

# Bismarck Conservation Area

## Fifteen-Year Area Management Plan FY 2019-2033



John Tuttle

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Forestry Division Chief

12/7/2018

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Date

## Bismarck Conservation Area Management Plan Approval Page

### PLANNING TEAM

Becky Fletcher, Resource Forester

Tyler Harding, Conservation Agent

Bruce Henry, Natural History Biologist

Bridget Jackson, Education Consultant

Mark McLain, Wildlife Management Biologist

Julie Norris, Private Land Conservationist

Mike Reed, Fisheries Management Biologist

Mike Darnell, Design and Development

### SOUTHEAST REGION

RCT Chair

Matt Bowyer

11/16/2018

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Date*

### FORESTRY DIVISION

Forest Management Chief

Justine Gartner

12/2/2018

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*Signature*

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*Date*

## OVERVIEW

- **Official Area Name:** Bismarck Conservation Area, # 6112
- **Year of Initial Acquisition:** 1981
- **Acreage:** 1,188 acres
- **County:** St. Francois, Iron, Washington
- **Region:** Southeast
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
  - A. Strategic Direction**

Manage and conserve the areas natural resources and provide compatible recreational public use opportunities. Manage DiSalvo Lake as a quality fishery, in accordance with the resources available and public interest.
  - B. Desired Future Condition**

The desired future condition of Bismarck Conservation Area (CA) would be a healthy aquatic ecosystem, healthy forest, and restored woodlands and glades.
  - C. Federal Aid Statement**

N/A

## GENERAL INFORMATION AND CONDITIONS

### I. Special Considerations

- A. Priority Areas:** St. Francois Knobs Glades and Woodlands – Glade Conservation Opportunity Area, Priority Forest Landscape
- B. Natural Areas:** None

### II. Important Natural Features and Resources

- A. Species of Conservation Concern:** None observed.
- B. Caves:** None
- C. Springs:** None
- D. Other:** Occurs mainly in the St. Francois Dolomite Glade/Oak Woodland Basins Landtype Association with a small part of the St. Francois Igneous Glade/Oak Forest Knobs Landtype Association. This landtype association consists mainly of low, flat to rolling lands in between igneous knobs. The soils are shallow to deep alfisols, relatively chert free, formed in loess and clayey dolomite residuum. The landtype association consists of prominent, broadly rounded igneous knobs with boulder strewn side slopes. Narrow shut-ins of igneous rocks on streams are common (Nigh & Schroeder, 2002).

**III. Existing Infrastructure**

- Three parking lots (Americans with Disabilities Act [ADA] accessible)
- Fishing jetty (ADA accessible)
- Concrete boat ramp with courtesy dock
- Privy (ADA accessible)
- Campground with four sites
- DiSalvo Lake (210-acre fishing lake)
- Three picnic tables and grills
- Concrete dam

**IV. Area Restrictions or Limitations**

- A. Deed Restrictions or Ownership Considerations:** None
- B. Federal Interest:** Federal funds may be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.
- C. Easements:** None
- D. Cultural Resources Findings:** No known cultural resources.
- E. Endangered Species:** None observed.
- F. Boundary Issues:** None

**MANAGEMENT CONSIDERATIONS**

**V. Terrestrial Resource Management Considerations**

Bismarck CA contains approximately 878 acres of forests and woodlands. The majority of those acres consist of upland oak/hickory woodlands on shallow igneous soils. There is also a unique wet-mesic bottomland forest located near the headwaters of DiSalvo Lake, which consists mainly of pin oak and swamp white oak. Wildlife habitat exists with scattered tree cavities, dead snags, and brushy areas for cover or nesting, and there are a variety of native forest plants for wildlife food.

The forested acreage is split into two general compartments:

- **Compartment 1 (north):** The forest/woodland on the north side of DiSalvo Lake consists of a mix of timber sizes, with most trees between 10 inches and 20 inches in diameter at breast height. There is a large glade/woodland complex on the igneous knob. It is currently being restored to its original plant community.
- **Compartment 2 (south):** The forests on the south side of DiSalvo Lake developed after heavy cutting in the past, and have been exposed to repeated wildfires, many caused by sparks from the railroad. The forest/woodland consists mainly of

scattered larger overstory trees, and a thick mid-story and sapling layer. Declining and storm-damaged trees are present. There are a couple of igneous glades scattered on the upper southern and western slopes, and a bottomland forest in the wetter areas. The bottomland forest was damaged by an ice storm in 2008 and is recovering.

Bismarck CA also contains nearly 66 acres of open land, much of which is either planted food plots or fields of mixed grasses and forbs. Soils in these open areas vary in depth, rockiness, and fertility. This open land creates food, cover, and edge habitat for many wildlife species and offers good hunting opportunities.

**Challenges and Opportunities:**

- 1) Forest management on the southern compartment is difficult due to access issues. Most of that compartment is only accessible by boat or by seeking permission from neighboring private landowners.
- 2) Invasive plants are an issue on this area. Plants like Johnson grass, sericea lespedeza, and autumn olive have proven difficult to eradicate. These invasive plants are not as healthy for area wildlife as the native plants that they displace.
- 3) Maintaining fields and food plots can be difficult when soils are too wet to allow access by tractors, mowers, and other equipment.

**Management Objective 1: Maintain healthy forest and woodlands ecosystems.**

Strategy 1: Monitor for invasive vegetation, tree diseases, and insect problems. Control any pest or disease problems using appropriate management methods. (Forestry)

Strategy 2: Continue to improve and maintain glade habitat using appropriate management methods. (Forestry, Wildlife)

Strategy 3: Conduct forest inventories, prior to implementing forest management practices, to determine the health of the forest and woodland. Implement forest inventory prescriptions to improve timber quality, wildlife habitat, and native plant communities. (Forestry)

**Management Objective 2: Maintain open land fields for wildlife and recreation.**

Strategy 1: Construct brush piles near field edges as appropriate. (Wildlife, Forestry)

Strategy 2: Monitor and control invasive species. (Forestry, Wildlife)

Strategy 3: Continue to provide or maintain wildlife food plots as appropriate. (Forestry, Wildlife)

**Management Objective 3: Maintain the wet-mesic bottomland forest community.**

Strategy 1: Identify distribution of unique plants. (Wildlife, Forestry)

Strategy 2: Develop management strategies to encourage oak regeneration while protecting sensitive areas. (Forestry)

## **VI. Aquatic Resource Management Considerations**

The 210-acre DiSalvo Lake has a 47:1 drainage ratio (acreage of watershed to surface area of lake). It is an extremely shallow lake with a maximum depth of 15 feet. The entire upper one-third of the lake is less than 4 feet deep, with a wide shallow shoreline featuring exposed stumps in the upper reaches.

The lake impounds the headwaters of the St. Francois River. This has become a very popular fishing lake.

### **Challenges and Opportunities:**

- 1) Historically the lake supported an abundant and diverse macrophyte (aquatic plant) community, due to the shallowness of the lake. Problem plants were lotus, coontail, Eurasian water milfoil (an invasive species), and curly leaf pond weed (an invasive species). Repeated aquatic herbicide treatments and limited stockings of grass carp have reduced floating-leaved and submerged aquatic vegetation significantly. Lotus abundance and distribution remains an ongoing management challenge.
- 2) The lake has a reputation as a quality sunfish and trophy bass fishing lake. Predominant sport fish are largemouth bass, channel catfish, and crappie. Non-game fish include red-ear sunfish, bluegill, common carp, gizzard shad, spotted sucker, and bullhead catfish. The lake experiences moderate to high fishing pressure.
- 3) The fishing ramp can be difficult to use due to the shallowness of the water. When the water level is low, it can be difficult to unload larger boats from a boat trailer on the ramp. Also, due to high use, there is often a wait to use the boat ramp.
- 4) Fishing from the banks can be difficult during the summer months, due to vegetation on the shoreline and in the water.

**Management Objective 1: Maintain an adequate riparian corridor around the lake and along streams.**

Strategy 1: Management of natural resources in the riparian areas will follow best management practices, as outlined in *Missouri Watershed Protection Practice Recommended Practices for Missouri Forests: 2014 Guidelines for Maintaining Forested Watersheds to Protect Streams* (Missouri Department of Conservation, 2014). (Forestry, Fisheries)

**Management Objective 2: Manage aquatic vegetation so that a balance is maintained between necessary fish and wildlife habitat, and fishing access.**

Strategy 1: Control the amount of aquatic vegetation, using appropriate management methods. (Fisheries)

Strategy 2: Investigate the possibility of dredging parts of the lake to make it deeper. (Design and Development, Fisheries)

**Management Objective 3: Continue to manage the lake for quality sports fishing opportunities.**

Strategy 1: Monitor sport fish populations using various population survey methods and manage the fish populations as appropriate. (Fisheries)

**VII. Public Use Management Considerations**

**Challenges and Opportunities:**

- 1) Public use at Bismarck CA is increasing. This trend is likely to continue as the populations in the surrounding communities increase.
- 2) Continuing to provide and maintain quality public fishing and other recreational opportunities is very important. Continue enforcing area regulations to deter any illicit uses of the area (vandalism, target shooting, drug use, etc.).
- 3) Maintaining the current infrastructure, such as the boat ramp, campground, and jetty.

**Management Objective 1: Continue to provide and improve recreational opportunities.**

Strategy 1: Maintain the area grounds, ensuring that trash is picked up, mowing is done, and posted signs are in good condition. (Forestry)

Strategy 2: Monitor infrastructure for needed maintenance. (Design and Development, Forestry)

Strategy 3: Look into ways of increasing shoreline fishing access. (Fisheries, Forestry)

**Management Objective 2: Improve educational and interpretive opportunities.**

Strategy 1: Communicate to the public recreational opportunities (e.g., using brochures, Atlas database). (Forestry, Outreach and Education)

Strategy 2: Communicate to the public the uniqueness of the area to facilitate as a possible destination for ecology classes, school programs, and workshops. (All Divisions)

**Management Objective 3: Facilitate a good working relationship with neighboring landowners.**

Strategy 1: Work with neighbors to minimize any boundary, trespass or any other issues affecting Bismarck CA or adjacent private property.

**VIII. Administrative Considerations**

**Challenges and Opportunities:**

- 1) Maintain area infrastructure at current levels.
- 2) Consider land acquisition, when available and beneficial.

**Management Objective 1: Maintain area infrastructure in accordance with the Department guidelines.**

Strategy 1: Inspect area infrastructure regularly and keep in good repair, as needed. (Design and Development, Forestry)

Strategy 2: Maintain area boundaries as necessary. (Forestry)

**Lands Proposed for Acquisition:**

When available, adjacent land may be considered for acquisition from willing sellers. Tracts that improve area access, provide public use opportunities, contain unique natural communities and/or species of conservation concern, protect the watershed, or meet other Department priorities, as identified in the annual Department land acquisition priorities, may be considered.





## APPENDICES

### Area Background:

Bismarck Conservation Area was purchased in 1981, using Missouri Department of Conservation (Department) funds, to provide a quality fishery for the public. The conservation area is located in St. Francois, Iron, and Washington counties, approximately 3 miles south of the town of Bismarck. The area consists of the 210-acre DiSalvo Lake, 878 acres of forest and woodland, and 100 acres of open land.

DiSalvo Lake (formerly Bismarck Lake) was constructed in 1944 by Hannah Mining Company to serve as a water reservoir for the Iron Mountain Mine. The lake is very shallow because it was originally intended to supply drinking water, and was not created as a recreational lake. The lake impounds the headwaters of the St. Francois River. The dam is 220 feet long, 30 feet tall, and 3 feet wide at the top. Due to safety concerns, the Department reinforced the dam in 1990 to comply with the State’s dam safety act.

### Current Land and Water Types:

Land/Water Type	Acres	% of Area
Forest/Woodland	878	74
Lake	210	18
Open Land	66	6
Glades	32	2
Infrastructure	2	<1
<b>Total</b>	<b>1,188</b>	<b>100</b>

### Public Input Summary:

The draft Bismarck Conservation Area Management Plan was available for a public comment period Nov. 1–30, 2017. The Missouri Department of Conservation received comments from four respondents (Appendix A). The Bismarck Conservation Area Planning Team carefully reviewed and considered these ideas as they finalized this document. A brief summary of public input themes, including how they were incorporated or why they were not, can be found below. Rather than respond to each individual comment, comments are grouped into general themes and are addressed collectively.

Department responses to themes and issues identified through the Bismarck Conservation Area Management Plan public comment period.

### Appreciates the boat ramp.

The Department appreciates the help and support of our Missouri citizens and all our visitors.

**Appreciates that gas motors are allowed on the lake.**

DiSalvo Lake is a great place for recreation as well as protection of fish habitat. Minimizing damage and conflicts between people using the area is of importance. As long as allowing gas motors on the lake is not causing serious issues, we are glad to allow the use.

**Suggests adopting a no-wake rule for all boats (not just boats over 10 horsepower).**

The no-wake rule for boats over 10 horsepower is a statewide regulation applied to many small impoundments. It is intended to keep boats with large motors from creating large wakes, which might be detrimental to other small boats in the area. We hope all boat operators will show respect for fellow boaters. Creating a more restrictive rule for a few discourteous boaters seems unnecessary at this time.

**Opposes dredging/altering the lake because of concerns that fish habitat would be harmed, wetland hunting opportunities would diminish, and migratory birds would suffer.**

Any dredging project would be designed by a fisheries biologist with the intent of improving angler access and fish habitat. If dredging occurred, it would only occur in small select areas, such as near the boat ramp, and not the entire lake. Wetland hunting opportunities would not be affected.

**Suggests expanding the boat ramp (e.g., adding/extending boat lanes) to accommodate boat traffic at the area and prevent boats from dropping off the concrete ledge.**

We are currently looking into this possibility, as funding allows. Currently, the shallowness of the lake prevents a longer or deeper ramp from being installed. Unfortunately, that means that when the water level is low, vehicles have to back down the ramp farther. We have added gravel to the end of the ramp and will continue to do so. A permanent solution to the lake depth at the boat ramp would need to be worked out before another boat ramp could be constructed.

**Suggests adding a hiking trail to the conservation area.**

We will look into the possibility of adding a hiking trail, as time and budgets allow.

**Suggests planting a perennial food source for ducks in all the ponds.**

Currently, there are no ponds on Bismarck CA. There are small pools created by the lake and creek during certain times of the year. The area habitat already provides many natural food sources for ducks and other wildlife.

**Suggests liming the fields and hedge rows.**

For the few small food plots on the area, it is not really cost-effective to lime the fields. The yield is sufficient for the wildlife that use these areas. Fields of native warm-season grass already thrive on the area. Crop rotation and addition of legumes like clover help add nitrogen back into the soil, which also helps productivity.

**Suggests banning the use of lead shot at the area.**

Nontoxic shot is presently required for use by all waterfowl hunters.

**Suggests making the objectives in this plan more specific.**

Missouri Department of Conservation area management plans are strategic-level plans that guide management at a broad level. These plans document strategies for natural resource management and public use on conservation areas. Conservation area plans also help communicate an area's purpose and management direction to staff and interested citizens. If you have questions or concerns about any of our conservation goals on this area, please contact the area manager directly to discuss them.

**References:**

Missouri Department of Conservation. (2014). *Missouri watershed protection practice recommended practices for Missouri forests: 2014 management guidelines for maintaining forested watersheds to protect streams*. Jefferson City, MO: Conservation Commission of the State of Missouri.

Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Jefferson City, MO: Missouri Department of Conservation.

**Maps:**

Figure 1: Area Map

Figure 2: Aerial Map with Land Cover

Figure 3: Topographic Map

**Additional Appendices:**

Appendix A: Bismarck Conservation Area Management Plan Public Comments

Figure 1: Area Map

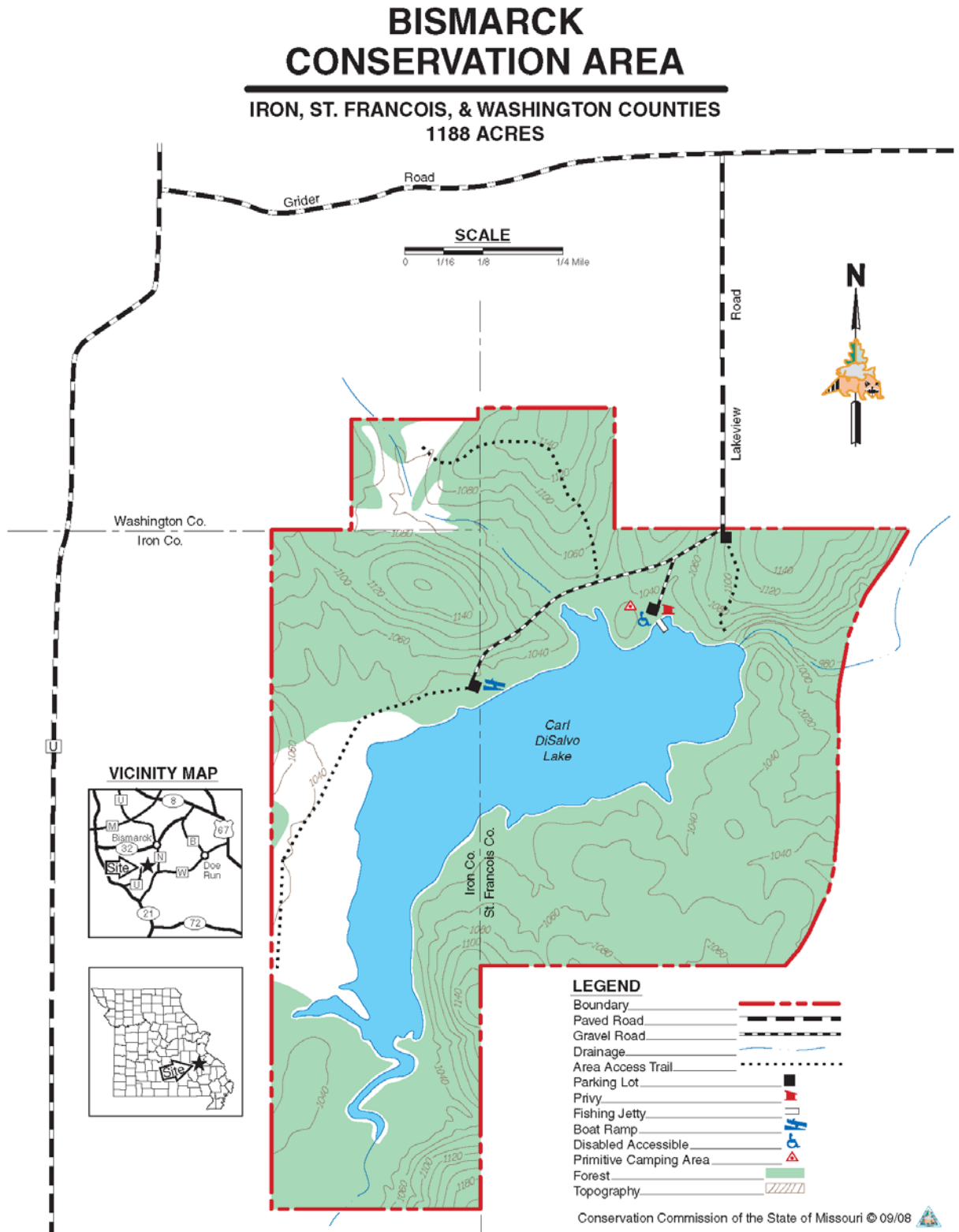
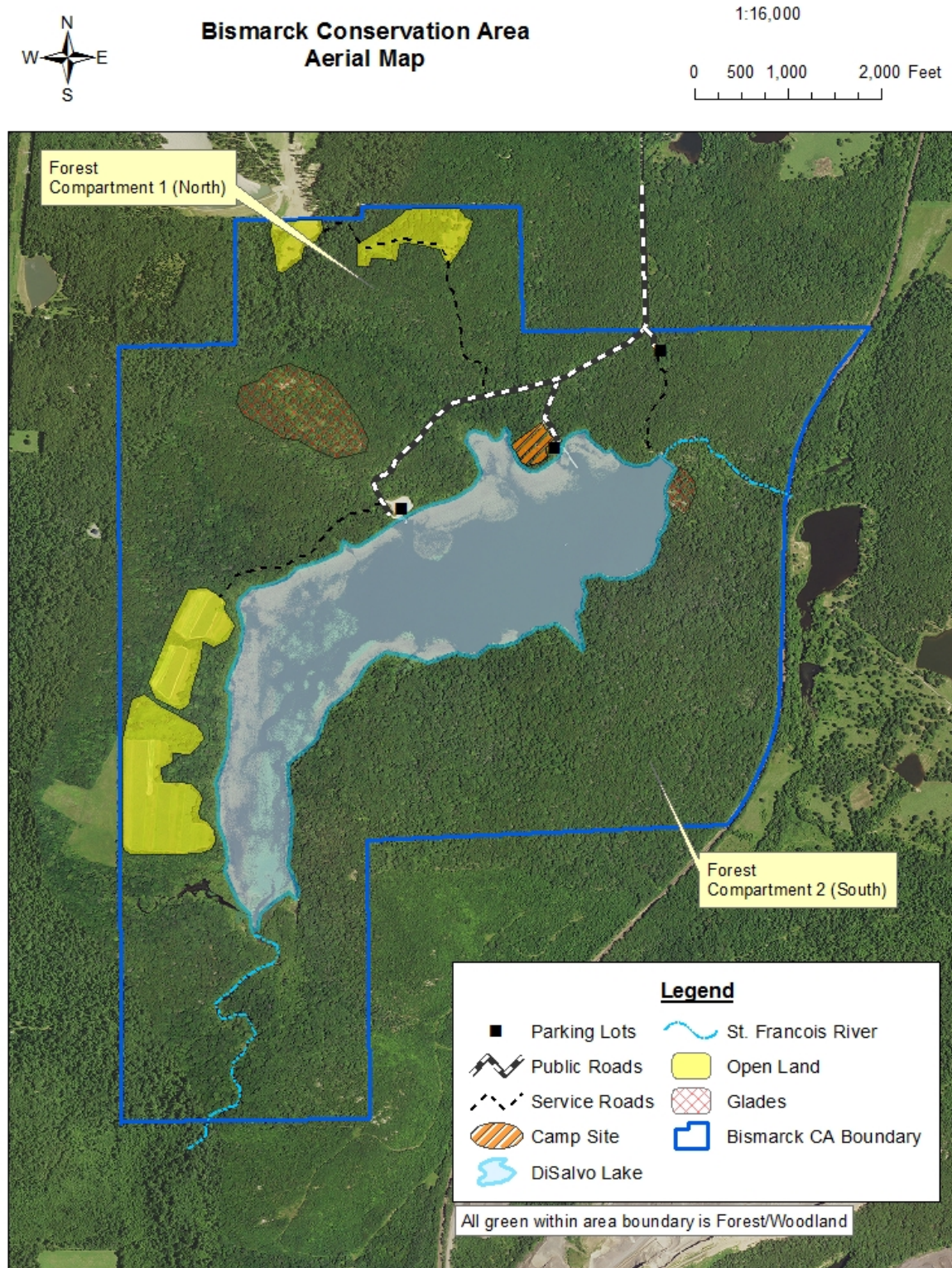


Figure 2: Aerial Map with Land Cover





**Appendix A: Bismarck Conservation Area Management Plan Public Comments**

Received during public comment period (Nov. 1–30, 2017):

I like that this lake has a nice boat ramp and that boats are allowed to use gas motors. I also think the no wake rule should apply to all boats not just ones over 10 hp. I would not support dredging the lake as it would mess up fish habitat. The most dredging I would do would be a couple boat lanes. A hiking trail would be nice.

plant food for ducks that will grow year after year in all the ponds lime the fields and hedge rows no lead shot

I believe your objectives are far to non-specific. As you identified there is already a tremendous bass / bluegill population (better than most). I am totally against the dredging or any interference of the lake ecosystem as the result of interference in existing system could not improve from the lakes current state. in addition the surrounding wetland areas and related public hunting opportunities are constantly being diminished as we are currently experiencing from the US Forest Service draining Crane Lake (20 mile) and Palmer Lake (22 mile) within the last 5 years. Migratory birds are continuing to suffer from the human interference in our community lakes from land management organizations what has for 50+ years provided public and wildlife use at peak performance. Impact that would benefit from an Area plan would be an extended and multi lane boat ramp as i have waited in a line 10+ boats long to launch many times. The Bismarck Lake Area currently receives high traffic use and that is not from random day trips, it is very popular to both wildlife and human use and interference to the current habitats will only diminish use and provide another conservation area abandon by sportsman and create another non-use area for criminal intervention.

Need to fix boat ramp. If you back boat in the trailer drops off a concrete ledge. One guy tore his axle out of trailer. I had to get in water and pick up trailer while my buddy pulled up.