLIC AND AGENCY COORDINATION OVERVIEW

USACE policy guidance in ER 1130-2-550, Change 7, January 30, 2013 and EP 1130-2-550, Change 5, January 30, 2013 requires thorough public involvement and agency coordination throughout the master plan revision process including any associated environmental assessment process. Public involvement is especially important at East Sidney Lake to ensure that future management actions are both environmentally sustainable and responsive to public outdoor recreation needs within the region. The following milestones provide a brief look at the overall process of revising the East Sidney Lake Master Plan.

- 16-17 October 2018, the planning team visited East Sidney Lake where initial introductions, site orientation, a site tour, and concept discussions took place.
- Pre-Draft Master Plan & Environmental Assessment (EA) Submittal to project staff and USACE: 11 January 2019.
- Draft Master Plan & EA Submittal (Public Review): 21 March 2019.
- A Public Review—Town Hall Meeting is planned after the draft submittal to give stakeholders the opportunity to discuss the Master Plan with the project team and USACE representatives. The Meeting is planned for 03 April 2019 from 6 to 9 p.m. at the Sidney Town Clerk Building.
- Prefinal Master Plan & EA Submittal: 03 May 2019.
- Final Master Plan and EA Submittal: 26 June 2019.
- EA Administrative Record: 25 July 2019.

*[This section will be updated in subsequent submittals to provide an accurate description of all review milestones and public engagement initiatives]*

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# 8 Summary of Recommendations

## 8.1 SUMMARY OVERVIEW

The preparation of the East Sidney Lake Master Plan follows the USACE master planning guidance in ER 1130-2-550 and EP 1130-2-550, both dated 13 January 2013. Three major requirements set forth in the new guidance include (1) the preparation of contemporary Resource Objectives, (2) Classification of project lands using the newly approved classification standards, and (3) the preparation of a Resource Plan describing in broad terms how the land in each of the land classifications will be managed into the foreseeable future. Additional important requirements include rigorous public involvement throughout the process, and consideration of regional recreation and natural resource management priorities identified by other federal, state, and municipal authorities. The study team followed this guidance to prepare a master plan that will provide for enhanced recreational opportunities for the public, improve environmental quality, and foster a management philosophy conducive to existing and projected staff levels at East Sidney Lake. Factors considered in the Plan were identified through discussions with project representatives, USACE, and the general public. This Master Plan will ensure the long-term sustainability of the USACE-managed recreation program and natural resources associated with East Sidney Lake.

## 8.2 LAND RECLASSIFICATION PROPOSALS

The proposed changes in land classification at the project, as presented in Section 4, reflect classification criteria change more than any planned development. A summary of land classification changes is provided in Table 8-1.

**Table 8-1 Land Classification Summary**

Prior (1961) Land Classifications		Acres	New Land Classifications		Acres
Project Operations		TBD	Project Operations		14
Recreation		TBD	High-Density Recreation		50
Multiple Resource Management		TBD	Multiple Resource Management		993
Low Density Recreation		TBD	Low Density Recreation		1
Wildlife Management		TBD	Vegetative Management		992
			Water Surface		210
			Restricted		3
			No Wake		4
			Open Recreation		203
Total		1,265	Total		1,267

Land classification criteria is now more specific and conservative than previous versions of Master Planning guidance. The changes are in large part semantics, with no real modification to land use at the site.

A summary of land classification changes and justification is provided in Table 8-2 on the following page.

**Table 8-2 Land Classification Change Justifications**

Land Classification	Totals (acreage)	Justification
Project Operations	1961: TBD 2019: 14	Under the new land use classification criteria, Project Operations is limited to land provided direct support to the operations of the project’s primary missions. In TBD, USACE sold the old dam tender’s residence, totaling TBD acres, to a private owner. This reflected new USACE policy that required dam tenders to reside outside of project boundaries. Although the rest of the mission-support areas of the project have not changed since the 1961 Master Plan, the land fitting the new criteria totals only 14 acres.
High-Density Recreation	1961: TBD 2019: 50	Under the new criteria, areas developed specifically to support recreation activities meet the intent of the high-density recreation classification. The new guidance offers a more conservative definition of recreation areas. The 50 acres that fit into the new criteria fall within the East Sidney Lake Recreation Area and the Franklin School District Recreational Fields.
Multiple Resource Management Land— Low Density Recreation	1961: TBD 2019: 1	The previous classification of low-intensity recreation is comparable to the intent of low-density recreation, but excludes areas designated as vegetation and wildlife management areas. When applying this new, more conservative definition to the land classification, it leaves only areas with minimal development to support passive recreation use, i.e. primitive camping, hunting, trails, wildlife



viewing, etc. There is less than one acre fitting the new criteria and includes the Overlook Area on the left abutment of the dam.

Multiple Resource Management Land—Vegetative Management	1961: TBD 2019: 992	This classification was not considered in the previous Master Plan. Under the new criteria, this category includes land designated for stewardship of forest, prairie, and other native vegetative cover. The land may or may not be protected from development but is currently (and for the foreseeable future) undeveloped green space. There are 992 acres that fall within this new criterion.
Water Surface, Designated No Wake	1961: TBD 2019: 4	This change reflects new classification criteria: No actual change in water use. This area applies to the water surface in front of the dam intake area and the water surface around the designated beach area.
Water Surface, Restricted	1961: TBD 2019: 3	This change reflects new classification criteria: No actual change in water use. This area includes the vicinity of the intake tower and spillway.
Water Surface, Open Recreation Area	1961: TBD 2019: 203	This change reflects new classification criteria: No actual change in water use. This area includes all remaining water surface area outside of the restricted and no wake zones.

*\*Note: Awaiting real estate information to populate land-ownership data.*

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# 9 Appendices

Appendix A: Acronyms and Abbreviations .....	9-3
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Appendix D: Land Classification and Recreational Assets Maps .....	9-13

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## APPENDIX A: ACRONYMS AND ABBREVIATIONS

ac	Acres
ACS	American Community Survey
ADA	Americans with Disabilities Act
cfs	Cubic Feet Per Second
ECL	Environmental Conservation Law
EOPs	Environmental Operating Principles
EP	Engineering Pamphlet
ER	Engineering Regulation
ft	Feet
GIS	Geographic Information Systems
HDC	Hydroelectric Design Center
ICRMP	Integrated Cultural Resources Management Plan
NRHP	National Register of Historic Places
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
NYCRIS	New York Cultural Resources Information System
NYSDEC	New York State Department of Environmental Conservation
OMP	Operations Management Plan
OPRHP	Office of Parks, Recreation, and Historic Preservation
PAC	Physical Activity Council
PAF	Public Archaeology Facility (PAF)
RIN	Relative Index of Needs
SUNY	State University of New York
SCORP	State Comprehensive Outdoor Recreation Plan
UFC	Unified Facilities Criteria
USACE	United States Army Corps of Engineers

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## **APPENDIX B: REFERENCES**

*To be included in follow-on submittals.*

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## APPENDIX C: KICK-OFF MEETING MINUTES

# East Sidney Lake Master Plan Update Data Gathering Site Visit



3225 Shallowford Rd NE  
Suite 830  
Marietta, GA 30062  
Telephone 770.321.4040

**TO:** MAJ Terrence Harrington, USACE-Baltimore District, Planning Division  
Melanie Mathesz, USACE-Baltimore District, Planning Division, Assistant Project Manager  
Phil Cwiek, USACE-Baltimore District, Operations Division, Natural Resource Management Specialist  
Scott Ryan, Head Dam Operator  
Ryan Tuttle, Assistant Dam Operator  
Nathan Perry, Seasonal Dam Operator  
Scott Wells, NY State Department of Environmental Conservation  
Randy Newell, East Sidney Lake Recreation Area Manager

**CC:** Patrick West, JG&A  
Caitlin Crawford, JG&A

**FROM:** John Minter, JG&A  
19 November 2018

**ACTIVITY:** Site Visit Kickoff Meeting and Site Tour  
**DATE/TIME:** 16 October 2018 / 0800 hrs  
**LOCATION:** East Sidney Lake-Dam Operations Office  
**ATTENDEES:** Phil Cwiek, Scott Ryan, Ryan Tuttle, Nathan Perry, John Minter, and Caitlin Crawford

The planning team met with United States Corps of Engineers (USACE) and East Sidney Lake (ESL) representatives to discuss the intent of the ESL Master Plan Update. Key points from the introductory discussion are presented below:

- The background data for the project area is unclear. Contacting Real Estate will dictate the total acreage. Approximate estimates are 450 acres for fee simple lands and 1,200 acres for total flow easement area.
- The primary mission of ESL is flood-risk management.
  - Includes low flow releases.
- The secondary mission is recreation.
  - ESL provides a seasonal pool for recreation.
- There are only a few private landowners surrounding the site WSL boundary.
  - Not many issues with encroachment or flow easements.
- There is currently no leasing of owned land for agricultural leases. There are corn fields located within the flow easements.
- Franklin School baseball/soccer fields are located within a flow easement.
  - The area is located in the 1180' flood-zone elevation.
- Hunting is permitted on the property as long as it is 500' from the dam/office and outside the recreation area.
  - Hunters must follow state game regulations.

- The most popular area to hunt is located on the north side of the lake and is only accessible by hiking.
  - Hard to patrol/monitor whether or not hunters are staying on USACE land.
  - Property line on north side of the lake is very close to the shore line.
- Fishing is authorized on the lake.
  - Prohibited in the outworks/stilling basin.
    - Signage is posted but there is no fence.
  - ESL is regularly stocked with walleye.
  - Ice fishing has recently been authorized by the NY Department of Environmental Conservation (NYDEC), but is not a very popular activity. The authorization by the NYDEC was a recent development.
- ESL has a seasonal recreation pool at 1150' elevation and a winter drawdown to 1140' elevation.
  - Minimum low-flow (12 cfs) is required to be maintained.
- Water restrictions include a no wake (kayak-only) zone between the dam and the park. The area immediately surrounding the dam is completely restricted. The rest of the water is unrestricted and allows power boats.
  - The restricted and no wake areas are delineated by buoys.
  - There is also a designated swim area at the beach.
- There are two non restricted areas that are mowed, but otherwise open to the public. Both have significant slopes.
  - One is between the overlook and the recreation area.
  - One is between the stilling basin and the administrative office.
- Hydropower project was not constructed due to not having enough water flow year round to pay for the system.
- Lands downstream of the dam that impact water level operations (i.e. restrict outflows) include the KOA campground and the Towns of Unadilla and Conclin.
- The administrative facilities are all in good working order.
  - There are no projects on the horizon for improvements, renovations, or new construction.
  - The old dam tender's house adjacent to the administrative complex is no longer USACE property. ESL staff believes it was sold around 1994. We need to look at real estate records to show the modified boundary for the fee property.
- There are bald eagles present on site, but exact nesting location is not known.
- There are no official trails on the site or through the recreation area.
- There are no known borrow areas at ESL.
- There is a controlled water release every year since 2007 for The Canoe Regatta Event on Memorial Day Weekend.

USACE representatives guided the planning team while visiting each of the important activity nodes. Below is a listing of locations that were visited and explained:

- Dam Overlook
- South side of dam
- Nearby KOA campground
- East Sidney Lake Recreation Area

- Boat Launch
- Beach
- Picnic Pavilion
- Campground
- Franklin School Baseball/Soccer Fields
- North side of dam (old access road)
- Flow easements

ACTIVITY: NYDEC Conference Call  
 DATE/TIME: 17 October 2018  
 LOCATION: East Sidney Lake-Dam Operations Office  
 ATTENDEES: Scott Wells, Phil Cwiek, Scott Ryan, Ryan Tuttle, Nathan Perry, John Minter, and Caitlin Crawford

The planning team talked with USACE and NYDEC representatives through phone conversation to discuss the environmental conservation aspects of ESL. Below is a summary of the topics covered:

- The lake is a small, warm-water fishery within Delaware County.
  - There are very few fisheries in the region, especially for walleye.
  - A recent electrofishing study confirms that there is potential to support a walleye fishery.
    - Walleye natural habitat occurs within the watershed south of the dam, so introduction to the lake is feasible.
    - Strong diversity of bait fish present in the lake which can support long term success of a walleye fishery.
  - Locals also know that the site is a viable option for both large and small mouth black bass fishery.
  - Trout exist up in the inlet area.
- Walleye are stocked every year since 2015.
  - 20 walleye yearlings are released per acre, totaling around 4,000 total walleye yearlings.
  - The walleye fishery is still developing. It is very slow growing because of the current water habitat.
- NYDEC does not believe that the area is utilized well by the public.
  - Off season access is an issue. The boat ramp and parking lot within the recreation area are closed. Steep topography makes boat and foot access strenuous.
  - Off season access to the water should to be explored.
    - Potential for boat ramp on the north side of the lake.
    - Potential for year round access to the boat ramp within the park.
- Ice fishing is now permitted on the lake.
  - Water fluctuation is problematic for ice fishing opportunities.
    - Current and dramatic changes in water level are common during the winter drawdown period. Ice remnants along the banks can block water access and create unsafe pedestrian conditions.
  - Overall access is once again a major issue/deterrent to the activity.
  - Once a walleye fishery is established, ice fishing will be very popular. Need to prepare for this influx of visitors during the off season.

- The potential access route on the north side of the lake is prohibited to vehicle traffic due to the proximity to the dam.
  - There is a small parking area on the north side that provides a 'hike-in' point for hikers, hunters, and kayakers.
- Currently, there is no planned construction or dredging for ESL.
  - The last analysis showed an increase in silting and loss of several acre-feet, but not enough to justify a dredging yet.
- There are currently no DEC leases at ESL.
  - Any land management efforts would need to be authorized by an agreement.
  - Currently DEC cannot spend any money at ESL, since the site federal land without a lease agreement or MOU.
- Opening any other dedicated recreation area outside of the leased recreation area would require an increase in personnel in the off-season.
  - ESL is not currently staffed with rangers to monitor activities.
  - Floating ranger position among several sites is a possibility.

The planning team continued with a more in-depth conversation with USACE representatives about their concerns about ice fishing becoming a permitted use at ESL. Below is a summary of the issues discussed:

- There is a big staffing issue with the potential for supporting ice fishing during the off season.
  - A full-time ranger or an additional full-time employee would be required.
  - Possibly a full-time on-site floating ranger between nearby reservoirs is needed to regulate recreation year round.
- The current condition of the lake makes it unsafe for ice fishers.
  - The water level fluctuates tremendously during the off season.
  - Ice can break off and line the banks during low water events which makes water access dangerous.
  - Along the potential north access road, fishers can be exposed to herbicide from the riprap.
- There is also a security issue with allowing dedicated water access from the north side of the lake.
  - The path is adjacent to the dam, thus fencing or some sort of security measure is needed.
  - Threat of motor vehicle use too close to dam operations (in restricted area).
- The relationship between USACE and the park is good and developing a dedicated year-round recreation asset on the north side of the lake may be detrimental to the current relationship.
- USACE does not desire a high volume of visitors on the north side of the lake.
  - There are potential issues with labeling the north side area as low density recreation.
  - Even though hunting is permitted, it is only a secondary use behind vegetative management.
    - Tight boundary lines exist throughout the access route and it can flood during high water events.

ACTIVITY: Meeting  
DATE/TIME: 17 October 2018 / 1600 hrs  
LOCATION: East Sidney Lake  
ATTENDEES: Randy Newell, Phil Cwiek, Scott Ryan, Ryan Tuttle, Nathan Perry, John Minter, and Caitlin Crawford

The planning team met with USACE and ESL Recreation Area representatives to discuss everything that is going on at ESL Recreation Area, including amenities, future development, visitation statistics, and the potential for ice fishing. Below is a summary of the topics discussed:

- The lease was updated in 2015.
- A recreation development plan was performed in 2015 which stated proposed improvement projects, like updating the playground and adding primitive cabins to the underutilized primitive camping spots.
  - Two projects that were completed were adding a bathroom to the pavilion area and adding electric to five primitive camping sites.
  - If cabins are not pursued, then adding electric is the next best option. There is not a lot of demand for primitive camping at the park.
- The planning team was given a copy of visitation statistics from the past season. The electric campsites average about a 96.5% occupancy rate.
- There are currently no maps of the site. The county recently completed a survey of the site, but no maps have been made.
- There are a total of 99 camp sites within the recreation area.
  - 86 are RV sites with electric.
    - Run by individual meters where power usage is paid by users on top of RV passes.
    - Installed approximately 4 years ago, and generated a decrease in power usage.
  - 13 sites are primitive.
- Other amenities include:
  - 3 bathroom facilities, 1 shower, 1 dump station, 1 water spicket
  - 1 large, rentable picnic shelter that doubles as an event space
  - 1 boat launch and 1 kayak intake area
  - A dedicated beach area
  - RC Derby Track (really popular, put in this past season)
  - Gaga Ball Pit (really popular, put in last year)
  - A playground and basketball hoop
    - Tried to replace/update 3 years ago, but did not get grant
- No expansion to the lease area seems feasible from the Town of Sidney.
- There is potential for ice fishing to be supported by the Town of Sidney.
  - Could provide off-season access through the recreation area with individual gate access.
    - Only the boat launch area and parking lot would be accessible.
  - Town would also have to plow the access road if vehicles were allowed.

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








*Please direct additions or corrections to these minutes to JG&A in writing within seven days of receipt; they become our official record of the meeting at that point in time. Thank you.*

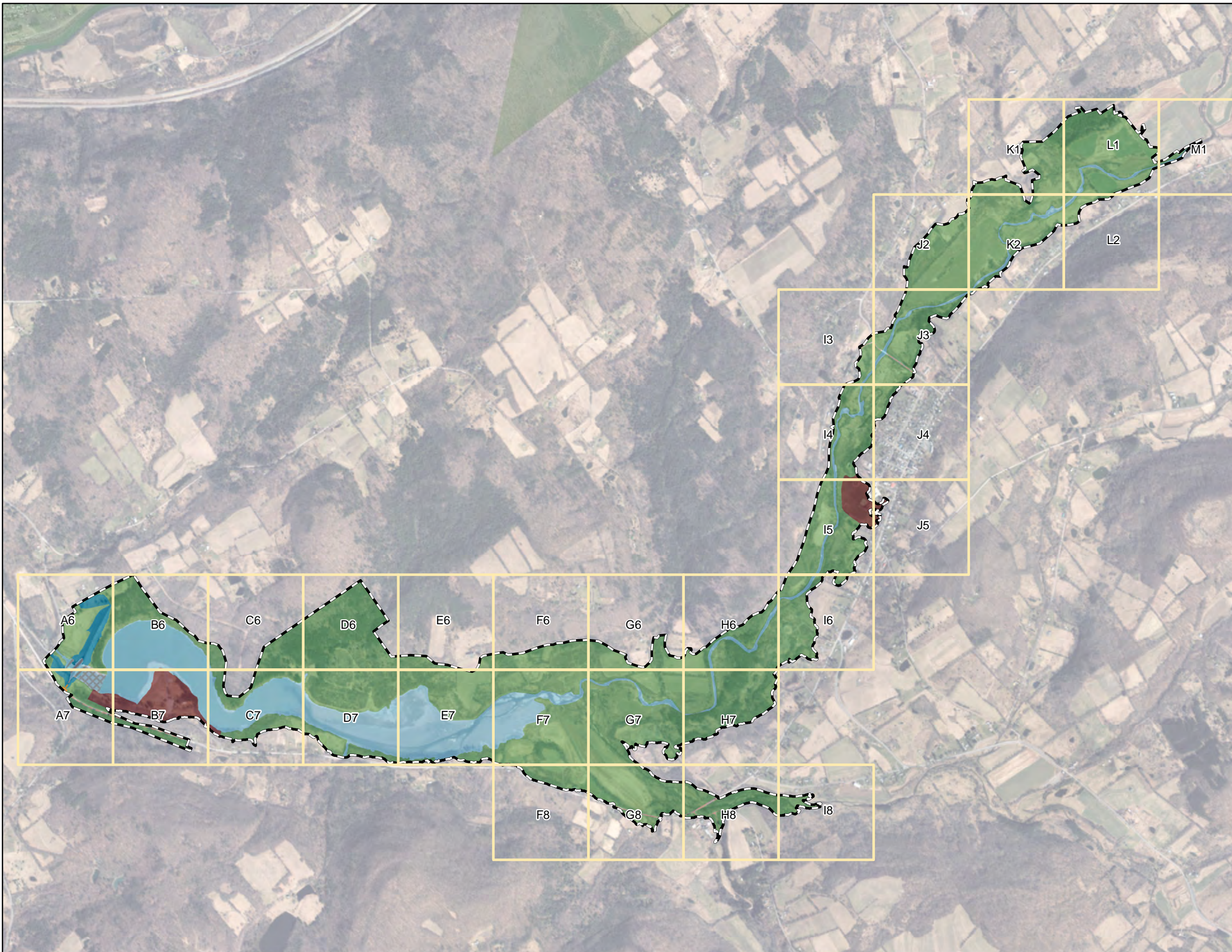
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# East Sidney Lake Master Plan

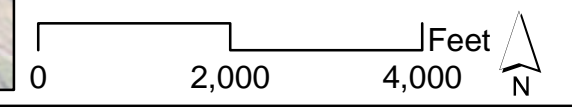
## Land Classification | Grid View

### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  High Density Recreation
-  MRML - Low Density Recreation
-  MRML - Vegetative Management
-  Owned by Other Entities
-  Project Operations
-  Water Surface - No Wake
-  Water Surface - Open Recreation
-  Water Surface - Restricted










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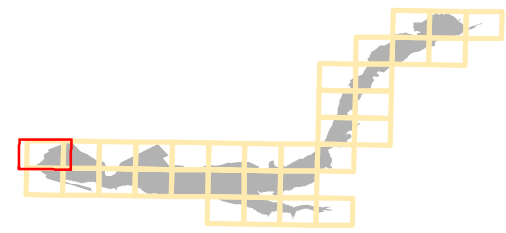


# East Sidney Lake Master Plan

## Land Classification | Grid View

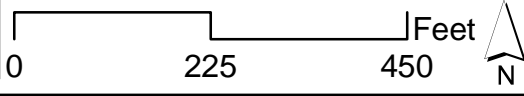
### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  MRML - Vegetative Management
-  Project Operations
-  Water Surface - No Wake
-  Water Surface - Open Recreation
-  Water Surface - Restricted



Overall ESL Site

*Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community*













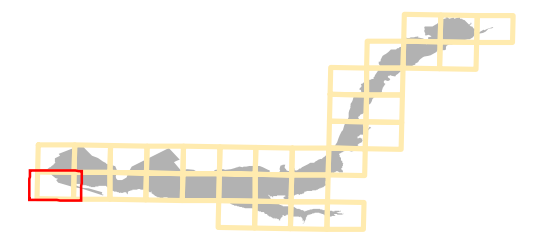
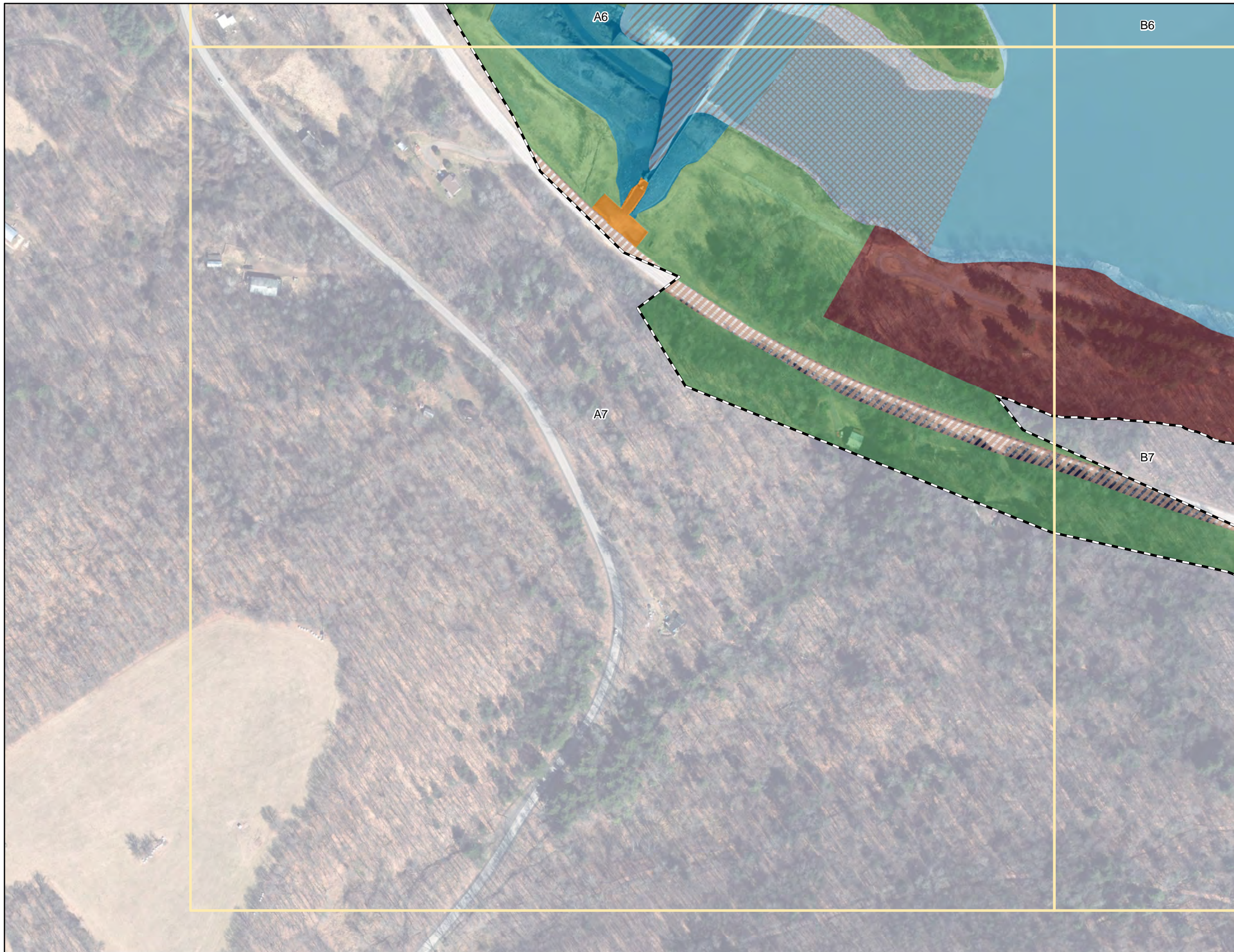


# East Sidney Lake Master Plan

## Land Classification | Grid View

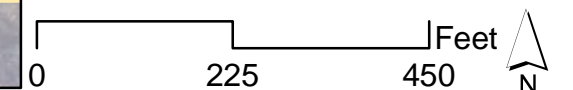
### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  High Density Recreation
-  MRML - Low Density Recreation
-  MRML - Vegetative Management
-  Owned by Other Entities
-  Project Operations
-  Water Surface - No Wake
-  Water Surface - Open Recreation
-  Water Surface - Restricted



Overall ESL Site








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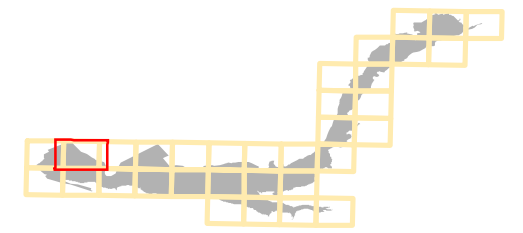
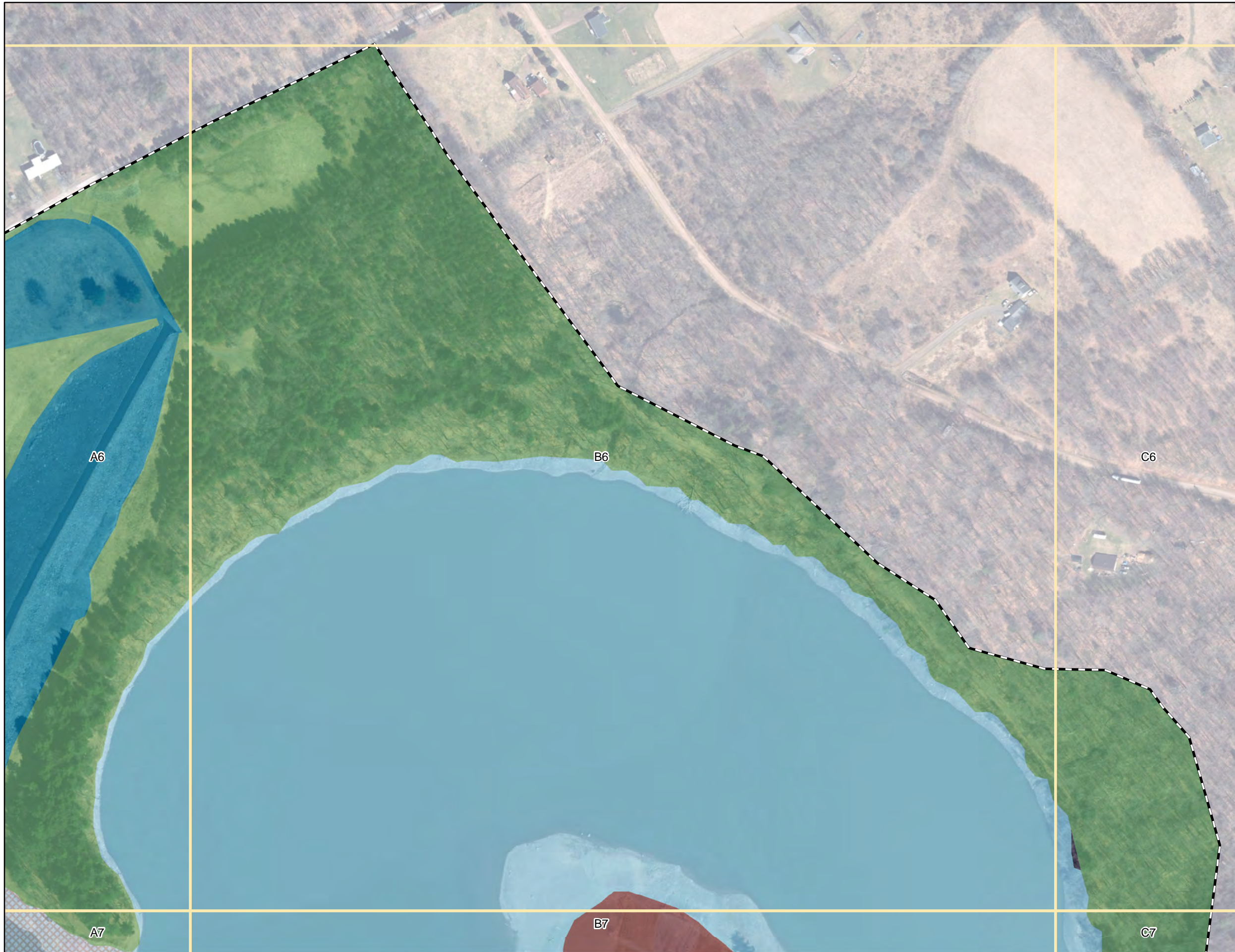


# East Sidney Lake Master Plan

## Land Classification | Grid View

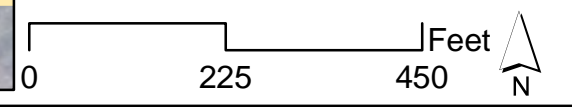
### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  High Density Recreation
-  MRML - Vegetative Management
-  Project Operations
-  Water Surface - No Wake
-  Water Surface - Open Recreation



Overall ESL Site








*Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community*

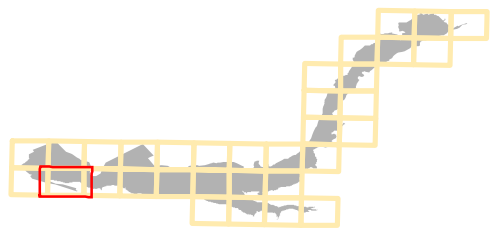
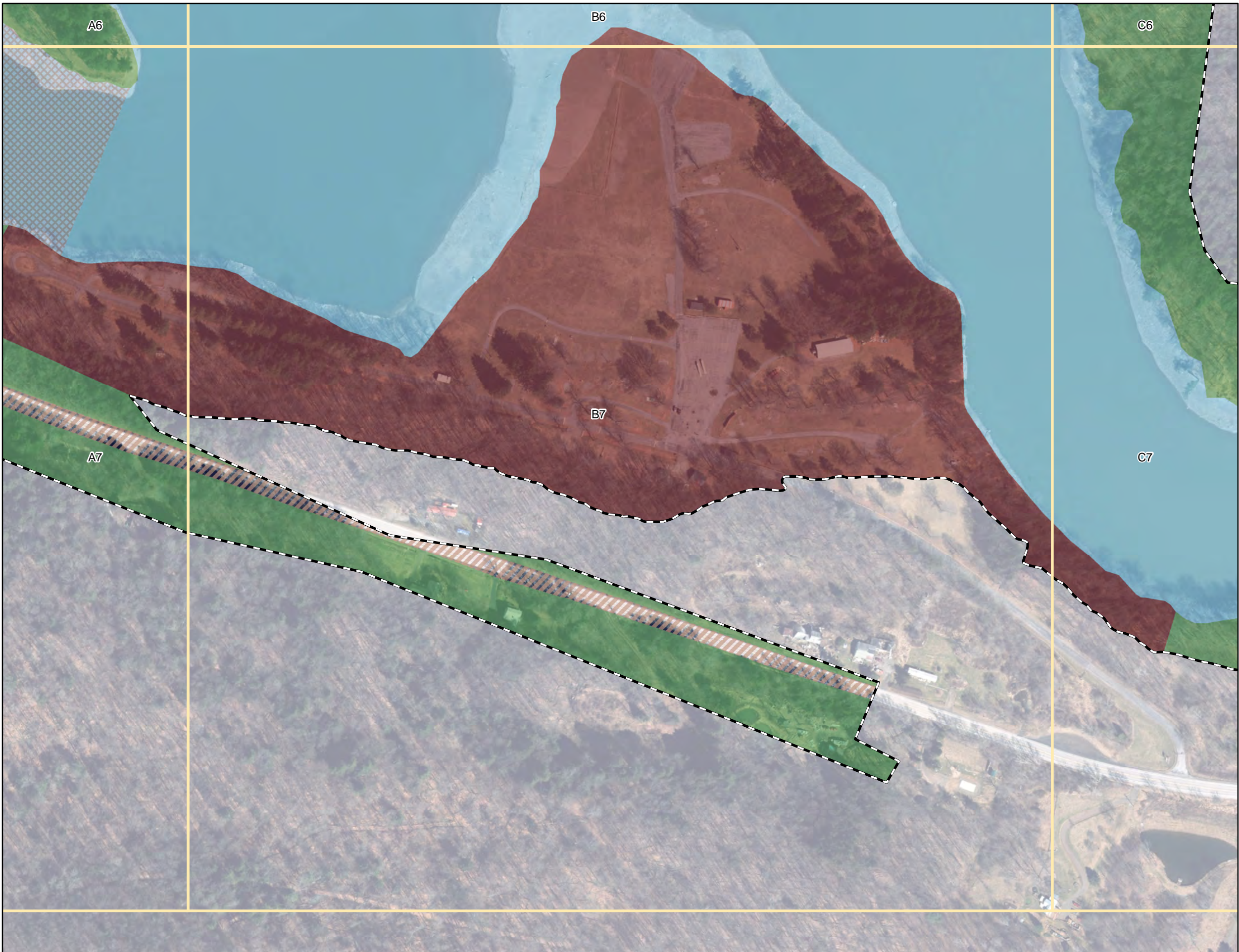


# East Sidney Lake Master Plan

## Land Classification | Grid View

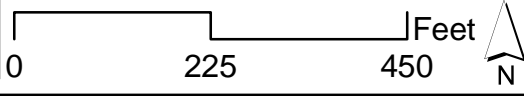
### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  High Density Recreation
-  MRML - Vegetative Management
-  Owned by Other Entities
-  Water Surface - No Wake
-  Water Surface - Open Recreation



Overall ESL Site

*Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community*



# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

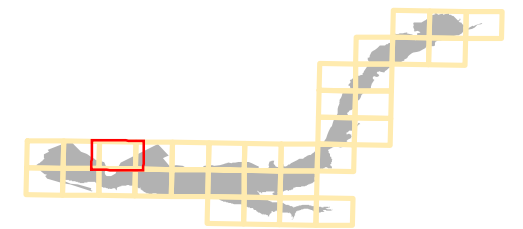
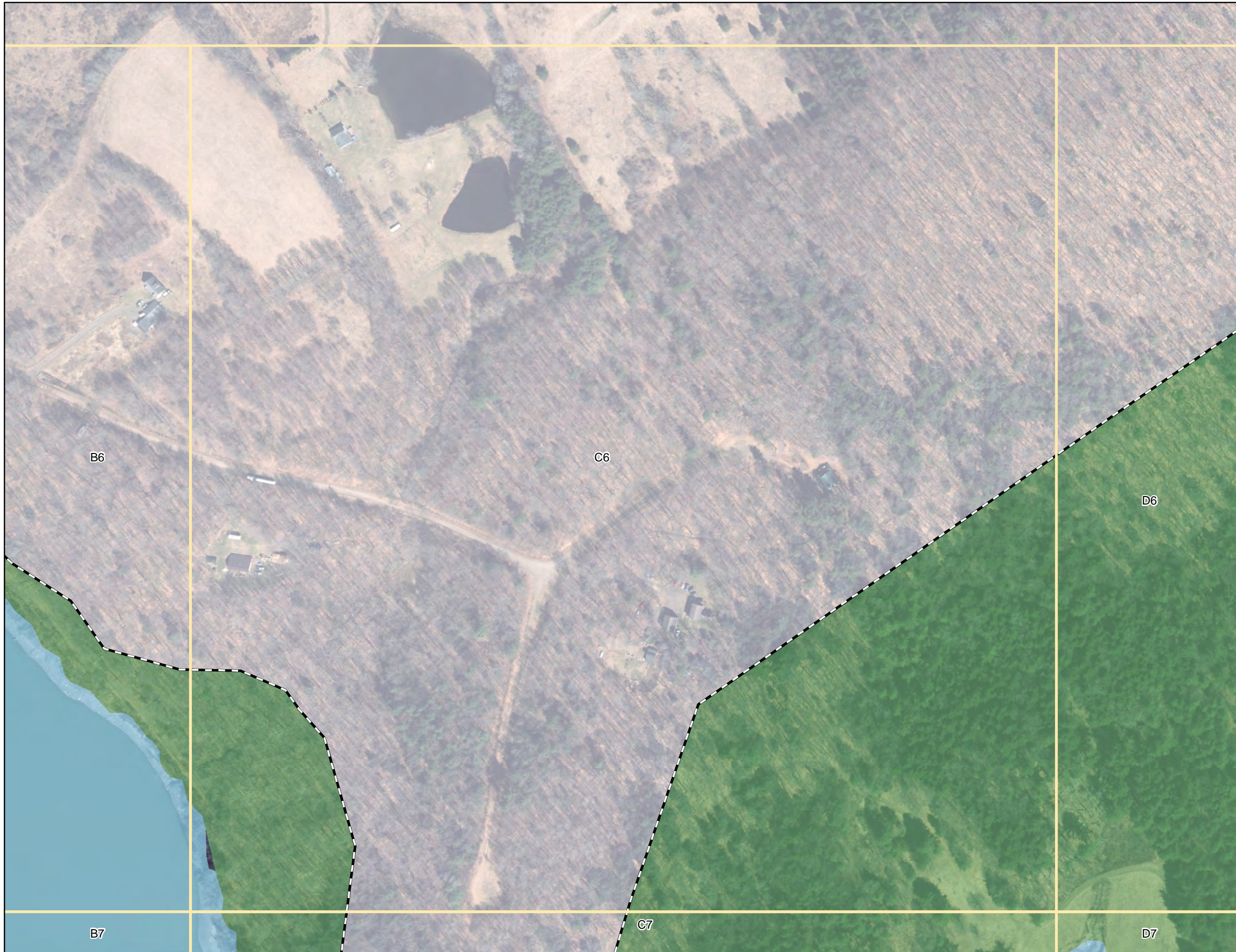
 Site Boundary

 Grid

### Land Classification

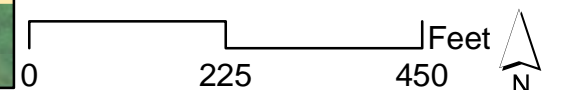
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site







Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

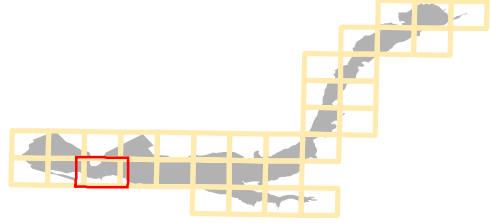
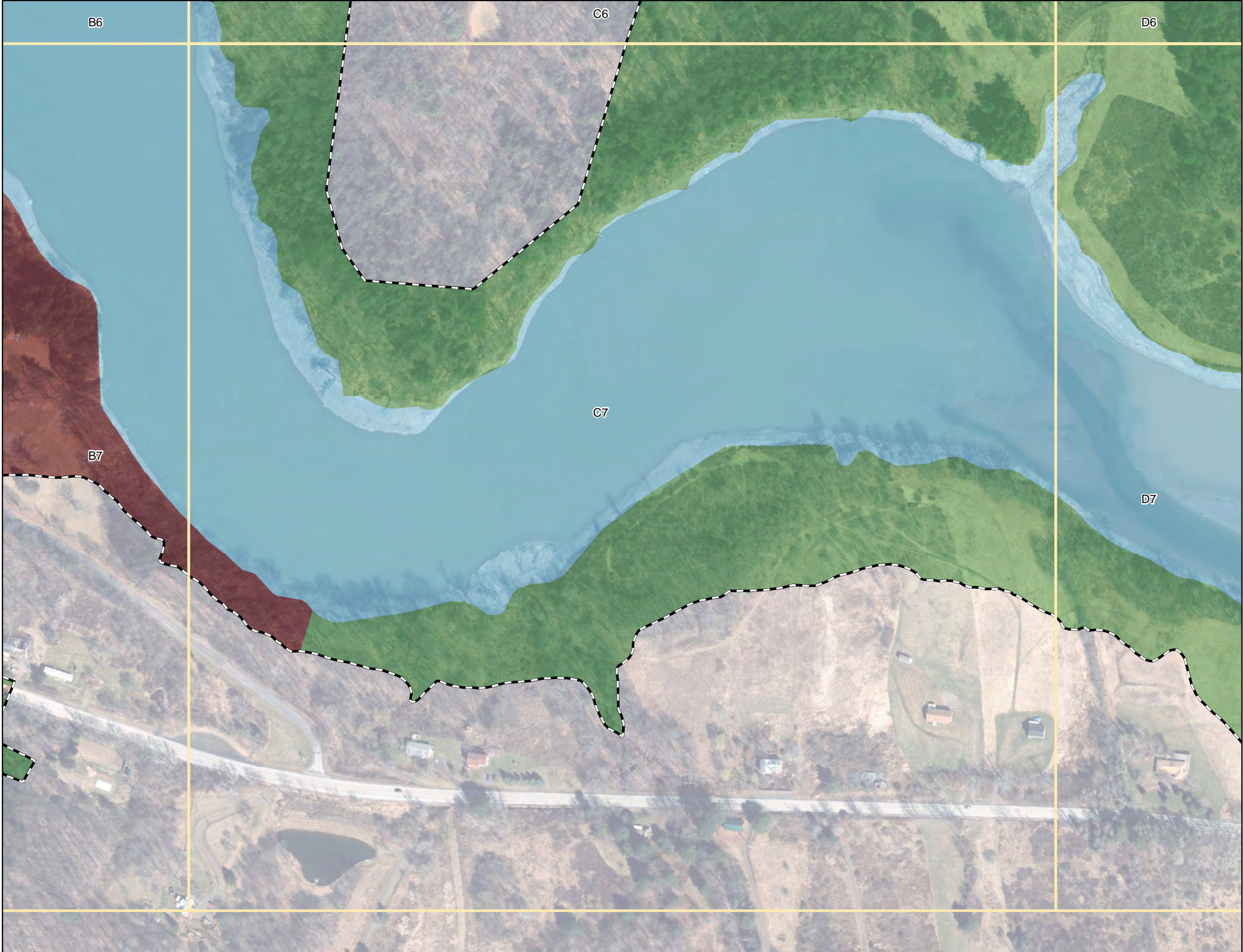


# East Sidney Lake Master Plan

## Land Classification | Grid View

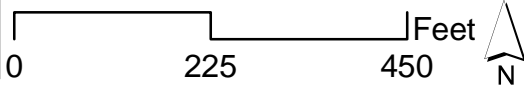
### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  High Density Recreation
-  MRML - Vegetative Management
-  Owned by Other Entities
-  Water Surface - Open Recreation



Overall ESL Site

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# East Sidney Lake Master Plan

## Land Classification | Grid View


### Legend

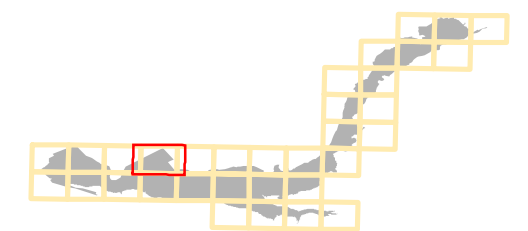
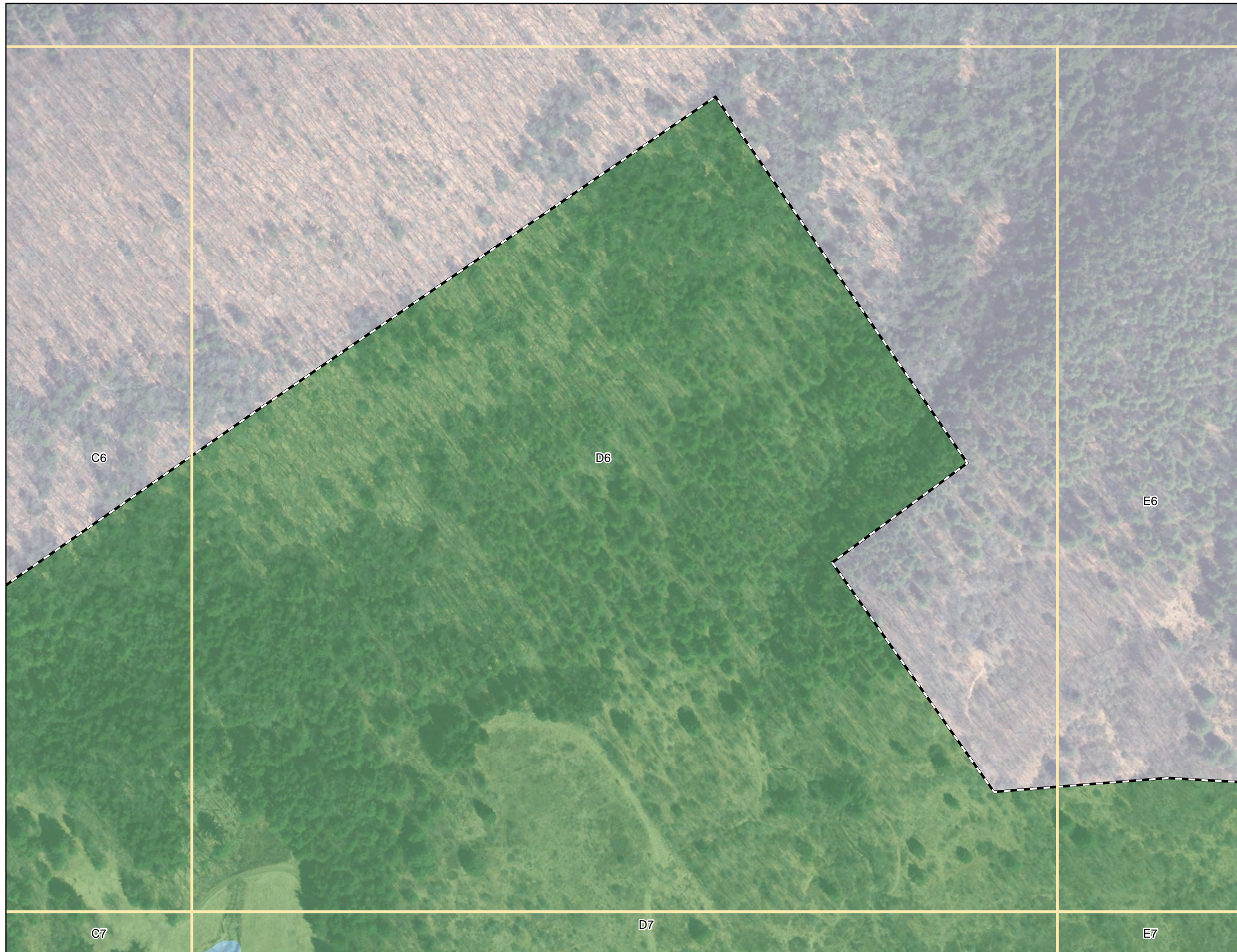
 Site Boundary

 Grid

### Land Classification

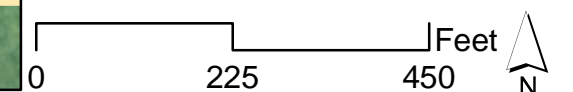
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site

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# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

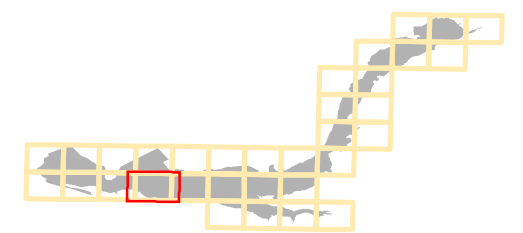
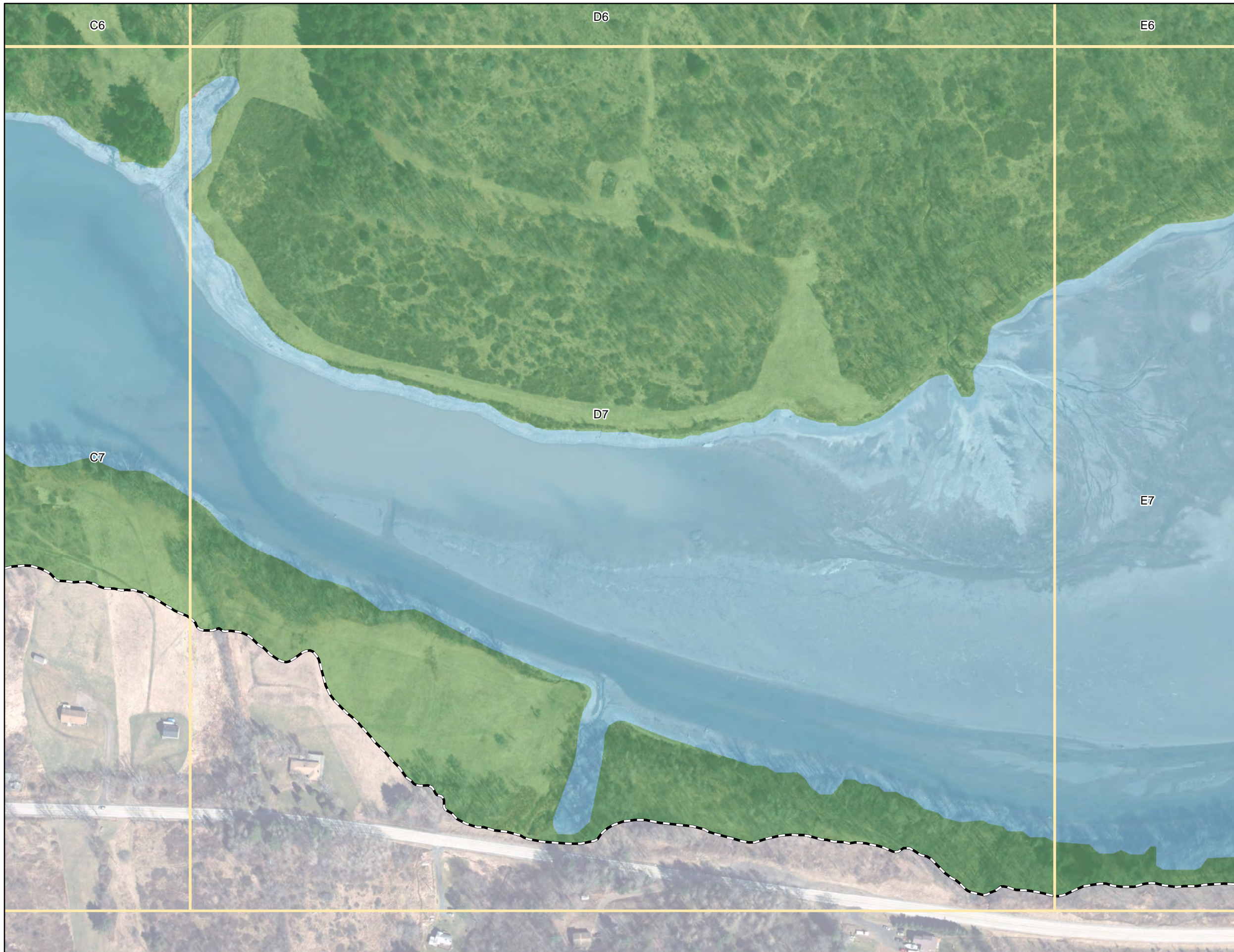
 Site Boundary

 Grid

### Land Classification

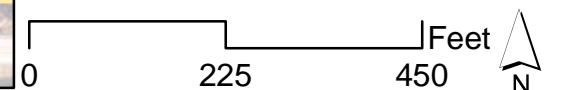
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Overall ESL Site

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## Land Classification | Grid View

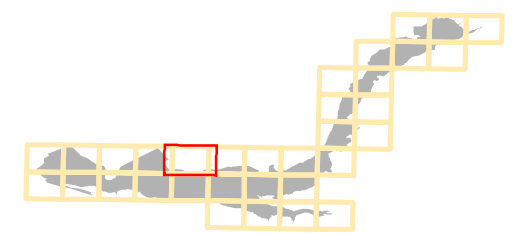
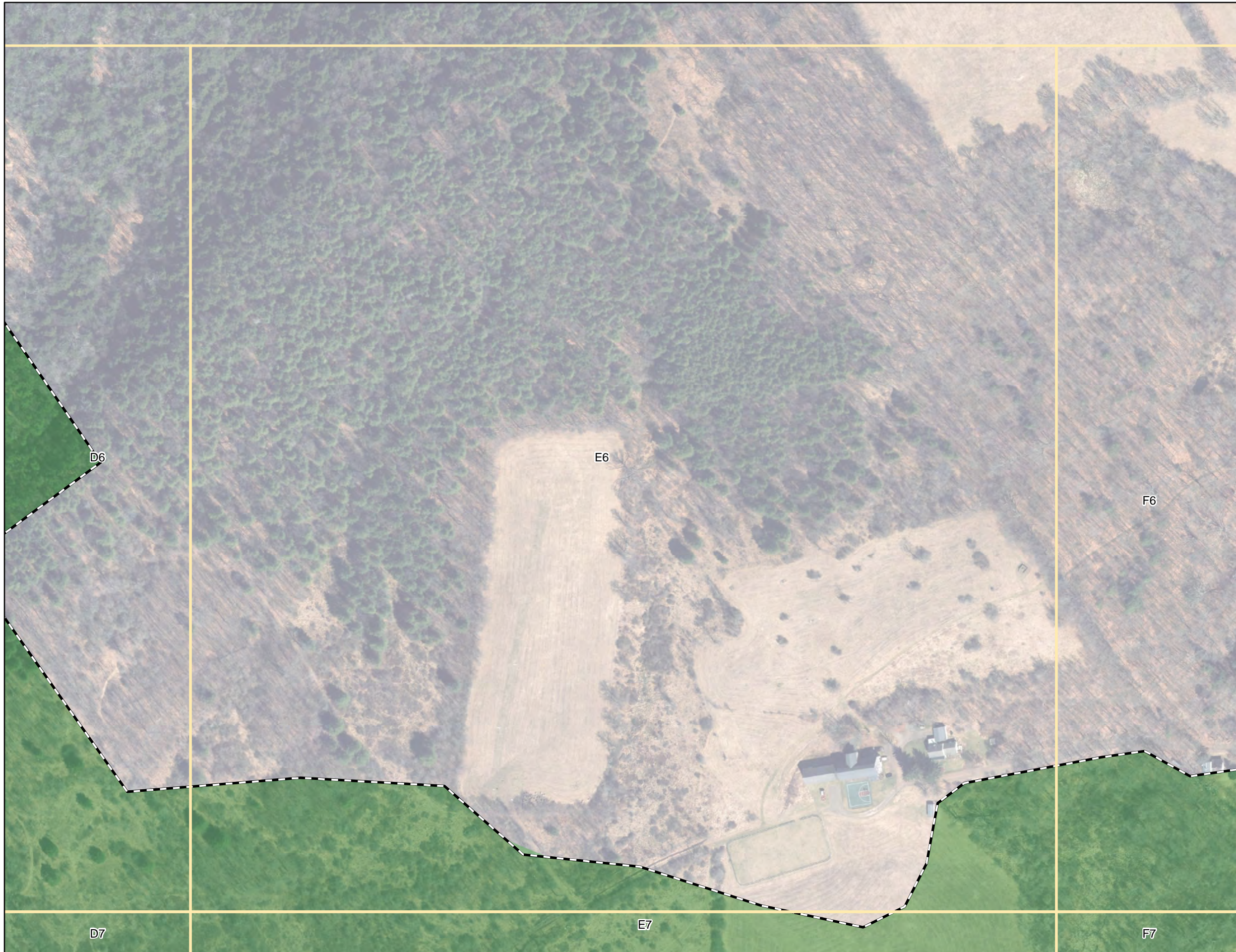
### Legend

 Site Boundary

 Grid

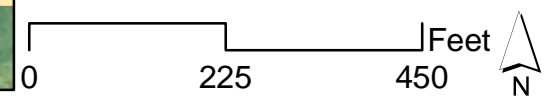
### Land Classification

 MRML - Vegetative Management



Overall ESL Site

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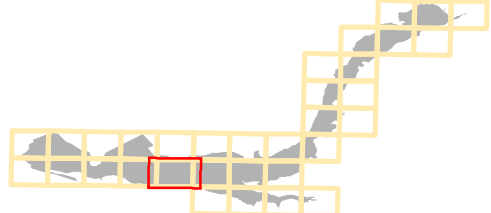


# East Sidney Lake Master Plan

## Land Classification | Grid View

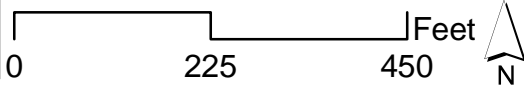
### Legend

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-  Grid
- Land Classification**
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Overall ESL Site

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## Land Classification | Grid View

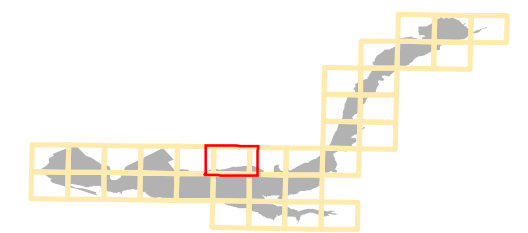
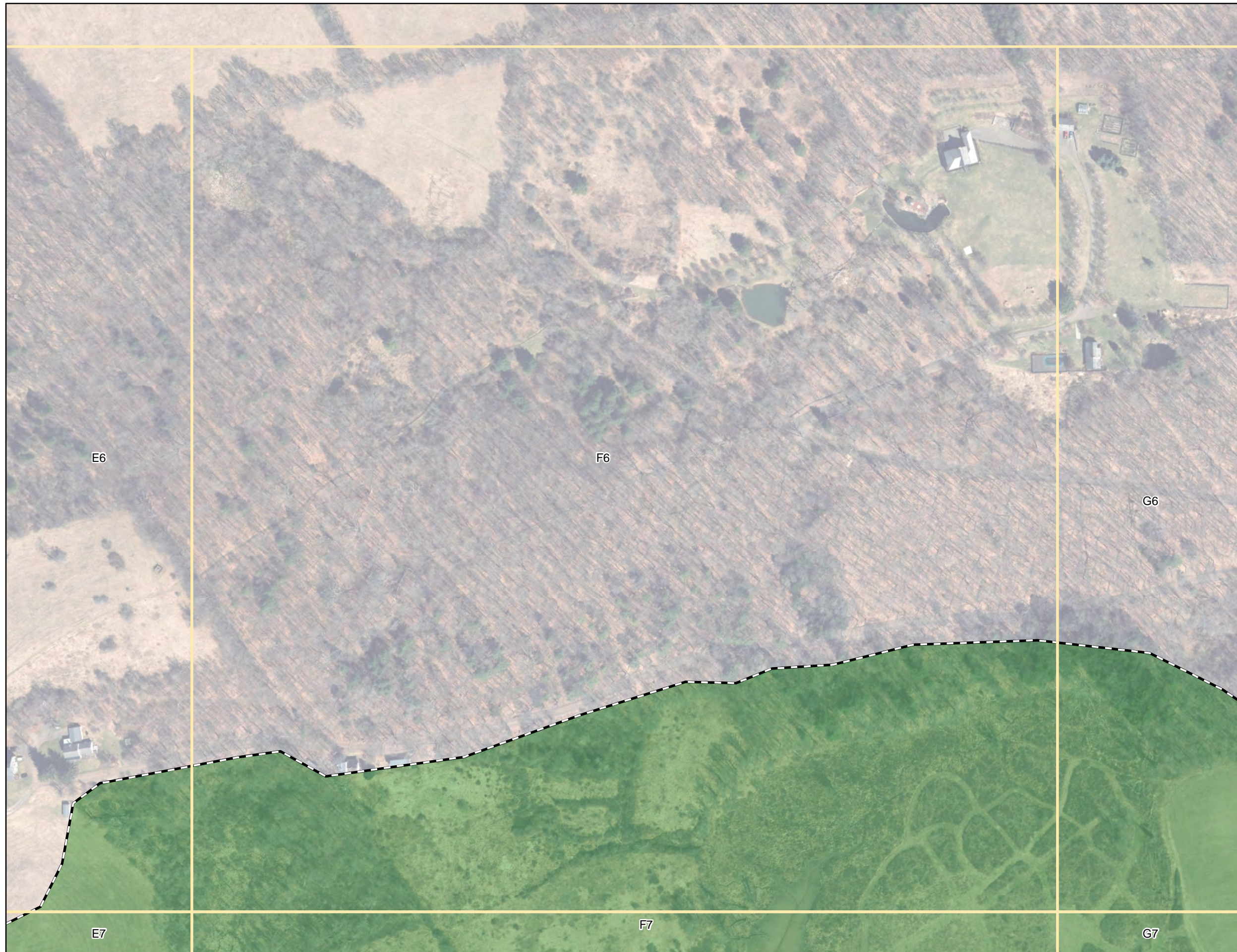
### Legend

 Site Boundary

 Grid

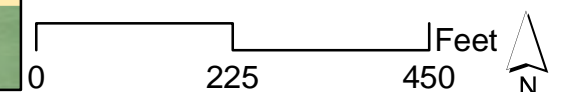
### Land Classification

 MRML - Vegetative Management



Overall ESL Site

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# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

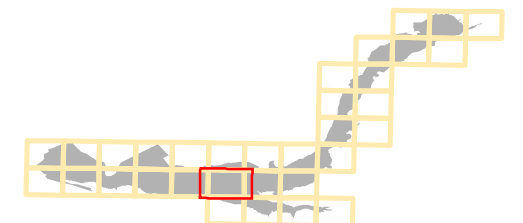
 Site Boundary

 Grid

### Land Classification

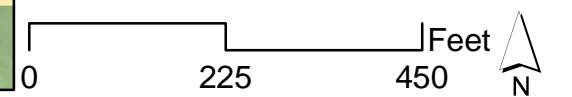
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site


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# East Sidney Lake Master Plan


## Land Classification | Grid View

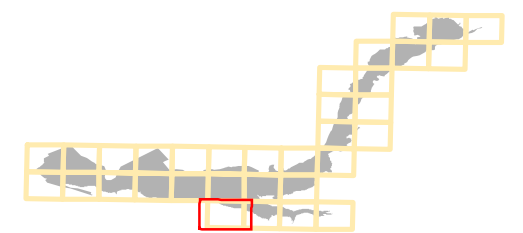
### Legend

 Site Boundary

 Grid

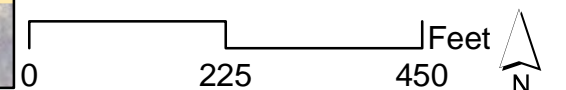
### Land Classification

 MRML - Vegetative Management



Overall ESL Site


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# East Sidney Lake Master Plan


## Land Classification | Grid View

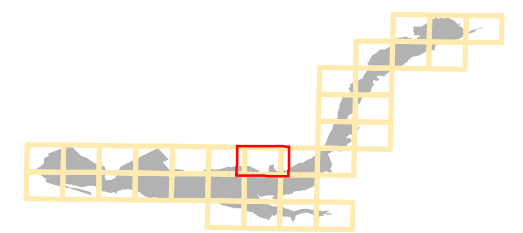
### Legend

 Site Boundary

 Grid

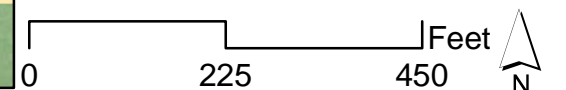
### Land Classification

 MRML - Vegetative Management



Overall ESL Site

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# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

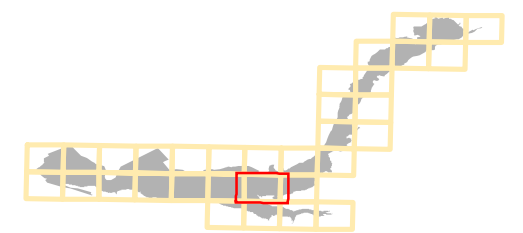
 Site Boundary

 Grid

### Land Classification

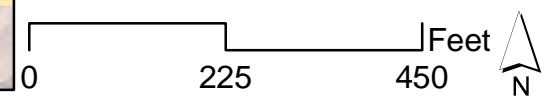
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site





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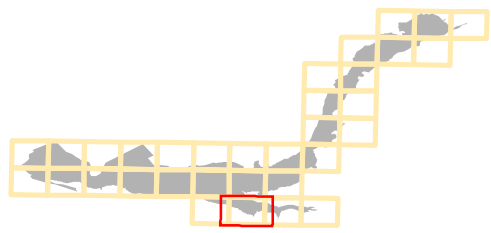


# East Sidney Lake Master Plan

## Land Classification | Grid View

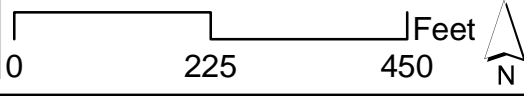
### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  MRML - Vegetative Management
-  Owned by Other Entities



Overall ESL Site


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# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

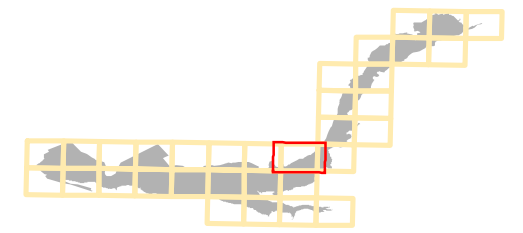
 Site Boundary

 Grid

### Land Classification

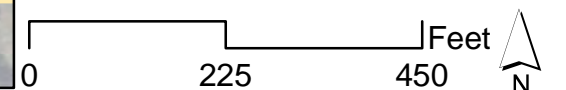
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site

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# East Sidney Lake Master Plan


## Land Classification | Grid View


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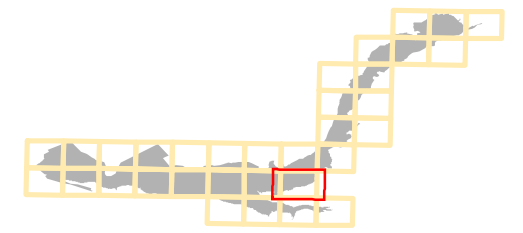
 Site Boundary

 Grid

### Land Classification

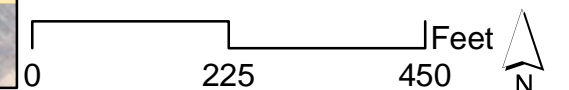
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site


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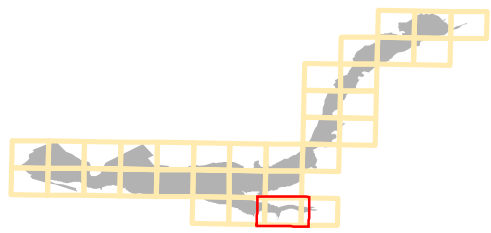


# East Sidney Lake Master Plan

## Land Classification | Grid View

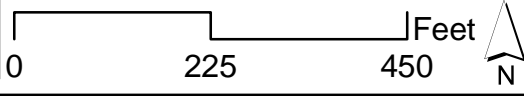
### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  MRML - Vegetative Management
-  Owned by Other Entities



Overall ESL Site






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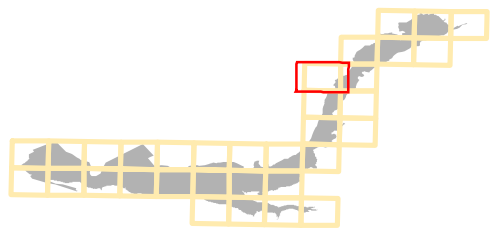


# East Sidney Lake Master Plan

## Land Classification | Grid View

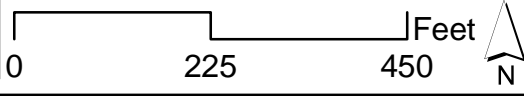
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Overall ESL Site


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# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend


 Site Boundary

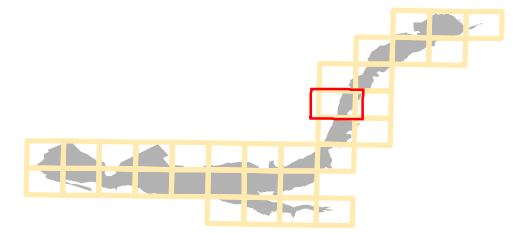
 Grid

### Land Classification

 High Density Recreation

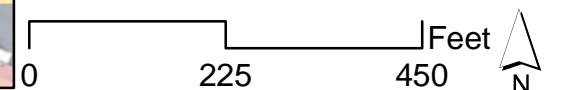
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site





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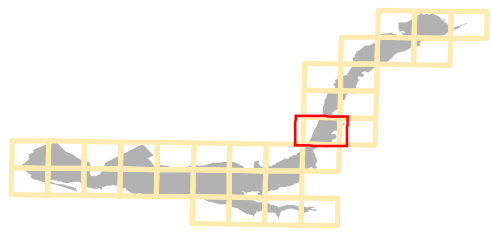
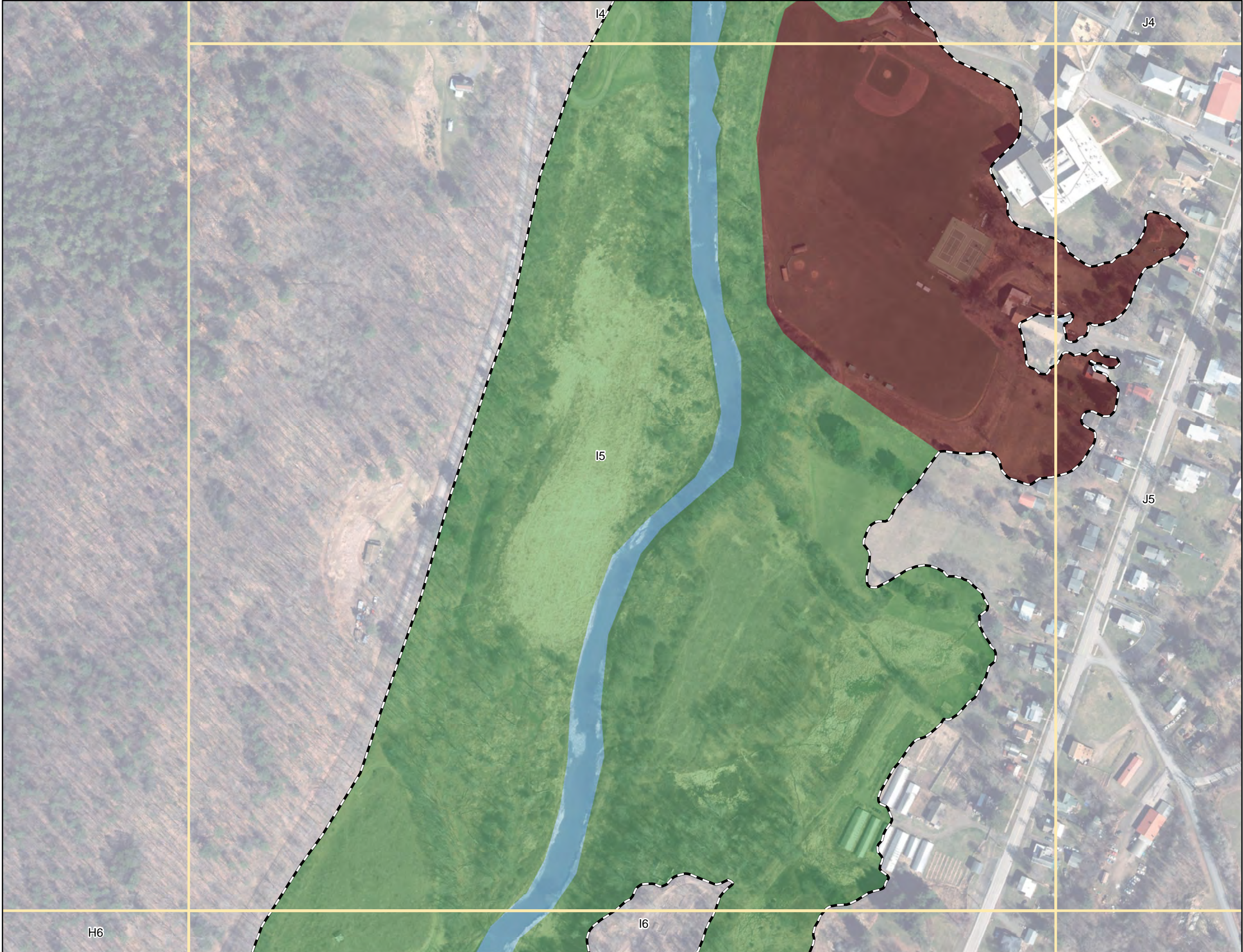


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## Land Classification | Grid View

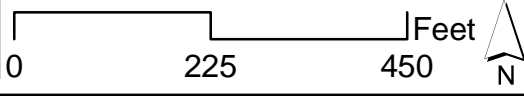
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Overall ESL Site

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## Land Classification | Grid View

### Legend

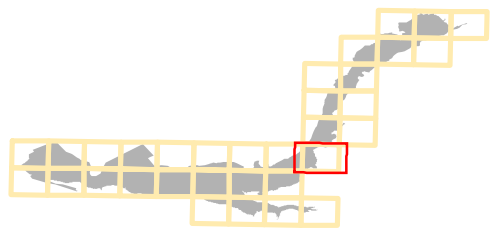
 Site Boundary

 Grid

### Land Classification

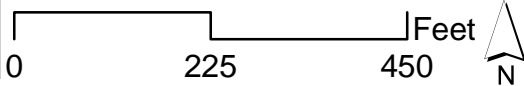
 MRML - Vegetative Management

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Overall ESL Site

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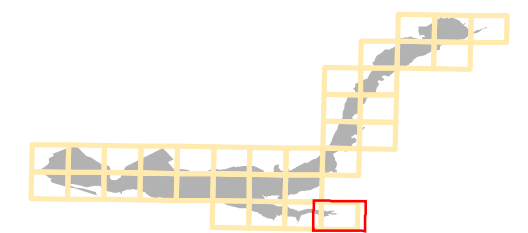
### Legend

 Site Boundary

 Grid

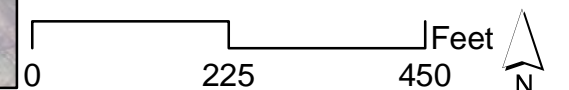
### Land Classification

 MRML - Vegetative Management



Overall ESL Site





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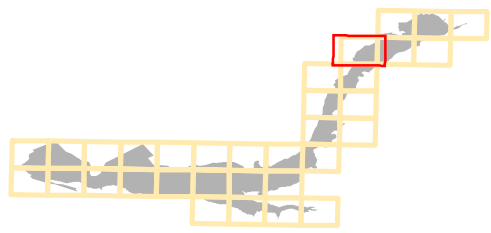


# East Sidney Lake Master Plan

## Land Classification | Grid View

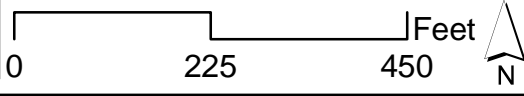
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Overall ESL Site

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


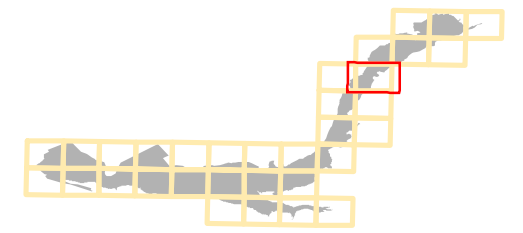


# East Sidney Lake Master Plan

## Land Classification | Grid View

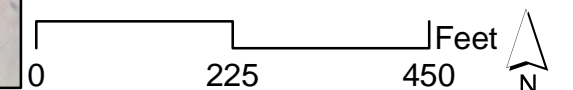
### Legend

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Overall ESL Site





Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

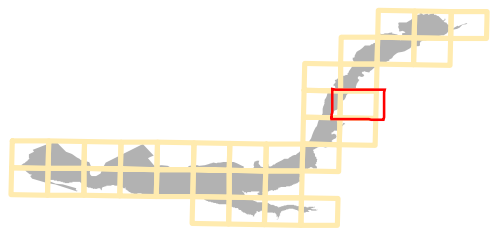


# East Sidney Lake Master Plan

## Land Classification | Grid View

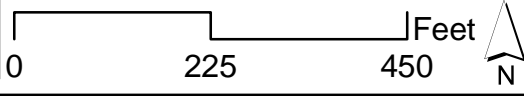
### Legend

-  Site Boundary
-  Grid
- Land Classification**
-  High Density Recreation
-  MRML - Vegetative Management
-  Water Surface - Open Recreation



Overall ESL Site

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

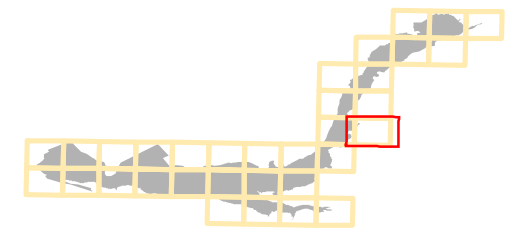
 Site Boundary

 Grid

### Land Classification

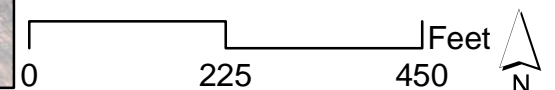
 High Density Recreation

 MRML - Vegetative Management



Overall ESL Site


*Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community*



# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

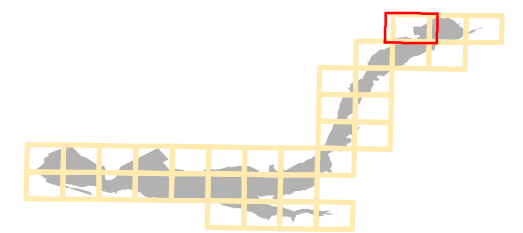
 Site Boundary

 Grid

### Land Classification

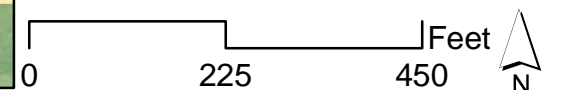
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site





Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

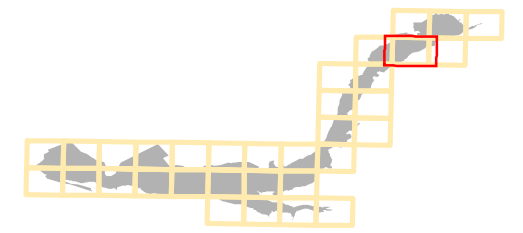


# East Sidney Lake Master Plan

## Land Classification | Grid View

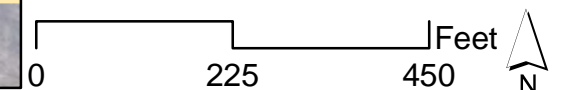
### Legend

-  Site Boundary
-  Grid
- Land Classification**
  -  MRML - Vegetative Management
  -  Water Surface - Open Recreation



Overall ESL Site

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

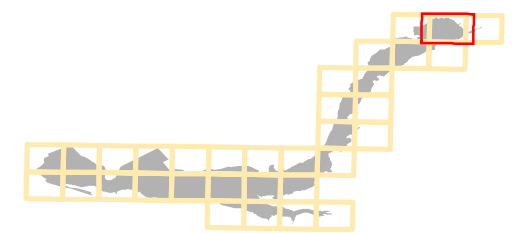
 Site Boundary

 Grid

### Land Classification

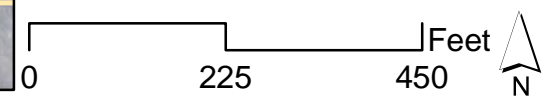
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site

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# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

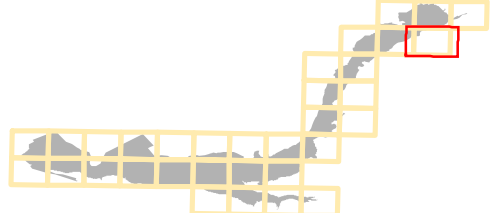
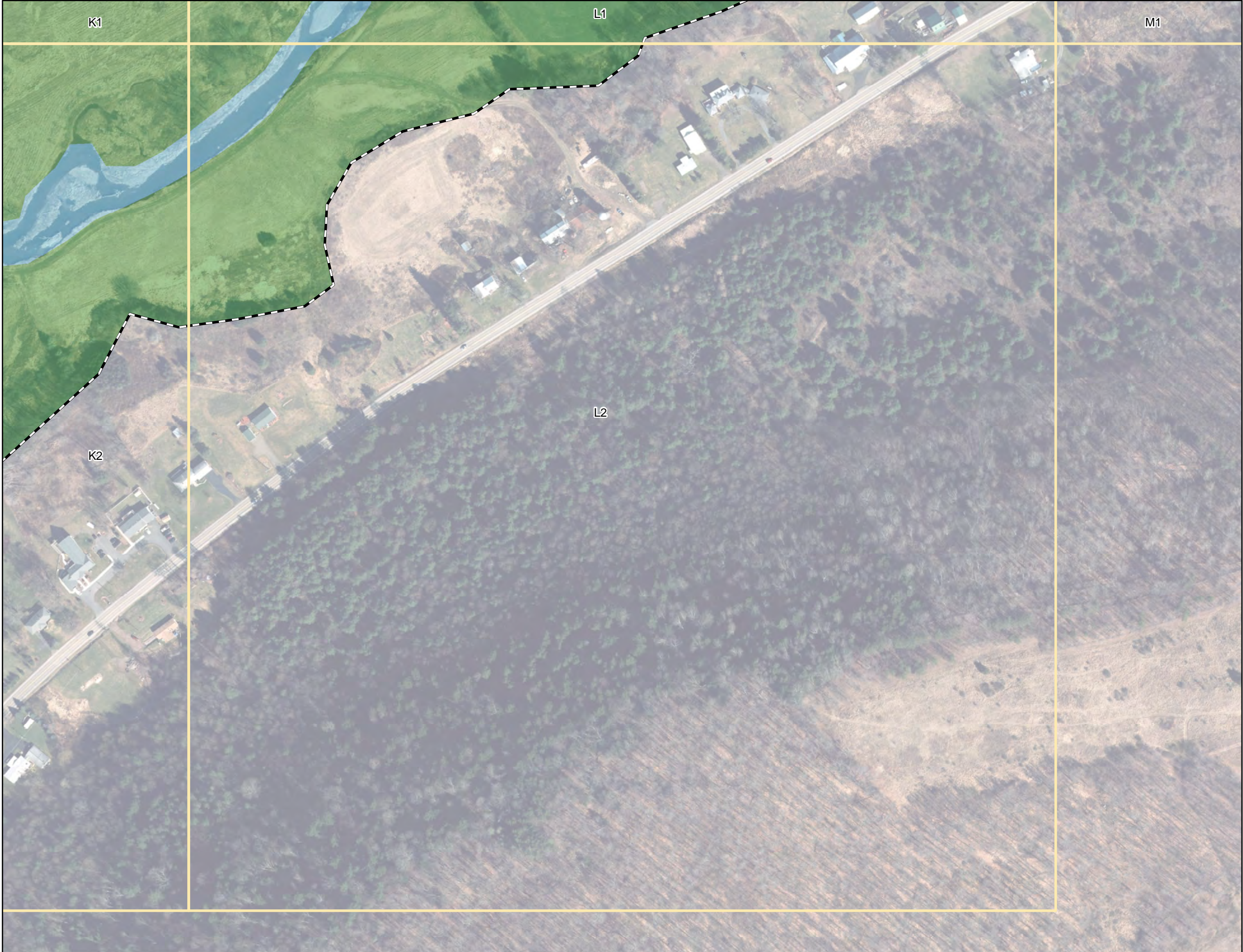
 Site Boundary

 Grid

### Land Classification

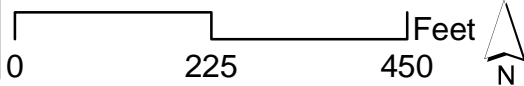
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site

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# East Sidney Lake Master Plan


## Land Classification | Grid View


### Legend

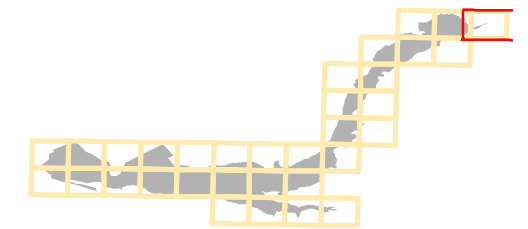
 Site Boundary

 Grid

### Land Classification

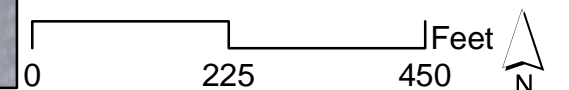
 MRML - Vegetative Management

 Water Surface - Open Recreation



Overall ESL Site

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














# East Sidney Lake Master Plan

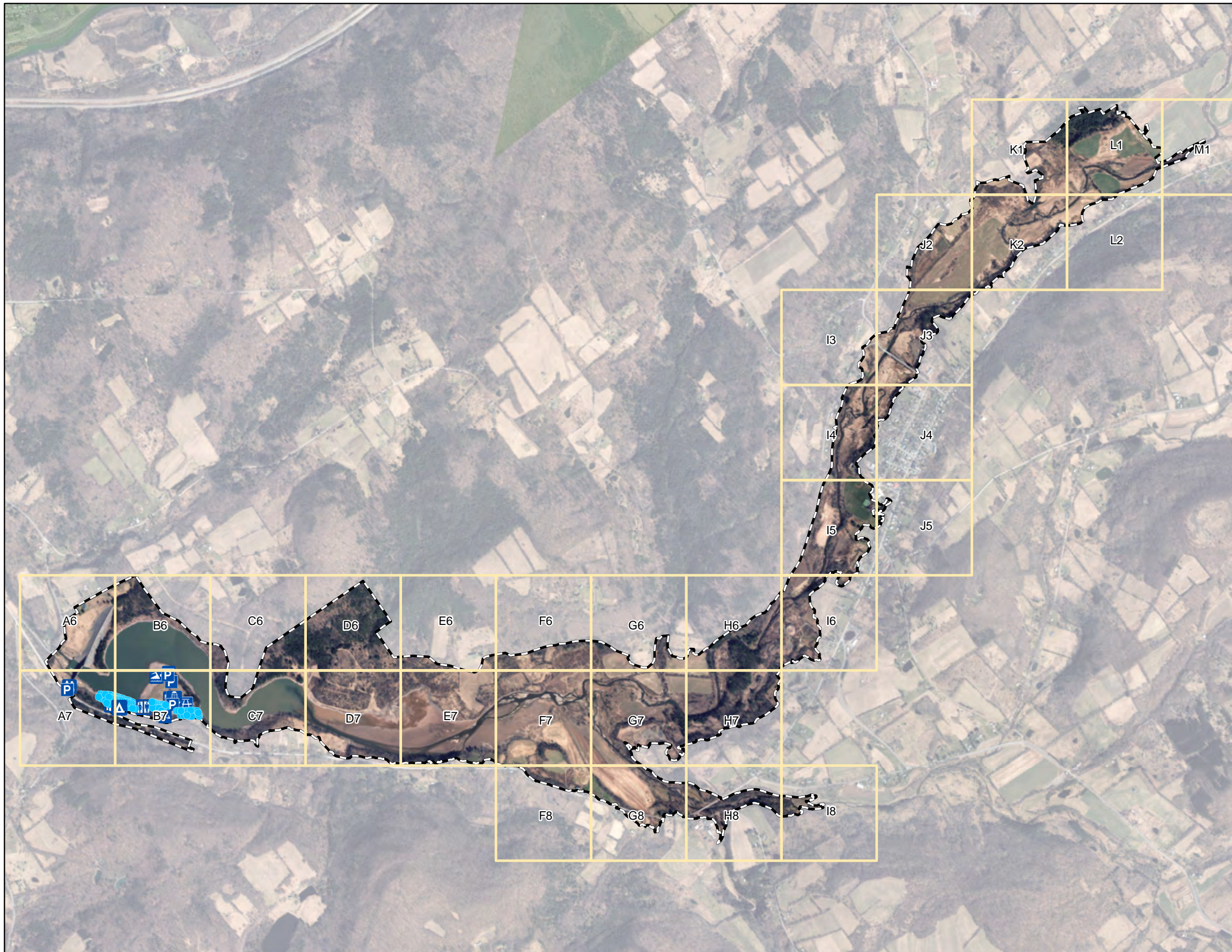
## Recreation Assets | Grid View

### Legend

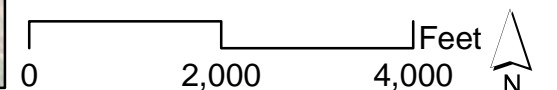
-  ESL\_Boundary
-  Grid

### Recreation Assets

-  Beach
-  Boat Launch
-  Overlook
-  Parking
-  Pavilion
-  Playground
-  Primitive Camping Area
-  RV Campsite
-  Restroom Facility
-  Shower House




Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# East Sidney Lake Master Plan

## Recreation Assets | Grid View

### Legend

 ESL\_Boundary

 Grid

### Recreation Assets

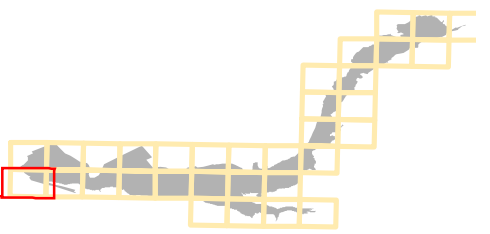
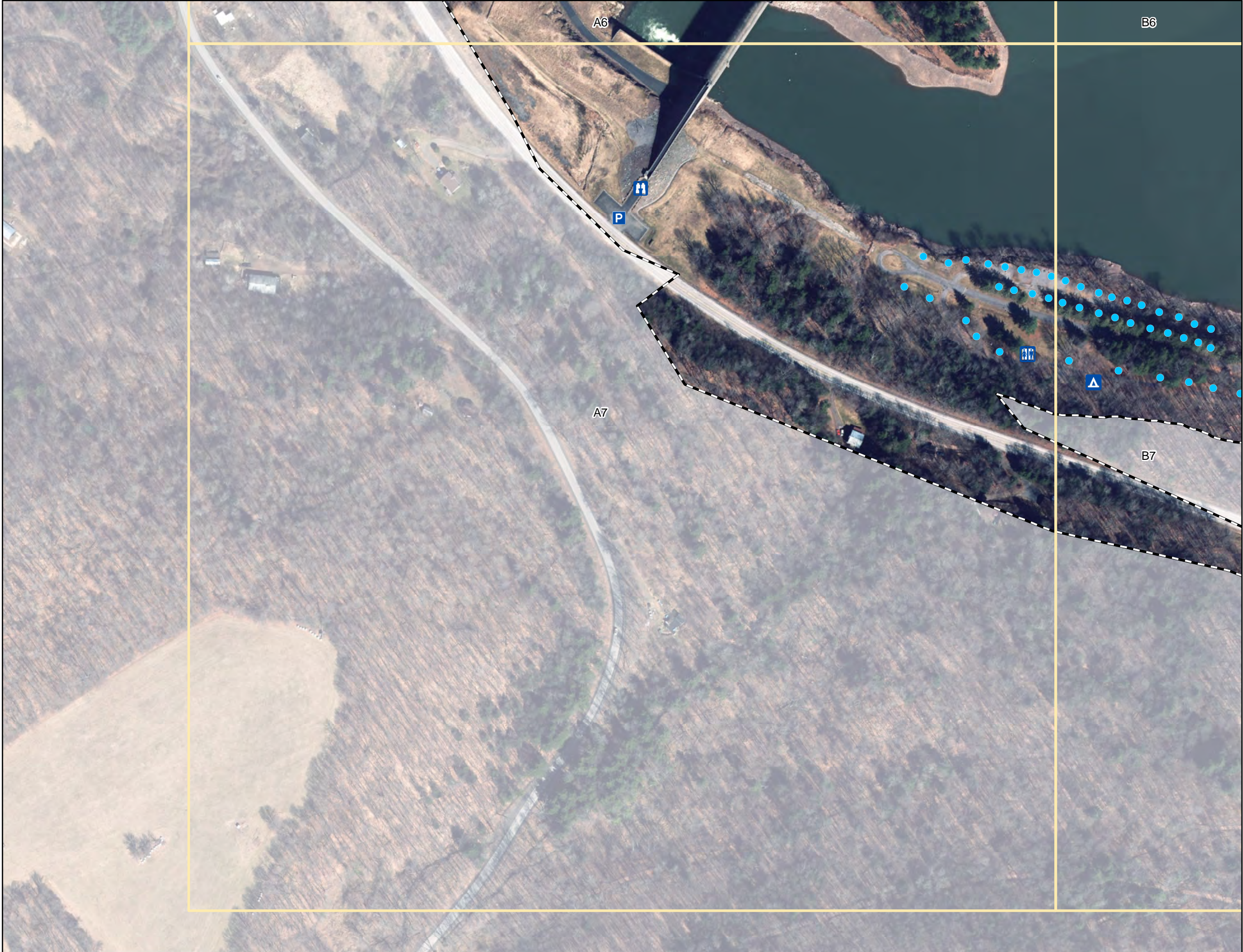
 Overlook

 Parking

 Primitive Camping Area

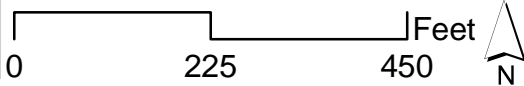
 RV Campsite

 Restroom Facility



Overall ESL Site


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# East Sidney Lake Master Plan










## Recreation Assets | Grid View

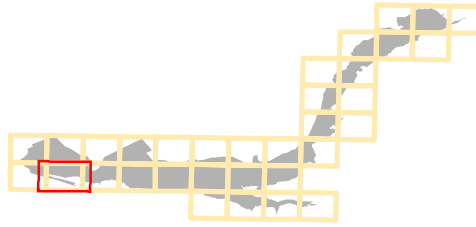
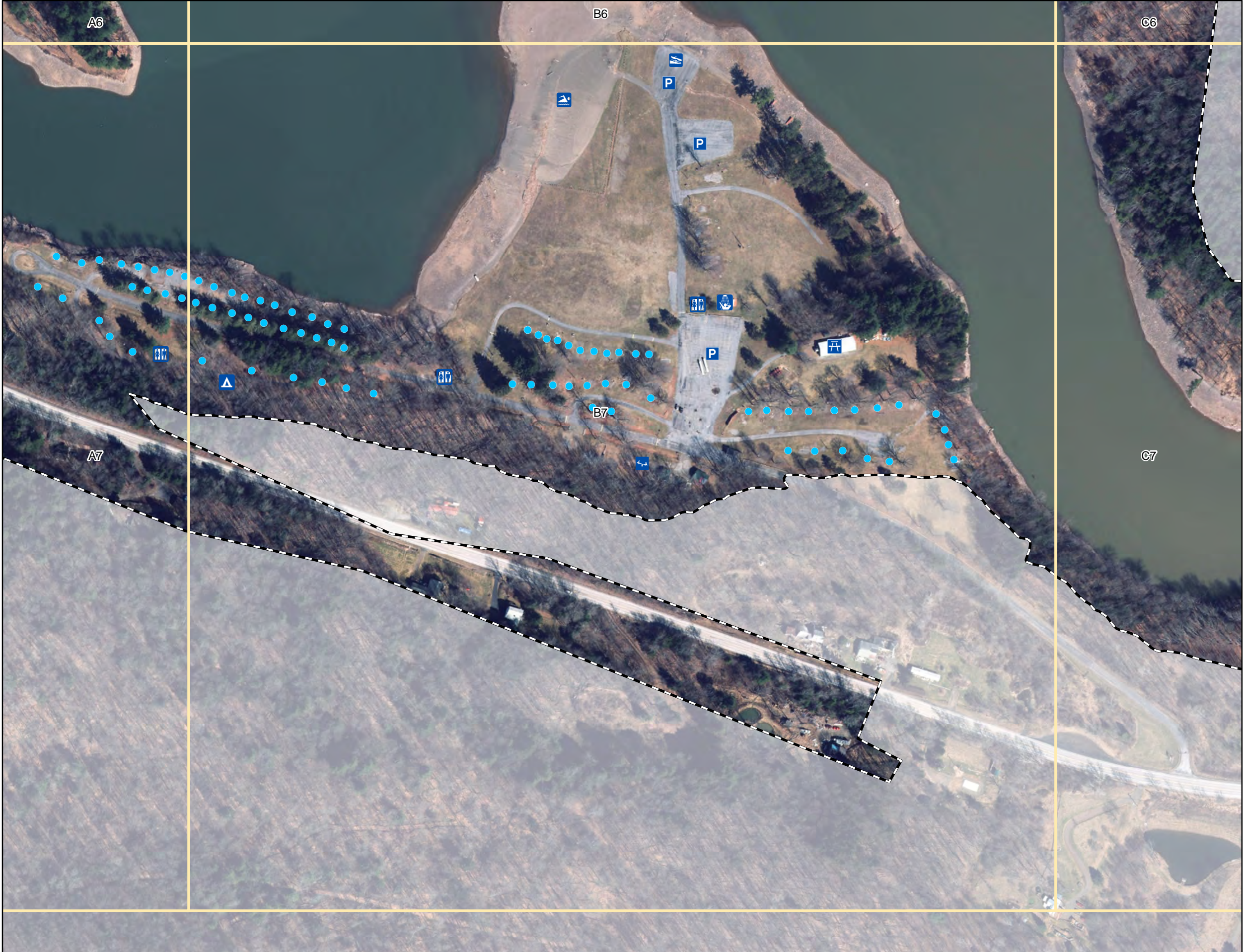
### Legend

 ESL\_Boundary

 Grid

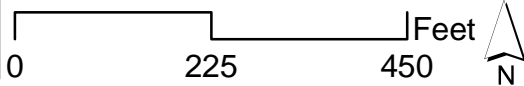
### Recreation Assets

-  Beach
-  Boat Launch
-  Parking
-  Pavilion
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-  Primitive Camping Area
-  RV Campsite
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Overall ESL Site

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Draft Submittal  
March 2019

