

**Application for Non-Capacity Amendment of the FERC Project
Boundary for Island Lake Reservoir, Fish Lake Reservoir, and
Whiteface Reservoir Developments within the St. Louis River
Project**

**St. Louis River Project
FERC Project No. 2360**

**Submitted by:
Minnesota Power
30 West Superior Street
Duluth, MN 55802**

1 EXECUTIVE SUMMARY

ALLETE, Inc., doing business as Minnesota Power (MP), Licensee for the St. Louis River Project (SLRP) No. 2360, is proposing to amend the Federal Energy Regulatory Commission (FERC) Project Boundary for the SLRP's Island Lake Reservoir, Fish Lake Reservoir, and Whiteface Reservoir (collectively the "reservoirs"). This amendment is needed to more accurately reflect the lands currently needed for project operations and maintenance, as well as other project purposes. Other project purposes include recreation, shoreline control, and protection of environmental resources.

The current Project Boundary for the reservoirs was established in 1991. At that time, the Project Boundary encompassed lands including areas containing or adjacent to key project structures (dams, inlets, etc.), recreation areas, environmental areas, and cultural resource areas. As the project has evolved over the past thirty years, MP has determined that additional lands should now be included in the Project Boundary for these reservoirs, while other lands should be removed from the project.

The lands to be added to the Project Boundary include lands used for both operational and other project purposes. Approximately 92 acres of undeveloped lands are proposed to be included near the Island Lake Reservoir dam outfall area along the Cloquet River, as well as 169 acres downstream of the North Dike on Island Lake Reservoir. An additional 57 acres of undeveloped land around Fish Lake Reservoir and approximately 151 acres of undeveloped lands around Whiteface Reservoir are also proposed to be included in the amended Project Boundary. These additional 468 acres of lands, of which 193 acres are wetlands, will be added to the Natural Character Areas (NCA) of the Project Boundary for scenic uses and protection of environmental resources. These lands are undeveloped and currently managed for environmental benefits. Based upon a 2020 evaluation of these lands, MP now deems it necessary and appropriate to include these in the FERC Project Boundary.

Some non-project purpose lands are proposed to be removed from the Project Boundary. These lands are not needed for operations, maintenance, or other project purposes. Specifically, MP proposes to revise the upland project boundary to remove lands currently used solely for private residential use by MP's leaseholders. MP is proposing to remove these residential lands, while preserving an upland buffer area within the project boundary to ensure adequate shoreland protection. If approved by the FERC, MP intends to offer most of these residential lands for sale to current leaseholders, as they serve no current or future Project purpose.

MP anticipates no changes to other requirements or obligations in FERC License #2360 if the proposed Project Boundary adjustments are approved. MP already has extensive lands for other project purposes reserved within SLRP (i.e. environmental, recreational, and cultural lands and sites), and those lands will either be added to (i.e. the proposed NCA additions) or remain unchanged as a result of this Project Boundary adjustment.

There are no proposed changes to lands within the revised Project Boundary which are used for public recreation. MP's extensive recreational program in the SLRP provides ample opportunity for

recreation, including boat launches, campsites, trails, and large swaths of Natural Character Areas. These areas and amenities will continue to remain available for environmental protection and recreational use and enjoyment.

MP also has an extensive and well-developed cultural resources and historic preservation program. Any lands considered to be, or potentially eligible for, the National Register of Historic Places will remain in the Project Boundary and are not included in this proposed amendment.

Due to the multiple benefits of this Project Boundary adjustment, MP believes this Project Boundary adjustment is appropriate and should be approved by the FERC.

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2 INTRODUCTION & PURPOSE OF THE LICENSE AMENDMENT

ALLETE, Inc., doing business as Minnesota Power (MP), Licensee for the St. Louis River Project No. 2360 (SLRP), pursuant to 18 C.F.R. § 4.201, is applying to the Federal Energy Regulatory Commission (FERC or Commission) for a non-capacity related amendment. The purpose of this application is to request an amendment to the Project Boundary for Island Lake Reservoir, Fish Lake Reservoir, and Whiteface Reservoir within the SLRP. This includes addition of lands currently not within the Project Boundary and the removal of lands not needed for operational, maintenance, or other project purposes.

The SLRP consists of four hydroelectric developments and five headwater storage reservoirs. During the last relicensing in 1991, the project boundary was constructed to encompass all of the principle project works as well as lands needed for other project purposes. Other project purposes included recreation facilities, the Boulder Lake Management Area (BLMA), and some of the areas designated as Natural Character Areas (NCA).

Lands proposed to be retained or added to the Project:

All principle projects works included in the current project boundary would remain, with several additions for downstream areas from existing principle project works that have undergone recent upgrades.

Lands used for other project purposes which are currently included in the Project Boundary are extensive. Currently, a total of 2311 acres of land around the SLRP is reserved and managed as NCAs. This includes 772 acres around Fish Lake Reservoir, 255 acres around Whiteface Reservoir, 592 acres around Rice Lake Reservoir, 674 acres around Island Lake Reservoir, 15 acres around Thomson Reservoir and 3 acres around Scanlon Hydro Station. In addition to the NCAs, there is approximately 3000 acres of land surrounding SLRP's Boulder Lake Reservoir that is managed as part of the Boulder Lake Conservation Area (BLCA). All of these lands will remain within the Project Boundary.

As part of this application, MP has reviewed other MP owned undeveloped lands near the Project that are not currently in the Project Boundary. Because these undeveloped lands would enhance the other project purposes such as recreation, shoreline control, or protection of environmental resources, MP is proposing to add these undeveloped lands into the Project Boundary and manage them as NCAs. With MP's proposed Project Boundary adjustment, approximately 468 acres of undeveloped land (NCA) will be added to the Project Boundary.

Island Lake Reservoir: From 2015 to 2020, significant work occurred to improve spill capacity on Island Lake Reservoir including work on the dam's waste gates and on the North Dike. Based on an analysis of these areas and a revised understanding of what lands would be appropriate for inclusion in the

Project Boundary, MP proposes adding additional land downstream from both areas encompassing approximately 92 acres below the dam and approximately 169 acres below the North Dike Area.

Fish Lake Reservoir: An additional 57 acres of undeveloped mixed wetlands and forested area are proposed to be added to the Project Boundary on Fish Lake Reservoir.

Whiteface Reservoir: An additional 151 acres of undeveloped mixed wetlands and forested area are proposed to be added to the Project Boundary on Whiteface Reservoir. In order to more clearly define the Project Boundary, approximately 118 acres around Skunk Creek near the dam are proposed to be removed at Whiteface Reservoir. The lands proposed to be removed are residential and not needed for project purposes. The lands proposed to remain in this area are being retained for project operation, safety, and maintenance purposes.

All recreation sites, as well as existing NCAs and BLMA lands will remain in the Project Boundary. See Figures 4, 10, and 16 for more details.

Lands proposed to be removed from the Project:

As the Commission states in *Brazos River Authority*, 124 FERC ¶ 61,253, as a general matter it is Commission policy that lands used for private residential development should not be included within the Project Boundary unless the lands are clearly needed for project purposes.

Currently, a portion of residential lease lots on Island, Fish, and Whiteface Reservoirs are included in the Project Boundary. This portion of the residential lease lots within the Project Boundary is generally defined as a strip of land that is 25' or 75' horizontal feet landward from the full pool elevation, a.k.a. maximum operating level. These lands are used exclusively for residential use, and other than the shoreline, serve no operational, maintenance, or other Project purpose.

With this non-capacity Project Boundary amendment application, MP is proposing to adjust the horizontal setback for residential lease lots on the reservoirs to three horizontal feet landward. The revised Project Boundary will continue to include upland buffer space between the full pool elevation and lands currently used for private residential purposes. The lands proposed to be removed do not serve any Project recreational purpose other than to the existing leaseholder. This use would remain unchanged.

The removal of that portion of the existing lease lots would result in a decrease of 125 acres of residential property on Island Lake Reservoir, 18 acres of residential property on Fish Lake Reservoir, and 48 acres on Whiteface Reservoir. This decrease in acreage is the result of the proposed amendment to adjust the Project Boundary to three horizontal feet landward from full pool; no other lands are proposed to be removed. No new leases are being proposed as part of this amendment application.

When the lands proposed to be added to the Project Boundary are accounted for, the total change to the Project Boundary results in an approximate net increase of 423 acres. More importantly, the

revised footprint provides a more detailed and accurate Project Boundary that accounts for current and future Project operational, maintenance, recreational, and environmental uses and Project needs. Furthermore, MP already owns all lands within the planned Project Boundary adjustment.

Based on the extensive knowledge of these lease lots, MP feels there will be no effect to existing recreational or environmental Project uses by adjusting the Project Boundary for the residential lease lots. The only Project needs for land in this area are at the shoreline, which along with the proposed buffer area will remain within the Project Boundary. FERC environmental requirements for this shoreline area will subsequently remain unchanged, providing continued protection for the shoreline area.

Additionally, the State of Minnesota and St. Louis County have extensive, multi-layered environmental protections in place to ensure shorelands in the SLRP are protected. Those additional protections will also remain unchanged as a result of this Project Boundary adjustment. The St. Louis County Shoreline Management Guide describes the environmental protections required by the State and County, which are extensive and in alignment with FERC objectives for shoreland management. The St. Louis County Shoreline Management Guide is included in Appendix 1.

Lands within the revised Project Boundary will remain open to the public for recreational purposes, including the retention of all FERC-approved recreation sites. MP's extensive recreational program in the SLRP already provides ample opportunity for recreation, including boat launches, campsites, trails, and large swaths of NCAs. These amenities will continue to remain available with no changes proposed.

MP also has an extensive, well-developed cultural resources and historic preservation management program. As stated previously, any lands -- including residential leases -- eligible for NRHP currently within the existing Project Boundary will remain within the Project Boundary. MP determined these sites through Phase I archaeological surveys during the relicensing, and performed an additional Phase II evaluation in the summer of 2020. As a result, eight lease lots are considered possibly eligible for NRHP; those lots will remain in the Project Boundary.

Summary: The proposed Project Boundary adjustment will simultaneously include all lands needed for current project purposes, while excluding lands not needed for project purposes. The lands proposed to be excluded from the Project Boundary are used exclusively for private residential use, and do not serve an operational, maintenance, or other project purpose. Furthermore, because buffer space around the shoreland remains for the lease lots, there will be no effect to environmental or recreational project uses or existing local, state, or federal protections. Finally, because MP is not proposing to remove lands eligible for NRHP, there will be no effect to cultural or historical resources as a result of this Project Boundary adjustment.

If approved, the Project Boundary will be both larger and be a more accurate reflection of current and future Project uses and needs. The current Project Boundary encompasses approximately 2109 acres of land around Island Lake Reservoir, 1452 acres around Fish Lake Reservoir, and 1280 acres around Whiteface Reservoir. The proposed Project Boundary adjustment would result in a net change of an

additional 305 acres around Island Lake Reservoir, 43 additional acres around Fish Lake Reservoir, and 75 additional acres around Whiteface Reservoir. In total, the proposed Project Boundary adjustment will increase by 423 acres.

3 DESCRIPTION OF LICENSE AMENDMENT PROPOSED PROJECT BOUNDARY CHANGES

This application analyses all aspects necessary for the complete, safe and effective operation of the SLRP. It analyzes components such as shoreline property ownership, reservoir levels and operation, wildlife shoreline habitat, federal and state listed threatened and endangered resources, shoreline wetlands, recreation, and historic resources.

The updated Figures show the proposed adjusted Project Boundary and also identifies the 1991 Project Boundary for comparison. Following FERC's approval of the amendment, final updated Exhibit G for the three reservoirs will be developed and submitted.

4 DESCRIPTION OF THE AFFECTED ENVIRONMENT

4.1 SHORELINE PROPERTY OWNERSHIP

Island Lake Reservoir

Based on previous recreation FERC Form 80 surveys and observations, Island Lake Reservoir is the largest and most heavily used inland reservoir lake near Duluth, Minnesota. MP currently owns a majority of the land surrounding this reservoir. The State of Minnesota and St. Louis County each own less than ½ mile of shoreline. The balance of the land is mainly privately owned. MP currently has 630 leases around Island Lake Reservoir.

Fish Lake Reservoir

Two-thirds of the shoreline around Fish Lake Reservoir is owned by MP and approximately one-third is either private or public (State of Minnesota or St. Louis County) property. There are several areas of undeveloped land around this reservoir, including wetland areas. Most of the leased lots are residential properties, but there is also a resort and a recreation camping area for the Duluth National Air Guard. MP has 93 leases around Fish Lake Reservoir.

Whiteface Reservoir

The shoreline ownership of Whiteface Reservoir is more varied than the other two reservoirs. MP owns less than one-half of the shoreline. The rest is private or public (United States Forest Service (USFS), State of Minnesota, and St. Louis County) property. The USFS operates a campground in the Superior

National Forest on a portion of Whiteface Reservoir. The State of Minnesota has sold most of their lease lots to private individuals. These lands are mostly developed seasonal or permanent residences. There are approximately 255 acres of undeveloped NCA land within the current Project Boundary surrounding this reservoir. MP has 188 leases around Whiteface Reservoir.

4.2 RESERVOIR LEVELS AND OPERATION

The primary purpose of the headwater reservoirs of the SLRP is to provide water for wintertime generation at downstream hydroelectric generating stations. In addition, they provide water regulation to help mitigate high downstream flows and water for recreational opportunities and aquatic habitat in the reservoir and downstream.

Island Lake Reservoir

At full pool elevation of 1369.81 feet (39.5 feet stage), the surface area of Island Lake Reservoir is approximately 8,390 acres based on updated GIS calculations and the gross storage is 166,000 acre-ft as reported in the last License application.

To provide water for winter generation at downstream generating facilities, the Island Lake Reservoir is annually drafted no lower than elevation 1358.11 feet (27.8 feet stage), which equates to a drawdown of approximately 10.7 feet (81,306 acre-feet). The drawdown begins on or close to November 1 depending on natural flow conditions of the St. Louis River. The target date for the end of the drawdown is April 1.

After spring snowmelt begins and there is sufficient flow in the St. Louis River to run downstream hydroelectric developments at or near maximum turbine hydraulic capacity, the discharge from the Island Lake Reservoir is adjusted to FERC License minimum flow requirements. However, a greater discharge may be warranted for flood mitigation. The reservoir target refill elevation is 1368.81 feet (38.5 feet stage) by June 1.

After the June 1 refill elevation of 1368.81 feet has been met, the reservoir will normally be maintained between elevations 1368.61 feet and 1369.31 feet (between 38.3 feet and 39.0 feet stage). The capacity between 1369.31 feet and 1369.81 feet may be used as a buffer to mitigate downstream flows during high flow events.

Fish Lake Reservoir

At full pool elevation of 1352.42 feet NGVD (19.2 feet stage), the surface area of Fish Lake Reservoir is 3,387 acres based on updated GIS calculations and the gross storage is 40,300 acre-ft as reported in the last License application.

To provide water for winter generation at downstream generating facilities, the Fish Lake Reservoir is annually drafted no lower than elevation 1349.22 feet (16.0 feet stage), which equates to a drawdown

of approximately 2.5 feet (11,040 acre-feet). The drawdown begins on or close to November 1 depending on natural flow conditions. The target date for the end of the drawdown is April 1.

After spring snowmelt begins and there is sufficient flow in the St. Louis River to run downstream hydroelectric developments at or near maximum turbine hydraulic capacity, the discharge from the project is adjusted to the FERC License minimum flow requirements unless a greater discharge is warranted for flood mitigation reasons. The reservoir target refill elevation is 1351.72 feet (18.5 feet stage) by June 1.

After the June 1 refill elevation of 1351.72 feet (18.5 feet stage) has been met, the reservoir is normally maintained at an elevation between 1351.52 feet and 1352.02 feet (18.3 and 18.8 feet stage). The capacity between 1352.02 feet and 1352.42 feet may be used as a buffer to mitigate downstream flows during high flow events.

Whiteface Reservoir

At full pool elevation of 1453.92 feet NGVD (35.0 feet stage), the surface area of Whiteface Reservoir is approximately 4,688 acres based on updated GIS calculations and the gross storage is 81,900 acre-ft as reported in the last License application.

To provide water for winter generation at downstream generating facilities, the Whiteface Reservoir is annually drafted no lower than elevation 1448.72 feet (29.8 feet stage), which equates to a drawdown of approximately 4.2 feet (21,862 acre-feet). The drawdown begins on or close to November 1, depending on natural flow conditions. The target date for the end of the drawdown is April 1.

After spring snowmelt begins and there is sufficient flow in the St. Louis River to operate downstream hydroelectric developments at or near maximum turbine hydraulic capacity, the discharge from the project is adjusted to the FERC License minimum flow requirements unless a greater discharge is warranted, for flood mitigation reason. The target refill elevation is 1452.92 feet (34.0 feet stage) by June 1.

After the June 1 refill elevation requirement of 1452.92 feet (34.0 feet stage) has been met, the reservoir will normally be maintained at an elevation of between 1452.92 feet and 1453.42 feet (34.0 and 34.5 feet stage). The reservoir capacity between 1453.42 feet and 1453.92 feet may be used as a buffer to mitigate downstream flows during high flow events.

4.3 SHORELINE VEGETATION

The shoreline vegetation present within the existing and proposed project boundaries was determined using the federal Multi-Resolution Land Characteristic (MRLC) Consortium's National Land Cover Database 2016 (NLCD 2016) land cover data. The data was derived from a wide variety of federal agencies which coordinate information to generate consistent and relevant land cover information.

The data was used to determine vegetation cover types within the Project Boundary. The data is available for public use in determining vegetation cover types in all areas of the State.

Below is a listing and description of the vegetation cover types located within the Project Boundary.

- **Deciduous Forest:** Areas dominated by trees generally greater than 5 meters tall and greater than 20% of the total vegetation cover. More than 75% of the tree species shed foliage simultaneously in response to seasonal change.
- **Barren Land (Rock/Sand/Clay):** Areas of bedrock, desert pavement, scarps, talus, slides, volcanic material, glacial debris, sand dunes, and other accumulation of earthen material. Generally, vegetation accounts for less than 15% cover.
- **Developed (High intensity):** Highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses and commercial/industrial. Impervious surfaces account for 80% to 100% of the total cover.
- **Developed (Medium intensity):** Areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50% to 79% of the total cover. These areas most commonly include single-family housing units.
- **Developed (Low intensity):** Areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20% to 49% percent of total cover. These areas most commonly include single-family housing units.
- **Developed (Open Space):** Areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20% of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.
- **Emergent Herbaceous Wetlands:** Areas where perennial herbaceous vegetation accounts for greater than 80% of vegetation cover and the soil or substrate is periodically saturated with or covered with water.
- **Evergreen Forest:** Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75% of the tree species maintain their leaves all year. Canopy is never without green foliage.
- **Hay/Pasture:** Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay/vegetation accounts for greater than 20% of total vegetation.
- **Herbaceous:** Areas dominated by graminoid or herbaceous vegetation, generally greater than 80% of total vegetation. These areas are not subject to intensive management such as tilling, but can be utilized for grazing.
- **Mixed Forest:** Area dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. Neither deciduous nor evergreen species are greater than 75% of total tree cover.
- **Shrub Scrub:** Areas dominated by shrubs; less than 5 meters tall with shrub canopy typically greater than 20% of total vegetation. This class includes true shrubs, young trees in an early successional stage or trees stunted from environmental conditions.

- **Woody Wetlands:** Areas where forest or shrubland vegetation accounts for greater than 20% of vegetative cover and the soil or substrate is periodically saturated with or covered with water.

Table 4.1 List of dominant plant species observed or identified within or near the Project Boundary of the SLRP (USFS, MNDNR, NWF, UMN Extension, and Picture This App)

Common Name	Scientific Name
Herbaceous Layer	
Virginia Creeper	<i>Parthenocissus quinquefolia</i>
Tall Hairy Agrimony	<i>Agrimonia gryposepala</i>
Bracken Fern	<i>Pteridium aquilinum</i>
Reed Canary Grass	<i>Phalaris aruninacea</i>
Earth Loose Strife	<i>Lysimachia terrestris</i>
American Water Horehound	<i>Lycopus americanus</i>
Wild Rose	<i>Rosa spp.</i>
Common Milkweed	<i>Asclepias syriaca</i>
Yellow Avens	<i>Geum aleppicum</i>
Nodding Sedge	<i>Carex gynandra</i>
Long haired sedge	<i>Carex capillaris</i>
Jewel Weed	<i>Impatiens capensis</i>
Climbing Nightshade	<i>Solanum dulcamara</i>
Yellow Pond Lily	<i>Nuphar lutea</i>
American White Pond Lily	<i>Nymphaea odorata</i>
Starflower	<i>Trientalis borealis</i>
Canada Mayflower	<i>Maianthemum canadense</i>
Bishops Goutweed	<i>Aegopodium podagraria</i>
Red Baneberry	<i>Actaea rubra</i>

Common Name	Scientific Name
Wood Anemone	<i>Anemone quinquefolia</i>
Sweet-scented Bedstraw	<i>Galium triflorum</i>
Sensitive Fern	<i>Onoclea sensibilis</i>
Sweat Fern	<i>Selaginella emmeliana</i>
Narrowleaf cattail	<i>Typha angustifolia</i>
Bearded iris	<i>Iris germanica</i>
Marsh Bellflower	<i>Campanula aparinoides</i>
Longleaf Aster	<i>Symphytrichum ascendens</i>
Large-flowered Bellwort	<i>Uvularia grandiflora</i>
Poison Ivy	<i>Toxicodendron radicans</i>
Bluebeard Lily	<i>Clintonia borealis</i>
Riverbank Grape	<i>Vitis riparia</i>
Ribes Spp.	<i>Ribes spp.</i>
Horsetail	<i>Equisetum spp.</i>
Common Yarrow	<i>Achillea millefolium</i>
Tall Hawkweed	<i>Hieracium piloselloides</i>
Yellow Buttercup	<i>Ranunculus flabellaris</i>
Wild Rice	<i>Zizania spp.</i>

Shrub Layers

Beaked Hazelnut	<i>Corylus cornuta</i>
Bush Honeysuckle	<i>Diervilla lonicera</i>
Round Leaf Dogwood	<i>Cornus rugosa</i>
Red Osier Dogwood	<i>Cornus sericea</i>

Common Name	Scientific Name
Alternate Leafed Dogwood	<i>Cornus alternifolia</i>
Nannyberry	<i>Viburnum lentago</i>
Smooth Sumac	<i>Rhus glabra</i>

Trees

Jack Pine	<i>Pinus banksiana</i>
White Cedar	<i>Thuja occidentalis</i>
Red Pine	<i>Pinus resinosa</i>
Paper Birch	<i>Betula papyrifera</i>
White Pine	<i>Pinus strobus</i>
Quaking Aspen	<i>Pouulus tremuloides</i>
Red Maple	<i>Acer rubrum</i>
Sugar Maple	<i>Acer saccharum</i>
Northern Red Oak	<i>Quercus rubra</i>
Bur Oak	<i>Quercus macrocarpa</i>
Basswood	<i>Tilia americana</i>
Box Elder	<i>Acer negundo</i>
White Spruce	<i>Picea glauca</i>
Black Spruce	<i>Picea mariana</i>
Balsam fir	<i>Abies balsamea</i>
Mountain Ash	<i>Sorbus aucuparia</i>
Black Ash	<i>Fraxinus nigra</i>
Alder	<i>Alnus spp.</i>
Weeping Willow	<i>Salix babylonica</i>

Common Name	Scientific Name
Tamarack	<i>Larix laricina</i>

4.4 WILDLIFE SHORELINE HABITAT

The SLRP provides for a variety of wildlife shoreline habitat. For purposes of this discussion, habitat types/classifications are the areas within 30 feet of SLRP’s normal summer operating level and encompasses approximately 4,900 acres in total among the three reservoirs.

MP has separated the SLRP shoreline habitat areas into three distinct habitat types based on use and environmental setting:

1. Residential Shoreline Wildlife Habitat
2. Forested/Shrub Shoreline Wildlife Habitat
3. Wetland Shoreline Wildlife Habitat

Residential Shoreline Wildlife Habitat

This habitat type is associated with residential human land use. This classification includes a mix of maintained lawn areas with (typically) less than 20% native tree and shrub component. Grass and forb species are a mix of both native and non-native species.

Forested/Shrub Shoreline Wildlife Habitat

This habitat type is associated with non-developed or “natural” environmental conditions. This classification includes a shoreline condition containing over 20% native perennial tree and shrub species. This category includes both coniferous and broad-leaved dominated forest types. Grass and forb species are comprised primarily of native species.

Wetland Shoreline Wildlife Habitat

This habitat type is associated with non-developed or “natural” environmental conditions. This classification includes shoreline habitat capable of supporting aquatic or hydrophytic vegetation and has soils indicative of wet conditions. This category includes emergent/wet meadow, lowland shrub and forest wetland types comprised primarily of native species. The NWI wetland inventory maps are presented as Figures 6, 12, and 18.

Table 4.2 Acreage by Habitat Type and Reservoir (MRLC 2016)

<i>Island Lake Reservoir</i>	<i>Acres</i>
Residential Shoreline Wildlife Habitat	209
Forested/Shrub Shoreline Wildlife Habitat	910
Wetland Shoreline Wildlife Habitat	891
<i>Fish Lake Reservoir</i>	<i>Acres</i>
Residential Shoreline Wildlife Habitat	163
Forested/Shrub Shoreline Wildlife Habitat	407
Wetland Shoreline Wildlife Habitat	1042
<i>White Face Reservoir</i>	<i>Acres</i>
Residential Shoreline Wildlife Habitat	111
Forested/Shrub Shoreline Wildlife Habitat	355
Wetland Shoreline Wildlife Habitat	813
<i>Total</i>	<i>Acres</i>
Residential Shoreline Wildlife Habitat	483
Forested/Shrub Shoreline Wildlife Habitat	1672
Wetland Shoreline Wildlife Habitat	2746

4.4.2 GENERAL DESCRIPTION OF WILDLIFE THAT MAY UTILIZE SHORELINE HABITAT

These differing shoreline types provide habitat for a variety of wildlife species. The animal species found within the SLRP’s Project Boundary are similar to species commonly found throughout northeastern Minnesota. Individual species populations are dynamic and can vary from year to year as well throughout the year. A species list based on multiple reference literature review and observations conducted within the SLRP Project Boundary can be found in Table 4.3 below.

Table 4.3 List of Wildlife That May Utilize the Shoreline Habitat (MNDNR 2020c)

Common Name	<i>Scientific Name</i>
Shrew and Moles	
Masked Shrew	<i>Sorex cinerus</i>
Arctic Shrew	<i>Sorex arcticus</i>
Water Shrew	<i>Sorex palustris</i>
Smoky Shrew	<i>Sorex fumens</i>
Short-tailed Shrew	<i>Blarina brevicauda</i>
Star-nosed Mole	<i>Candylura cristata</i>

Bats	
Little Brown Bat	<i>Myotis lucifugus</i>
Northern Myotis Bat	<i>Myotis septentrionalis</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>
Big Brown Bat	<i>Eptesicus Fuscus</i>
Red Bat	<i>Lasiurus cinereus</i>
Hoary Bat	<i>Lasiurus cinereus</i>
Lagomorphs	
Eastern Cottontail	<i>Sylvilagus floridanus</i>
Snowshoe Hare	<i>Lepus americanus</i>
Rodents	
Woodchuck (Groundhog)	<i>Marmota monax</i>
Eastern Chipmunk	<i>Tamias striatus</i>
Least Chipmunk	<i>Eutamias minimus</i>
Franklin’s Ground Squirrel	<i>Spermophilis franklinii</i>
Gray Squirrel	<i>Sciurus carolinesis</i>
Red Squirrel	<i>Tamiasciurus hudsonicus</i>
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>
Beaver	<i>Castor canadensis</i>
Deer Mouse	<i>Peromyscus maniculatus</i>
Southern Red-backed Vole	<i>Clethrionomys gapperi</i>
Meadow Vole	<i>Microtus pennsylvanicus</i>
Muskrat	<i>Ondatra zibethica</i>
Meadow Jumping Mouse	<i>Zapus hudsonius</i>
Woodland Jumping Mouse	<i>Napaeozapus insignis</i>
Porcupine	<i>Erethizon dorsatum</i>
Carnivores	
Red Fox	<i>Vulpes vulpes</i>

Coyote	<i>Canis latrans</i>
Gray Wolf	<i>Canis lupus</i>
Raccoon	<i>Procyon lotor</i>
Black Bear, American	<i>Ursus americanus</i>
Pine Marten	<i>Martes americanus</i>
Fisher	<i>Martes pennanti</i>
Ermine (Short-tailed Weasel)	<i>Mustela erminea</i>
Long-tailed Weasel	<i>Mustela frenata</i>
Mink	<i>Mustela vison</i>
Striped Skunk	<i>Mephitis mephitis</i>
River Otter	<i>Lutra canadensis</i>
Mountain Lion (Cougar, Puma)	<i>Felis concolor</i>
Lynx	<i>Lynx Canadensis</i>
Bobcat	<i>Lynx rufus</i>
Ungulates	
White-tailed Deer	<i>Odocoileus virginianus</i>
Moose	<i>Alces alces</i>
Amphibians	
Wood Frog	<i>Rana sylvatica</i>
Spring Peeper	<i>Psuedacris crucifer</i>
Western Chorus Frog	<i>Pseudacris triseriata</i>
Northern Leopard Frog	<i>Rana pipiens</i>
American Toad	<i>Bufo ameicanus</i>
Gray Tree frog	<i>Hyla versicolor</i>
Mink Frog	<i>Rana septentrionalis</i>
Green Frog	<i>Rana clamitans</i>
Salamanders	
Blue-Spotted Salamander	<i>Ambystoma laterale</i>

Eastern Newt	<i>Notophthalmus viridescens</i>
Redback Salamander	<i>Plethodon cinereus</i>
Tiger Salamander	<i>Ambystoma tigrinum</i>
Turtles	
Painted Turtle	<i>Chrysemys picta</i>
Eastern Newt	<i>Chelydra serpentina</i>
Snakes	
Common Garter Snake	<i>Thamnophis sirtalis</i>
Redbelly Snake	<i>Soreria occipitomaculata</i>
Ringneck Snake	<i>Diadophis punctatus</i>
Avian	
American Bittern	<i>Botaurus lentiginosus</i>
American Crow	<i>Corvus brachyrhynchos</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Canada Goose	<i>Branta canadensis</i>
Common Loon	<i>Gavia immer</i>
Common Snipe	<i>Gallinago gallinago</i>
Common Tern	<i>Sterna hirundo</i>
Black Tern	<i>Chlidonias niger</i>
Double-crested Cormorant	<i>Phalacrocorax auritus</i>
Blue-winged Teal	<i>Anas discors</i>
Mallard	<i>Anas platyrhynchos</i>
Ring-Necked Duck	<i>Aythya collaris</i>
Wood Duck	<i>Aix sponsa</i>
Eastern Bluebird	<i>Sialia sialis</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Gyr Falcon	<i>Falco rusticolus</i>
Merlin	<i>Falco columbarius</i>

Peregrine Falcon	<i>Falco peregrinus</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
Ruffed Grouse	<i>Bonasa umbellus</i>
Spruce Grouse	<i>Falcapennis canadensis</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Broad-winged Hawk	<i>Buteo platypterus</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Canada Warbler	<i>Cardellina canadensis</i>
Cape May Warbler	<i>Setophaga tigrina</i>
Connecticut Warbler	<i>Oporornis agilis</i>
Evening Grosbeak	<i>Coccythraustes vespertinus</i>
Golden-winged Warbler	<i>Vermivora chrysoptera</i>
Harris's Sparrow	<i>Zonotrichia querula</i>
Common Sparrow	<i>Passer domesticus</i>
Olive-sided Flycatcher	<i>Contopus cooperi</i>
Rusty Blackbird	<i>Euphagus carolinus</i>
Wood Thrush	<i>Hylocichla mustelina</i>
Mourning Dove	<i>Zenaida macroura</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
Barred Owl	<i>Strix varia</i>
Boreal Owl	<i>Aegolius funereus</i>
Great Gray Owl	<i>Strix nebulosa</i>
Great Horned Owl	<i>Bubo virginianus</i>
Long-eared Owl	<i>Asio otus</i>
Northern Hawk Owl	<i>Surnia ulula</i>
Northern Saw-whet Owl	<i>Aegolius acadicus</i>
Snowy Owl	<i>Nyctea scandiaca</i>
Sandhill Crane	<i>Grus canadensis</i>

Trumpeter Swan	<i>Cygnus buccinators</i>
Woodcock	<i>Scolopax minor</i>
Sharp-Shinned Hawk	<i>Accipiter striatus</i>
Broad-winged Hawk	<i>Buteo platypterus</i>
Killdeer	<i>Charadrius vociferus</i>
Spotted Sandpiper	<i>Actitis macularius</i>
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>
Hairy Woodpecker	<i>Leuconotopicus villosus</i>
Northern Flicker	<i>Colaptes auratus</i>
Pileated Woodpecker	<i>Dryocopus pileatus</i>
Alder Flycatcher	<i>Empidonax alnorum</i>
Blue Jay	<i>Cyanocitta cristata</i>
Northern Raven	<i>Corvus Corax</i>
Red-Breasted Nuthatch	<i>Sitta canadensis</i>
Golden-crowned Kinglet	<i>Regulus satrapa</i>
Ruby-crowned kinglet	<i>Regulus calendula</i>
Nashville Warbler	<i>Leiothlypis ruficapilla</i>
Chestnut-sided warbler	<i>Setophaga pensylvanica</i>
Magnolia Warbler	<i>Setophaga magnolia</i>
Yellow-rumped Warbler	<i>Setophaga coronata</i>
Black-throated Green Warbler	<i>Setophaga virens</i>
Blackburnian Warbler	<i>Setophaga fusca</i>
Black-and-white Warbler	<i>Mniotilta varia</i>
American Redstart (Warbler)	<i>Setophaga ruticilla</i>
Ovenbird (warbler)	<i>Seiurus aurocapilla</i>
Mourning Warbler	<i>Geothlypis philadelphia</i>
Canada Warbler	<i>Cardellina canadensis</i>
White-throated Sparrow	<i>Zonotrichia albicollis</i>

Clipping Sparrow	<i>Spizella passerina</i>
Rose-Breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Evening Grosbeak	<i>Coccothraustes vespertinus</i>

4.5 FEDERAL AND STATE RARE, THREATENED AND ENDANGERED SPECIES

As part of the information-gathering process conducted to support this Project Boundary amendment application, MP requested information from the Minnesota Department of Natural Resources (MDNR) and United States Fish and Wildlife Service (USFWS) regarding federal and state-listed rare, threatened and endangered (RTE) species, critical habitat, sensitive natural communities, and species of special concern within the Project’s vicinity.

4.5.1 FEDERALLY-LISTED RARE THREATENED, ENDANGERED, AND CANDIDATE SPECIES

4.5.1.1 SPECIES

MP conducted a review of federally listed threatened, endangered, and candidate species for St. Louis County around the SLRP using USFWS Information for Planning and Consultation (IPaC) online system on May 12, 2020. A total of four federally listed threatened, endangered, or candidate species have the potential to occur within or around the Project, see Table 4.4 below.

Table 4.4 Federal Listed RTE Species with Potential to Occur (USFWS IPaC)

Common Name	Scientific Name	Status
Canada Lynx	<i>Lynx canadensis</i>	Threatened
Gray Wolf	<i>Canis lupus</i>	Threatened
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Threatened
Piping Plover	<i>Charadrius melodus</i>	Endangered

Canada Lynx

Canada Lynx (*Lynx*) have a large home range generally between 12 to 83 square miles. The overall size of the lynx home range varies depending on abundance of prey, the species gender and age, season, and density of its population (USFWS 2020c). Breeding occurs through March and April in the north. During periods of hare abundance in the northern taiga, litter size can be large, up to four or five kittens. Litter sizes are typically smaller in lynx populations in the contiguous United States.

Snowshoe hares are the primary prey. Other prey species include red squirrel (*Tamiasciurus hudsonicus*), grouse (*Bonasa umbellus*, *Dendragapus* spp., and *Lagopus* spp.), flying squirrel (*Glaucomys sabrinus*), ground squirrel (*Spermophilus parryii* and *S. richardsonii*), porcupine (*Erethizon dorsatum*), beaver (*Castor canadensis*), mice (*Peromyscus* spp.), voles (*Microtus* spp.), shrews (*Sorex* spp.), and fish (USFWS 2020c).

In all regions within range of the lynx in the contiguous U.S., timber harvest, recreation, and related activities are the predominant land uses affecting lynx habitat (USFWS 2020c).

Because the proposed amendment does not impact lynx habitat or create additional recreational activities or timber harvest, MP has determined there will be no effect to the Canada lynx due to the proposed Project Boundary adjustment.

Gray Wolf

Gray wolves are pack animals with social hierarchy that defend their territories from other wolves. Territory size is a function of prey density and can range from 25 to 1,500 square miles. Both male and female wolves disperse at equal rates and equal distances, sometime greater than 600 miles (USFWS 2020d).

Wolf normally first breed as yearlings and once a year in February. Gestation is typically 63 days, where one to ten pups are born; five pups being the normal brood size. Pups typically stay with the pack until they are at least one year old. Wild and domestic ungulates are the preferred prey for wolves. This species is also a scavenger. Beaver are among the smallest important prey, but this species will also prey upon smaller mammals, birds, and fish (USFWS 2020d).

Five main factors are critical to the long-term survival of wolves: 1) large tracts of wild land with low human densities and minimal accessibility by humans, 2) ecologically sound management, 3) availability of adequate wild prey, 4) adequate understanding of wolf ecology and management, and 5) maintenance of populations that are either free of, or resistant to, parasites and diseases new to wolves or are large enough to successfully contend with their adverse effects (USFWS 1992).

Because the proposed amendment does not impact wolf habitat, prey species availability, or parasitic populations, MP has determined there will be no effect to the gray wolf due to the proposed Project Boundary adjustment.

Northern Long-eared Bat

The northern long-eared bat is found across much of the eastern and north central United States (37 states) and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. Northern long-eared bats begin breeding in late summer or early fall near hibernacula (hibernation sites with concentrated numbers of hibernating bats). Females go into delayed fertilization where sperm are stored after copulation and fertilization occurs after winter hibernation, the following spring. Pregnant females give birth to a single pup in late May to late July, depending on the species range of its colony. This species use echolocation during flight to feed during

dusk. Feeding occurs through the understory of forested hillsides and ridges on moths, flies, leafhoppers, caddisflies, and beetles (USFWS 2020e).

The white-nose syndrome, a fungal disease known to affect bats, is currently the predominant threat to this bat, especially throughout the Northeast where this species has declined at many hibernation sites by up to 99 percent from pre-white-nose syndrome levels (USFWS 2020e).

Because the proposed amendment does not impact bat habitat or affect the presence or prevalence of white-nose syndrome, MP has determined there will be no effect to the northern long-eared bat due to the proposed Project Boundary adjustment.

Piping Plover

The Great Lakes population of the piping plover was listed as an endangered species in 1986, and the Northern Great Plains and Atlantic Coast populations were listed as threatened species the same year (USFWS 2020f).

Piping plovers use wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include small creeks or wetlands (USFWS 2020f).

The female lays four eggs in its small, shallow nest lined with pebbles or broken shells. Both Parents care for the eggs and chicks. When the chicks hatch, they are able to run about and feed themselves within hours (USFWS 2020f).

Some of the reasons for the piping plover listing is loss or degradation of habitat, nest disturbance, and predation. The USFWS has developed a recovery plan that describes actions that need to be taken to help the bird survive and recover (USFWS 2020f).

The piping plover was identified in the Whiteface Reservoir IPaC search. There are no critical habitat identified within the Project Boundary of Whiteface Reservoir (USFWS 2020f).

Because the proposed amendment does not impact piping plover habitat, MP has determined there will be no effect to the piping plover due to the proposed Project Boundary adjustment.

4.5.1.2 Biological Opinions, Status Reports, and Recovery Plans of Threatened and Endangered Species

Biological Opinions

Several biological opinions have been developed to promote conservation of the Canada lynx, gray wolf, and northern long-eared bat. However, none of the biological opinions are specific to the Island Lake Reservoir, Fish Lake Reservoir, or Whiteface Reservoir

Status Reports

The USFWS Environmental Conservation Online System (ECOS) website provides a list of the threatened and endangered plants and animals and reports by individual species that includes

information on the species habitat range, range map, recovery plan, critical habitat, conservation plans, and biological opinions. There is not an ECOS status report for the Canada lynx, gray wolf, northern long-eared bat, and piping plover.

Recovery Plans

Recovery plans have been developed for the Canada lynx, gray wolf, and piping plover and are available for view at the USFWS ECOS website <https://ecos.fws.gov/ecp/>. No recovery plan has been developed for the northern long-eared bat.

Critical Habitat

When a species is proposed for listing as endangered or threatened under the ESA, the USFWS must consider whether there are areas of habitat believed to be essential to the species' conservation. These areas may be proposed for designation as critical habitat. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Through review of critical habitat using the USFWS maps, there is critical habitat designations for the gray wolf in proximity to Whiteface Reservoir. There is also critical habitat designations for the Canadian lynx in proximity to all three reservoirs. However, none of the areas within the proposed Project Boundary adjustment are in the critical habitat designation (USFWS 2020e).

4.5.1.3 Temporal and Spatial Distribution of Federally Listed Threatened and Endangered Species

Canada Lynx

Canada lynx live in dense forests across northern Canada, in northern Minnesota and Maine, and in mountainous areas of the northwestern United States. Historically, the Canada lynx range within Minnesota was in northern Minnesota in the coniferous forest biome (MDNR 2020). The Canada lynx does not migrate extensive distances and, therefore, does not have a significant temporal distribution.

Gray Wolf

The gray wolf lives near lakes and sub-boreal forest in Minnesota. The gray wolf range in Minnesota has grown from the northeast corner of the state in the 1970s and now extends to the center of the state (2000s). Wolf packs live within territories ranging in size from 50 square miles to more than 1,000 square miles, depending on available prey and their seasonal movements (USFWS 2020e). The gray wolf does not migrate extensive distances and; therefore, does not have a significant temporal distribution.

Northern Long-eared Bat

The spatial distribution for the northern long-eared bat extends from Montana and Wyoming in the West, south to eastern Texas, across the northern portions of Mississippi, Alabama, Georgia, and North Carolina, north to Maine, and across the Great Lakes. As this species generally winters in local or

regional hibernacula, it does not migrate extensive distances and therefore does not have a significant temporal distribution.

Piping Plover

Piping plovers are migratory birds. In the spring and summer they breed in the northern United States and Canada. There are three locations where piping plovers nest in North America: the shorelines of the Great Lakes, the shores of rivers and lakes in the Northern Great Plains, and along the Atlantic Coast. Their nesting range has become smaller over the years, especially in the Great Lakes area. In the fall, plovers migrate south and winter along the coast of the Gulf of Mexico or other southern locations (USFWS 2020f).

Conclusion

There will be no effect to federally protected threatened, endangered or candidate species or designated critical habitat due to the Project Boundary adjustment.

4.5.2 STATE-LISTED, THREATENED, ENDANGERED, AND CANDIDATE SPECIES

MP reviewed the state-listed threatened or endangered species using the National Heritage Information System database (NHIS) (Appendix 7); species proposed for listing as rare, threatened or endangered (RTE), or species of concern; designated or proposed critical habitat; and candidate species. The database search was performed for state-listed RTE and candidate species within 1 mile of the Island Lake Reservoir, Fish Lake Reservoir, and Whiteface Reservoir, respectively. Additionally, Bald eagle (*Haliaeetus leucocephalus*) nests were identified within one mile of Fish Lake Reservoir and Whiteface Reservoir. See Table 4.5 for a list of the state-listed RTE species or critical habitat that have the potential to occur within the vicinity of the Project.

Table 4.5 State-listed RTE species and Critical Habitat with Potential to Occur in the Vicinity of the Project (MNDNR 2020g)

Common Name	Scientific Name	State Listing
Mussels		
Black Sandshell	<i>Ligumia recta</i>	Special Concern
Avian		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Special Concern
Common Tern	<i>Sterna hirundo</i>	Threatened

American Bittern	<i>Botarus lentiginosus</i>	Species of Greatest Conservation Need
Colonial Waterbird Nesting Sites	NA	Proposed Critical Habitat
Plants		
Three-stamened Waterwort	<i>Elatine triandra</i>	Special Concern
Allegheny Vine	<i>Adlumia fungosa</i>	Special Concern
Discoi Beggarticks	<i>Bidens discoidea</i>	Special Concern
Northern Poor Fen	NA	Proposed Critical Habitat

¹ Copyright 2020, State of Minnesota, Department of Natural Resources. Rare features data reviewed were provided by the Division of Ecological and Water Resources, MDNR, under license agreement LA832. DNR has not provided comment on the interpretation of the results included in this report.

Black Sandshell

The black sandshell was once common in all but the smallest rivers in Minnesota, but is now listed as a species of special concern in the state. The black sandshell is usually found in the riffle and run areas of medium to large rivers in areas dominated by sand or gravel. Degradation of mussel habitat in streams throughout the black sandshell’s known range is a continuing threat to this species. The black sandshell is also being impacted by the infestation of non-native zebra mussels in the Mississippi River and its tributaries (MDNR 2020e).

This mussel was identified in the Island Lake Reservoir system. Because the proposed amendment does not affect the species or its habitat, there will be no effect to the black sandshell due to the Project Boundary adjustment.

Bald Eagle

The bald eagle was federally-delisted on August 8, 2007. While the bald eagle is no longer protected under Section 7 of the ESA, the Bald and Golden Eagle Protection Act prohibits take, possession, transport, or sale (among other actions) of live or dead eagles and their parts, nests, or eggs, unless authorized by a permit. The bald eagle is listed as a species of special concern in Minnesota. In Minnesota, the bald eagle commonly breed on northern lakes and along the St. Croix and Mississippi Rivers. Bald eagles move south for the winter to open water areas that attract large numbers of waterfowl or fish. In Minnesota, this includes the Minnesota and Mississippi Rivers and sometimes lakes in the southern part of the state (University of Minnesota 2020).

Because the proposed amendment does not affect the species, nesting sites, or its habitat, there will be no effect to the species. As stated above, bald eagles will continue to be protected under the Bald and Golden Eagle Protection Act.

Common Tern

The Great Lakes common tern has been experiencing a declining population and was listed as a species of special concern in Minnesota in 1984. Continuing declines in the state led to reclassification as threatened in 1996. There are currently less than 20 common tern nesting colonies in Minnesota. They prefer isolated, sparsely vegetated islands in large lakes for nesting. Optimal breeding sites are isolated from predators by natural barriers, have a constant, nearby source of food, have stable or falling water levels during the nesting season, and have topography that allows nesting common terns to see and hear their neighbors (MDNR 2020f).

The Audubon Minnesota developed a Common Tern Minnesota Conservation Plan in 2014. The plan has a goal of maintaining approximately 1000 breeding pair of Common Terns in Minnesota. The estimated number of breeding pairs when the report was published is 960. The report identified four designated Important Bird Areas (IBA) for Common Tern Breeding colonies. These consisted of Lake of the Woods, Mille Lacs Lake, Leech Lake and the St. Louis River Estuary. The closest IBA to the SLRP is the St. Louis River Estuary which is outside of the Project Boundary and is located around the Duluth, Minnesota area. The greatest risk to the nesting colonies in this area is from competing Ring-billed Gulls and Herring Gulls. The conservation plan identified a small group of nesting common terns around the Fish Lake Reservoir (Audubon Minnesota 2014). This is likely one of the colonial nesting sites identified in the NHIS database and is described below.

Because the proposed amendment does not affect the species or the colonial nesting sites, no impacts or effect to common terns will occur due to the Project Boundary adjustment.

American Bittern

The American bittern is a bird that prefers wetland and marshy habitat which it uses for hunting and nesting. The American bittern has declined 4.9 percent annually in Minnesota since 1966. This bird was listed as a Species of Greatest Conservation Need in Minnesota because its decline linked to habitat loss of wetlands. (MDNR)

The proposed Project Boundary adjustment will retain and increase NCAs and wetland areas associated with each reservoir. Therefore, there will be no effect to the American bittern.

Colonial Waterbird Nesting Sites

Colonial waterbird nesting sites are an important portion of Minnesota's avifauna. The species that nest in high densities in trees, over water, or on the ground include the eared grebe, western grebe, white pelican, double-crested cormorant, great blue heron, little blue heron, cattle egret, great egret, snowy egret, black-crowned night heron, yellow-crowned night heron, piping plover, herring gull, ring-billed gull, Franklin's gull, Forster's tern, common tern, and caspian tern (MDNR 1978).

The NHIS database identified two colonial nesting waterbird sites. One is a great blue heron tree nesting area around Island Lake Reservoir and the other is a common tern nesting area on Fish Lake Reservoir. Neither one of these nesting areas are going to be removed from the Project Boundary or otherwise affected by the proposed Project Boundary adjustment.

Three-stemmed Waterwort

The Three-stemmed waterwort is an aquatic plant that grows in shallow water or mud flats in large to medium size lakes in northeast Minnesota. A MN DNR 2015 survey found only about 20 site locations in Minnesota with two sites identified on Fish Lake Reservoir and Island Lake Reservoir. This aquatic plant is vulnerable in the southwest part of Minnesota due to agricultural activities and rock quarrying. These impacts are less prevalent in the northeast forested region of the state which is where the SLRP is located. Maintaining water quality, shoreline stability, and species diversity will have a positive effect on the Three-stemmed waterwort (MDNR 2020h).

The proposed Project Boundary adjustment is focused on terrestrial/upland areas and will not affect water quality, shoreline stability, or species diversity. Therefore, the proposed amendments will have no effect to the Three-stemmed waterwort.

Allegheny Vine

This vascular plant is very rare in Minnesota with only a handful of locations where it has been found. The plant is found near edges of hardwood or coniferous forests. It is considered an edge species, also known as a disturbance-dependent or fire dependent species. Therefore, this plant may benefit from logging, wind storms, periodic wildfire, and lightning strikes (MDNR 2020i).

The proposed PB adjustment will not impact forest edges or areas of disturbance. Therefore, it will have no effect to the Allegheny vine.

Discoid Beggarticks

This vascular plant has relatively few confirmed herbarium records in Minnesota. The Discoid Beggarticks grows in a wide range of wetlands, marshes, pond margins and riverine sloughs. Due to the scarcity of this plant, the DNR is still trying to understand if there is a decreasing trend and what conservation management methods could be implemented to protect them (MDNR 2020j).

Although this plant was identified within 1 mile of the Island Lake Reservoir, the proposed Project Boundary adjustment will not impact wetland resource areas around Island Lake Reservoir and therefore will have no effect to the Discoid Beggarticks.

Northern Poor Fen

The northern poor fen is classified as an open sphagnum peatland with variable development of hummocks and hollows and dominated either by fine-leaved sedges or low ericaceous shrubs. The NHIS database identified this type of fen within 1 mile of the Whiteface Reservoir. The northern poor fen is classified as an acid peatland system (APn91) in the northeast region of Minnesota. The poor fen

can develop either through acidification of rich fens or through alkalization of bogs. The pH is typically in the range of 4.2 -5.5 (MDNR 2020k).

The proposed Project Boundary adjustment will not impact any wetland resource areas and therefore will have no effect to the northern poor fen.

4.5.3 RESOURCE SUMMARY

MP completed a review of the USFWS’s ICaP and MDNR’s NHIS regarding ESA and state-listed RTE species, critical habitat, sensitive natural communities, and species of special concern within the vicinity of the three reservoirs. Canada lynx, gray wolf, northern long-eared bat, and piping plover were reported as Federally ESA-listed species potentially occurring within the Project Boundary. The MDNR listed the black sandshell, bald eagle, common tern, American bittern, colonial waterbird nesting site, three-stemmed waterwort, Allegheny vine, discord beggerticks and a northern poor fen as species or areas of concern.

There will be no effect to any federally or state listed protected, RTE or candidate species or designated critical habitat due to the proposed Project Boundary adjustment.

4.6 SHORELINE WETLANDS

The current Project Boundary has numerous wetland complexes throughout the landscape which is consistent with the overall region. These wetlands vary in size, type, and quality. Using the National Wetland Inventory (NWI) database, the following wetland types and approximant acreage located in the Project Boundary are presented in Table 4.6 below.

Table 4.6 Wetlands in the Project Boundary (USFWS NWI 2020g)

Island Lake Reservoir

Wetland Type	Approximate Acres
Freshwater Emergent Wetland	308
Freshwater Forested Wetland	81
Freshwater Forested/Emergent Wetland	0.8
Freshwater Forested/Shrub Wetland	8
Freshwater Pond	69
Freshwater Shrub Wetland	64
Freshwater Shrub/Emergent Wetland	146
Riverine	64

Lake	8,390
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Fish Lake Reservoir

Wetland Type	<i>Approximate Acres</i>
Freshwater Emergent Wetland	373
Freshwater Forested Wetland	86
Freshwater Forested/Shrub Wetland	21
Freshwater Freshwater Pond	24
Freshwater Shrub Wetland	101
Freshwater Shrub/Emergent Wetland	204
Riverine	37
Lake	3,390

Whiteface Reservoir

Wetland Type	<i>Approximate Acres</i>
Freshwater Emergent Wetland	292
Freshwater Forested Wetland	27
Freshwater Forested/Shrub Wetland	3
Freshwater Pond	14
Freshwater Shrub Wetland	178
Freshwater Shrub/Emergent Wetland	11
Riverine	13
Lake	4,688

4.7 RECREATION FACILITIES

The SLRP offers a variety of public recreation opportunities. The Project’s Public Recreation Management Plan (Plan) was filed with the FERC in 2006. The Plan is subsequently updated every six years with public input. The most recent six-year update was filed with FERC in 2015 and describes the

completion and operation of all Plan-related recreation sites. The next update to the Plan will be drafted in 2020 and filed with FERC in 2021.

The proposed Project Boundary adjustment will not impact any public recreation facilities. The following sections describes the recreation amenities available at each of the three reservoirs.

Island Lake Reservoir

Island Lake Reservoir was formed in 1915, covers approximately 8,390 surface water acres (NHD) with approximately 105 miles of shoreline (including islands), and is located eight miles north of Duluth, Minnesota. The reservoir is the most used SLRP reservoir for fishing, boating, water skiing, swimming, and snowmobiling by local area residents, tourists, and lakeshore residents.

MP owns three boat launches provide public access: Hideaway, Abbott Road and Island Lake Dam. There is also one private boat launch, United Northern Sportsmen's Club. The accesses provide access to the reservoir year-round. Summer boating and fishing is the primary activity at the reservoir. A private drive-in campground is located at the United Northern Sportsmen's Club. MP also owns, operates, and maintains a park, ski trails and shore fishing amenities which are all open to the public.

MP owns eleven primitive campsites throughout the reservoir. MP has a program to monitor and manage these sites, in conjunction with St. Louis County, the University of Minnesota-Duluth and the MDNR. All campsites are free of charge and operate on a first-come, first-served basis. Based on the 2014 FERC Form 80 calculations, the campsites' estimated capacity utilization is 77%.

As a continued community partnership, MP provides a route through the Island Lake Reservoir for the Minnesota State "Grant-in-Aid" public snowmobile trail (Reservoir Riders Trail). MP also partners with the MDNR in the Abbott Road Boat Launch maintenance and has worked collaboratively with the MDNR to expand the boat launch parking area. As part of these maintenance activities, MP and the MDNR coordinated and planted over 1,200 white pines, installed diversion structure/contouring, and seeded native grass.

Fish Lake Reservoir

Fish Lake Reservoir was formed in 1910 and covers approximately 3,890 surface acres (NHD) with approximately 60 miles of shoreline (including islands). The reservoir is located about 6 miles north of Duluth, Minnesota and is a highly utilized recreation destination for local area residents and lakeshore owners. MP owns two boat launches open to the public, which along with three additional private launches provide access to the reservoir year-round. Summer boating, fishing, camping and snowmobiling are the primary activities at the reservoir. MP owns eight primitive campsite locations on Fish Lake Reservoir, mostly in the southwestern portion of the reservoir. These designated campsites are managed by MP staff. The 2014 FERC Form 80 results indicate that the estimated capacity utilization for the primitive campsites on Fish Lake Reservoir is at 35%. The reservoir also hosts shore fishing and canoe portaging amenities.

Whiteface Reservoir

Whiteface Reservoir was formed in 1922, covers approximately 4,688 surface water acres (NHD), and has approximately 40 miles of shoreline. The reservoir is located approximately thirty miles north of Duluth, Minnesota. The reservoir is primarily utilized for sport fishing and boating during the summer recreation season. MP owns two boat launches open for the public. One launch is located at the north end of the reservoir at the US Forest Service Campground, and the other launch is located at the south end of the reservoir at MP's Whiteface Dam Public Recreation Area. MP owns and manages three primitive campsites. Like the other reservoirs, these campsites are available for public use on a first-come, first-serve basis. There are also a number of non-designated primitive campsites at Whiteface Reservoir. The USFS Campground offers several amenities including a swimming beach and an ADA shorefishing dock.

4.8 HISTORIC RESOURCES

During MP's relicensing of this Project, a Programmatic Agreement (PA) was developed to comply with Section 106 of the National Historic Preservation Act. Stipulation I of the PA required the development of a Cultural Resource Management Plan (CRMP). The CRMP was approved by FERC in 2001.

*“New activities will consider potential effects on sites within the SLRP area. New recreations sites, **lease lots** (emphasis added), and new construction within the shoreline zone on established areas will be reviewed for impacts to all sites. The specific area must be reviewed to determine if survey has been completed. If no survey has been done, the area will be surveyed. If survey indicates sites are present, the potential for effects must be calculated. If the sites are ineligible, the activity does not have to consider effects. If the sites have not been evaluated, either the effects need to be avoided or mitigated or the sites should be evaluated. If the site is eligible, the effects need to be avoided or mitigated.”* (CRMP, P.52).

In 2019, MP contracted with archaeological firms to conduct desktop reviews of the lease lots to determine which properties have eligible National Register of Historic Places (NRHP) sites, which properties do not, and which properties will require additional surveys to determine eligibility status. Seven sites were identified as eligible for the NRHP and are not included in the Project Boundary adjustment. The results of the desktop reviews were submitted to SHPO for review and comment. In addition to the desktop reviews, six lease lots underwent Phase II archaeological investigations in 2019 to determine eligibility status. All six of the Phase II lease lots were recommended as non-eligible by the archaeologist.

In 2020, MP continued the Phase II archaeological investigations on an additional 33 lease lots on the reservoirs. The findings of the investigative surveys indicated one additional site was recommended eligible for NRHP, for a total of eight lots that were recommended eligible on island, Fish, and

Whiteface Reservoirs. The 2020 report was submitted to SHPO in conjunction with submitting to them this draft application for comment.

MP is not proposing to adjust the Project Boundary on lease lots that have, or potentially have, eligible NRHP sites and will continue to follow the CRMP for management activities. Therefore, the proposed amendment will have no effect on NRHP sites.

5 ANTICIPATED CHANGES TO THE ENVIRONMENT

5.1 SHORELINE PROPERTY OWNERSHIP

5.1.1 EXISTING MANAGEMENT OF SHORELINE

The shoreline in the SLRP, including Island Lake Reservoir, Fish Lake Reservoir, and Whiteface Reservoir, is managed by Minnesota Power's professional land management staff in compliance with relevant FERC License articles and management plan requirements, including the SLRP Erosion Control Management Plan (ECMP), Cultural Resource Management Plan (CRMP), as well as MP's Shoreline Traditions lease program requirements. For residential and other lease lots, the shoreline is co-managed by both MP and the existing leaseholder. The shoreline is protected by existing FERC requirements, as well as rigorous local and state regulatory protections, and any shoreline alterations undergo MP review and approval prior to the activity taking place. For the co-managed lands, MP currently reviews and approves or denies any leaseholder proposed alterations via the Company's Construction and Earthwork Request Form (CERF). Any alterations to the shoreline must be approved via the CERF process prior to the leaseholder contacting the appropriate regulatory agency (if permitting is required). All FERC, local, and state requirements must be met prior to, during, and after construction. Failure to follow this process by the existing leaseholder could result in restoration and reparation and associated costs, as well as lease revocation.

5.1.2 PROPOSED MANAGEMENT PRACTICES

Following approval of this Project Boundary adjustment amendment and Minnesota Public Utility Commission (MPUC) approval, MP intends to offer many lessees on Island Lake Reservoir, Fish Lake Reservoir, and Whiteface Reservoir the option to purchase their lot. This will result in additional private ownership adjacent to the FERC Project Boundary. However, the shoreline in the amended Project Boundary for those lease lots will remain under MP ownership and management, with a riparian easement allowing the adjacent landowner access and the ability to install docks under existing Minnesota DNR general authorizations. See Appendix 3 for a draft example Riparian Easement Agreement.

Any proposed alteration to the shoreline will require the landowner with easement rights to follow the same process as is currently used by leaseholders to ensure adherence with local, state, and federal

requirements. Failure to follow this process by the easement holder could result in restoration and reparation and associated costs, as well as potential revocation of the easement. MP land management staff will monitor easement areas on an annual basis to ensure there are no unauthorized shoreline alterations.

As stated previously, MP has conducted a comprehensive review of the sites in regards to NHRP eligibility. As a result, MP has identified all NHRP-eligible sites, and will not sell properties that are potential or known eligible NRHP sites. All NCAs and recreation properties owned by MP will be retained within the Project Boundary.

5.1.3 ANTICIPATED EFFECTS

With this non-capacity Project Boundary amendment application, MP is proposing to adjust the Project Boundary to simultaneously include all lands needed for current project purposes, while excluding lands not needed for project purposes. The lands proposed to be excluded from the Project Boundary are used exclusively for private residential use, and do not serve an operational, maintenance, or other project purpose. Furthermore, because buffer space around the shoreland and the existing controls over the management of those lands remain, there will be no effect to environmental or recreational project uses or existing local, state, or federal protections. Finally, because MP is not proposing to remove lands with identified NHRP resources, there are no effects to cultural or historical resources as a result of this Project Boundary adjustment.

If approved, the Project Boundary will be both larger and be a more accurate reflection of current and future Project uses and needs. There are no other anticipated effects as a result of this proposal to amend the Project Boundary on Island Lake Reservoir, Fish Lake Reservoir, and Whiteface Reservoir.

5.2 RESERVOIR LEVELS AND OPERATION

The primary purpose of the headwater reservoirs of the SLRP will remain unchanged as a result of this Project Boundary amendment. The reservoirs will continue to provide water for wintertime generation at downstream hydroelectric generating stations, regulation to help mitigate high downstream flows, recreational opportunities, and aquatic habitat in the reservoir and downstream.

Island Lake Reservoir

At full pool elevation of 1369.81 feet (39.5 feet stage), Island Lake Reservoir has gross storage of 166,000 acre-ft.

To provide water for winter generation at downstream generating facilities, the Island Lake Reservoir will continue to annually be drafted close to, but not lower than, elevation 1358.11 feet (27.8 feet stage), which equates to a drawdown of approximately 10.7 feet (81,306 acre-feet). The drawdown will begin on or close to November 1, depending on natural flow conditions. The target date for the end of the drawdown is April 1.

After spring snowmelt begins and there is sufficient flow in the St. Louis River to run downstream hydroelectric developments at or near maximum turbine hydraulic capacity, the discharge from the Island Lake Reservoir shall be adjusted to FERC License minimum flow requirements unless a greater discharge is warranted for flood mitigation. The reservoir target refill elevation is 1368.81 feet (38.5 feet stage) by June 1.

After the June 1 refill elevation of 1368.81 feet has been met, the reservoir will normally be maintained between elevations 1368.61 feet and 1369.31 feet (between 38.3 feet and 39.0 feet stage). The capacity between 1369.31 feet and 1369.81 feet may be used as a buffer to mitigate downstream flows during high flow events.

Fish Lake Reservoir

At full pool elevation of 1352.42 feet NGVD (19.2 feet stage), Fish Lake Reservoir has a gross storage of 40,300 acre-ft. To provide water for winter generation at downstream generating facilities, the Fish Lake Reservoir will continue to annually be drafted close to, but not lower than, elevation 1349.22 feet (16.0 feet stage), which equates to a drawdown of approximately 2.5 feet (11,040 acre-feet). The drawdown will begin on or close to November 1, depending on natural flow conditions. The target date for the end of the drawdown is April 1.

After spring snowmelt begins and there is sufficient flow in the St. Louis River to run downstream hydroelectric developments at or near maximum turbine hydraulic capacity, the discharge from the project shall be adjusted to the FERC License minimum flow requirements unless for flood mitigation reasons a greater discharge is warranted. The reservoir target refill elevation is 1351.72 feet (18.5 feet stage) by June 1.

After the June 1 refill elevation of 1351.72 feet (18.5 feet stage) has been met, the reservoir is normally maintained at an elevation between 1351.52 feet and 1352.02 feet (18.3 and 18.8 feet stage). The capacity between 1352.02 feet and 1352.42 feet may be used as a buffer to mitigate downstream flows during high flow events.

Whiteface Reservoir

At full pool elevation of 1453.92 feet NGVD (35.0 feet stage), Whiteface Reservoir has a gross storage of 81,900 acre-ft.

To provide water for winter generation at downstream generating facilities, the Whiteface Reservoir will continue to annually be drafted close to but not lower than elevation 1448.72 feet (29.8 feet stage), which equates to a drawdown of approximately 4.2 feet (21,862 acre-feet). The drawdown will begin on or close to November 1, depending on natural flow conditions. The target date for the end of the drawdown is April 1.

After spring snowmelt begins and there is sufficient flow in the St. Louis River to operate downstream hydroelectric developments at or near maximum turbine hydraulic capacity, the discharge from the project shall be adjusted to the FERC License minimum flow requirements unless, for flood mitigation

reasons, a greater discharge is warranted. The target refill elevation is 1452.92 feet (34.0 feet stage) by June 1.

After the June 1 refill elevation requirement of 1452.92 feet (34.0 feet stage) has been met, the reservoir will normally be maintained at an elevation of between 1452.92 feet and 1453.42 feet (34.0 and 34.5 feet stage). The reservoir capacity between 1453.42 feet and 1453.92 feet may be used as a buffer to mitigate downstream flows during high flow events.

5.3 SHORELINE VEGETATION

5.3.1 EXISTING MANAGEMENT PRACTICES

Management of lands within the Project Boundary is addressed in the current license under the standard land use article, Article 5.

The ECMP was developed to address shoreline erosion, which includes periodic inspection along with preserving and promoting stable shoreline vegetation. MP promotes and manages shoreline vegetation in a manner that protects the scenic, recreational, and environmental values of the project. Shoreline vegetation on lands located within the Project Boundary is regulated by local and state rules. The St. Louis County Shoreline Guide describes the regulation that are in place for shoreland protections. These include regulation on minimum lot size, protection of vegetated buffer areas, building setbacks and permitting, wetland protections, and septic system requirements. The St. Louis County Shoreline Guide is included in Appendix 1.

5.3.2 PROPOSED MANAGEMENT PRACTICES

MP will continue to manage vegetation on property it owns to protect the scenic, recreational, and environmental values of the project. This include the shoreline protective area around the reservoirs that will remain in the Project Boundary. Management of shoreline vegetation as a result of the proposed Project Boundary amendment is not expected to change. However, the ECMP plan will be updated to reflect the removal of the upland areas of former lease lots.

The same local and state regulations will continue to apply to both lands added to and removed from the project. MP will retain ownership and control of the shoreline area to ensure adherence to FERC requirements, in addition to local and state rules and regulations.

5.3.3 ANTICIPATED EFFECTS

MP does not anticipate there will be reduction of shoreline vegetation as a result of the proposed Project Boundary adjustment. MP will retain a shoreline protective buffer area and continue periodic monitoring of the shoreline through commitments outlined in the updated ECMP. Additionally, state and county regulations will continue to restrict development within 75 ft. of the normal operating pool. MP will continue to work with property owners on shoreline stabilization when needed. MP promotes bio-engineering using vegetation to stabilize shorelines where possible.

Therefore, the Project Boundary adjustment will have no effect on the protection or management of shoreline vegetation.

5.4 WILDLIFE SHORELINE HABITAT

5.4.1 EXISTING MANAGEMENT PRACTICES

The SLRP License addresses wildlife shoreline habitat in Article 422, Waterfowl Enhancement Plan in Article 427, Land Management Plan in Article 419, Fishery Enhancement Plan and fish survey in Article 401 and the ECMP. All of these plans address the improvements of the wildlife shoreline habitat and are a continuing part of wildlife management under the SLRP License.

5.4.2 PROPOSED MANAGEMENT PRACTICES

As a requirement of the current SLRP License, MP will continue to update the ECMP to incorporate changes to the lease lot management program and improvements made to specified shoreline areas that have identified erosion areas. The remaining resource management plans addressed in Section 5.4.1 will be unchanged.

5.4.3 ANTICIPATED EFFECTS

Shoreline habitat within the NCA provides high-quality wildlife habitat. This habitat will remain in the Project Boundary and will continue to sustain wildlife species as it remains undisturbed and provides significant wildlife corridor connections to larger vegetated parcels. With the addition of 468 acres of undeveloped forest and wetland around the reservoirs, the amount of dedicated shoreline wildlife habitat will increase significantly within the Project Boundary.

5.5 FEDERAL AND STATE THREATENED AND ENDANGERED SPECIES

5.5.1 EXISTING MANAGEMENT PRACTICES

SLRP License Article 427 required the development of the Land Management Plan (LMP) and Boulder Lake Management Area (BLMA) Plan which addresses the management of Federal and State T & E species. The BLMA Plan was recently updated in 2017.

A review of both Federal and State listed species was conducted as part of this application and is described throughout Section 4.

5.5.2 PROPOSED MANAGEMENT PRACTICES

The SLRP provides habitat for several federally listed species and State listed species of concern. The diversity of wildlife and habitat in the Project demonstrates that MP's current management practices

provide a high standard of protecting and promoting RTE species and critical habitat within the Project. Because there are no anticipated impacts to threatened or endangered species, no changes to management practices are proposed as part of this Project Boundary amendment.

5.5.3 ANTICIPATED EFFECTS

The proposed Project Boundary adjustment will have no effect on the Federal or State listed species or designated special habitat.

5.6 SHORELINE WETLANDS

5.6.1 EXISTING MANAGEMENT PRACTICES

Management of wetlands within the Project Boundary is not specifically addressed in the current FERC License. However, MP preserves, protects, and manages all wetlands under company ownership in a manner that recognizes their natural values and importance to the environment and in accordance with local, state, and federal wetland requirements. Negative wetland impacts are avoided to the greatest extent possible when conducting operational activities. When wetland impacts are required for operation of the hydroelectric project, MP institutes best management practices, secures required permitting, and coordinates with the natural resource protection agencies. MP's goals are to avoid or minimize any impacts to the overall wetland functional values such as flood storage, wildlife habitat, recreation, and aesthetics.

5.6.2 PROPOSED MANAGEMENT PRACTICES

MP conducted a thorough inventory of the wetlands located within and adjacent to the existing Project Boundary using National Wetland Inventory (NWI) maps in conjunction with interpretation of aerial photography. All wetlands currently within the Project Boundary will remain within the Project Boundary. As part of this Project Boundary adjustment, MP is adding 468 acres of NCA lands to the Project Boundary, including 193 acres of additional wetlands.

5.6.3 ANTICIPATED EFFECTS

No change in wetland protection or management will occur for wetlands within the existing Project Boundary and they will continue to be managed by MP as protected resources. Any fill activity not authorized by the resource protection agencies will continue to be a violation of federal, state, county, and/or local regulations. Wetlands will continue to be regulated by the U.S. Army Corps of Engineers (Corps) and the MDNR.

The acreage of wetlands within the proposed Project Boundary will increase by 193 acres over the current Project Boundary wetland acreage. See Figures 6, 12 and 18 for additional details of the wetland areas.

5.7 RECREATION MANAGEMENT

5.7.1 EXISTING MANAGEMENT PRACTICES

Management of recreation facilities associated with the Project are outlined in the Recreation Plan as required under Articles 425 and 426 of the SLRP License. Development of all FERC-approved recreation sites has been completed, with the exception of a shore fishing location near the Island Lake Dam site. This will be completed following construction improvements to the Island Lake Reservoir Dam.

5.7.2 PROPOSED MANAGEMENT PRACTICES

All recreational facilities currently within the Project Boundary will remain within the Project Boundary. Any portion of the recreational facilities that was outside of the Project Boundary will be added so that the entire recreational facility will be within the Project Boundary following the approval of this license amendment application. All shoreline lands owned by local, state or federal government entities will remain within the Project Boundary.

5.7.3 ANTICIPATED EFFECTS

With the exception of some minor modifications of the Project Boundary to include additional areas associated with some recreation sites, there is no effect to public recreation activities. All recreation sites and management will remain the same if the proposed Project Boundary is approved.

5.8 HISTORIC RESOURCE MANAGEMENT

5.8.1 EXISTING MANAGEMENT PRACTICES

As a provision of the FERC license, a Programmatic Agreement (PA) was developed and approved for compliance with Section 106 of the NHPA. Under Stipulation I of the PA, a CRMP was developed and approved by FERC and SHPO for cultural and historic property management within the SLRP Project.

The CRMP contains procedures to evaluate potential effects to cultural or historic sites prior to any earth disturbing activities on lease lots. A certified archaeologist reviews any proposed construction activity to confirm it will have no effect on any historic property before proceeding. If there is a potential impact, the project is either not approved or mitigation is completed.

The CRMP requires annual shoreline monitoring to evaluate potential impacts from hydro operations. MP contracts with an archaeologist to perform the annual monitoring. A summary report with recommendations is prepared and submitted to SHPO every year. In addition to the monitoring report, an annual summary report of all cultural and historic property management activities is submitted to SHPO and FERC.

5.8.2 PROPOSED MANAGEMENT PRACTICES

There were 33 lease lots identified on Island Lake Reservoir, Fish Lake Reservoir, and Whiteface Reservoir as being potentially eligible for the NRHP based on previous Phase I archaeological surveys. MP contracted with a registered archaeologist to evaluate each of these sites to determine eligibility. This evaluation was completed in August 2020. Following the completion of the survey report, MP will consult with SHPO about the sites' potential eligibility. Any lease lots that are considered to be NRHP-eligible will not have the Project Boundary adjusted and will continue to be owned by MP and managed under the current CRMP program.

5.8.3 ANTICIPATED EFFECTS

Cultural and historic resource protection under the CRMP is not anticipated to change with the proposed Project Boundary adjustment. Any eligible NRHP sites located within the current Project Boundary will remain within the Project Boundary and continue to be managed under the CRMP. Since there is no change to the management activities under the CRMP, there will be no effect to eligible NRHP sites.

6 LITERATURE CITED

- Minnesota Audubon. 2014. Common Tern Minnesota Conservation Plan; Online (URL) http://mndev.audubon.org/sites/default/files/common_tern_minnesota_conservation_plan_10-16-2014_0.pdf
- MN DNR. 2020. Minnesota Native Trees; Online: (URL) <https://www.dnr.state.mn.us/trees/native-trees.html>
- MN DNR. 2020b. Plants of Minnesota; Online: (URL) <https://www.dnr.state.mn.us/plants/index.html>
- UMN Extension. nd. Native Plants, St. Paul, MN; Online: URL <https://extension.umn.edu/find-plants/native-plants> .
- National Wildlife Federation (NWF). 2015-2020. Native Plant Finder; Online (URL): <https://www.nwf.org/nativeplantfinder/>
- MN DNR. 2020c. Northshore mammals, amphibians, reptiles list; Online (URL) https://www.dnr.state.mn.us/state_parks/northshore_animalslist.html
- MN DNR. 2020d. Canada Lynx; Online: (URL) www.dnr.state.mn.us/mammals/canadalynx.html
- MN DNR. 2020e. *Legumia recta* :Black Sandshell; Online: (URL) <https://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=IMBIV26020#:~:text=The%20black%20sandshell%20was%20once,1%20live%20specimen%20was%20collected.>
- MN DNR. 2020f. *Sterna hirundo* : Common Tern; Online: (URL) [https://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=ABNNM08070#:~:text=Description,forsteri\)%2C%20another%20rare%20species.](https://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=ABNNM08070#:~:text=Description,forsteri)%2C%20another%20rare%20species.)
- MN DNR. 2020g. Natural Heritage Information System NHIS database; Online search May 12, 2020
- MN DNR. 2020h. *Elatine triandra*: Three-stemmed waterwort; Online (URL) <https://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=PDELTO2090>
- MN DNR. 2020i. *Adlumia fungosa* : Allegheny Vine; Online (URL) <https://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=PDFUM02010>
- MN DNR. 2020j. *Bidens discoidea*: Discoid Beggartick; Online (URL) <https://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=PDAST180LO>
- MN DNR. 2020k. APn91 Northern Poor Fen Fact Sheet; Online (URL) https://files.dnr.state.mn.us/natural_resources/npc/acid_peatland/apn91.pdf
- MN DNR. 1978. Minnesota Colonial Waterbird Nesting Site Inventory; Online (URL) https://files.dnr.state.mn.us/eco/nongame/projects/consgrant_reports/1978/1978_colonial_birds.pdf
- MP. 2015. Minnesota Power’s SLRP Recreation Plan (6 year Update)

MP. 2017. Minnesota Power SLRP Land Management Plan and Boulder Lake Land Management Plan Update.

MP. 2018. Minnesota Power's SLRP Erosion Control Plan Update

MP. 2001. Minnesota Power's Cultural Resource Management Plan NHD. 2017. National Hydrography Dataset, St, Louis County

St. Louis County. 2010. Shoreland Guide for St. Louis County, MN, A Comprehensive Property Owner Guide, Duluth, MN.

USFS.nd. Superior National Forest Vegetation, Online: (URL)
<https://www.fs.usda.gov/main/superior/about-forest>

USFWS. 2020b. Information for Planning and Consultation (IPac); Online search May 12, 2020

USFWS. 2020c. Species Profile for Canada Lynx (*Lynx canadensis*). USFWS Environmental Conservation Online system (URL): <https://ecos.fws.gov/exp0/profile/speciesProfile?sld=3652>.

USFWS. 2020d. Species Profile for Gray Wolf (*Canis lupus*). USFWS Environmental Conservation Online System; Online (URL) <https://ecos.fws.gov/ecp0/profile/speciesProfile?sld=4488#recovery>.

USFWS. 2020e. Species Profile for Northern Long-eared Bat (*Myotis septentrionalis*). Online: (URL)
[https://ecos.fws.gov/ecp\)/profile/speciesProfile?sld=9045#crithab](https://ecos.fws.gov/ecp)/profile/speciesProfile?sld=9045#crithab).

USFWS. 2020f. Piping Plover Fact Sheet. Online: (URL)
<https://www.fws.gov/midwest/endangered/pipingplover/pipingpl.html>

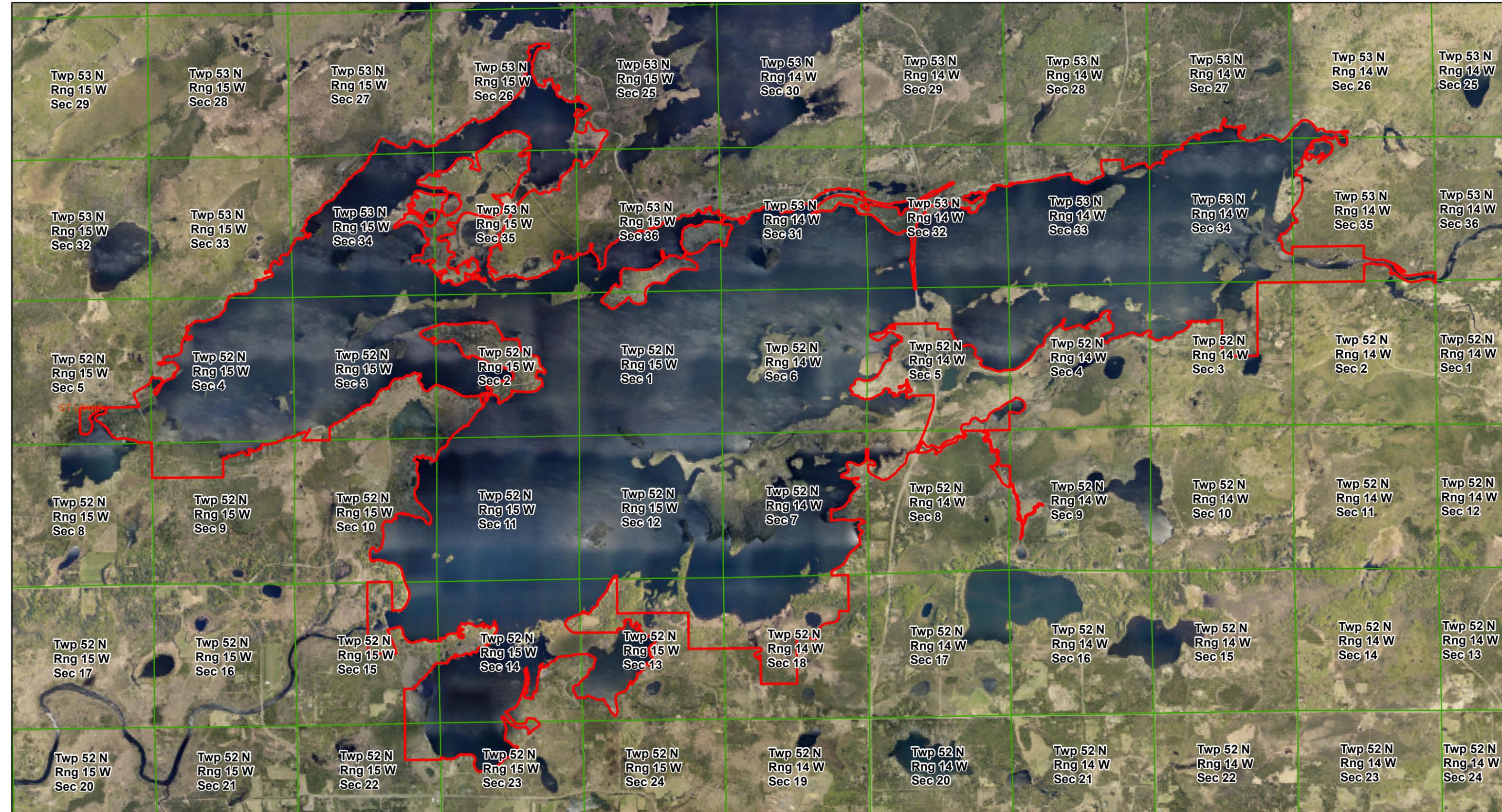
USFWS. 2020g. National Wetlands Inventory website. U.S. Department of Interior, Fish and Wildlife Service. Online (URL) <http://www.fws.gov/wetlands/>.

USGS Multi-Resolution Land Characteristics Consortium (MRLC), 2016, National Land Cover Database (NLCD), USGS, Sioux Falls, SD.

University of Minnesota.2020. The Raptor Center – Bald eagle; Online: (URL)
<https://raptor.umn.edu/about-raptors/raptors-north-america/bald-eagle>

7 FIGURES

Figure 1 Island Lake Reservoir Current Project Boundary



**Island Lake Reservoir
Current Project Boundary**

Figure 1

 Island Lake FERC Boundary (Orig)

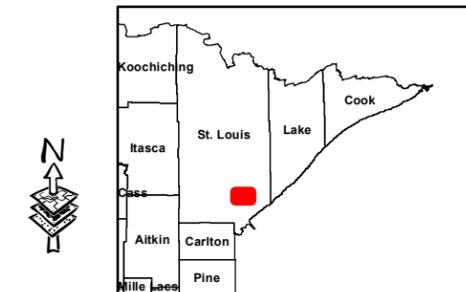
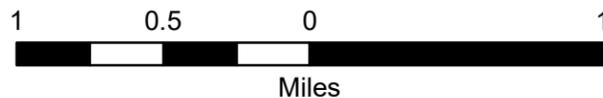
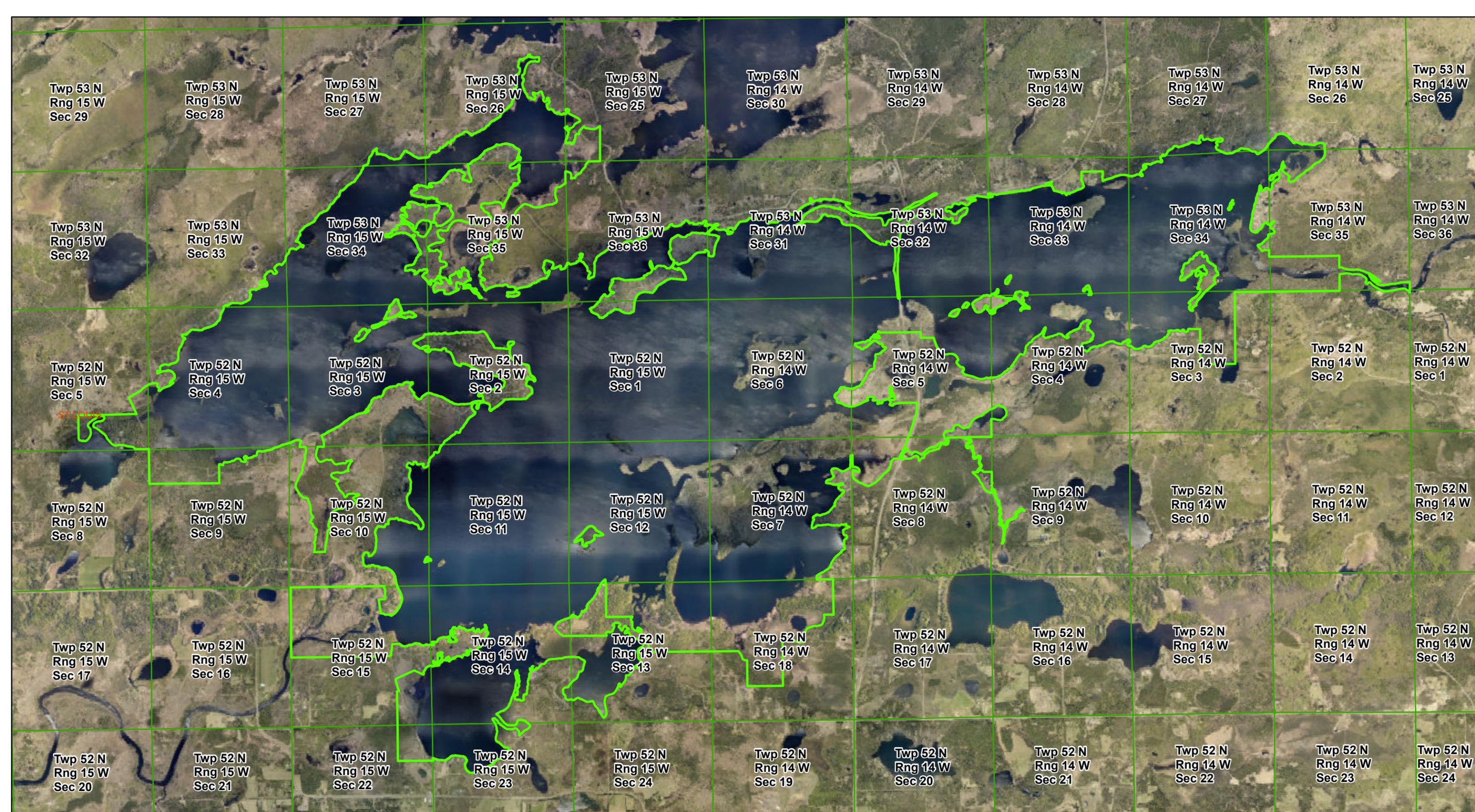


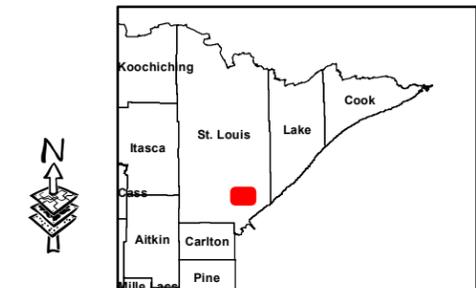
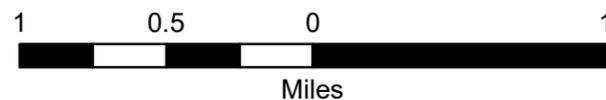
Figure 2 Island Lake Reservoir Proposed Project Boundary Adjustment



**Island Lake Reservoir
Proposed Project Boundary Adjustment**

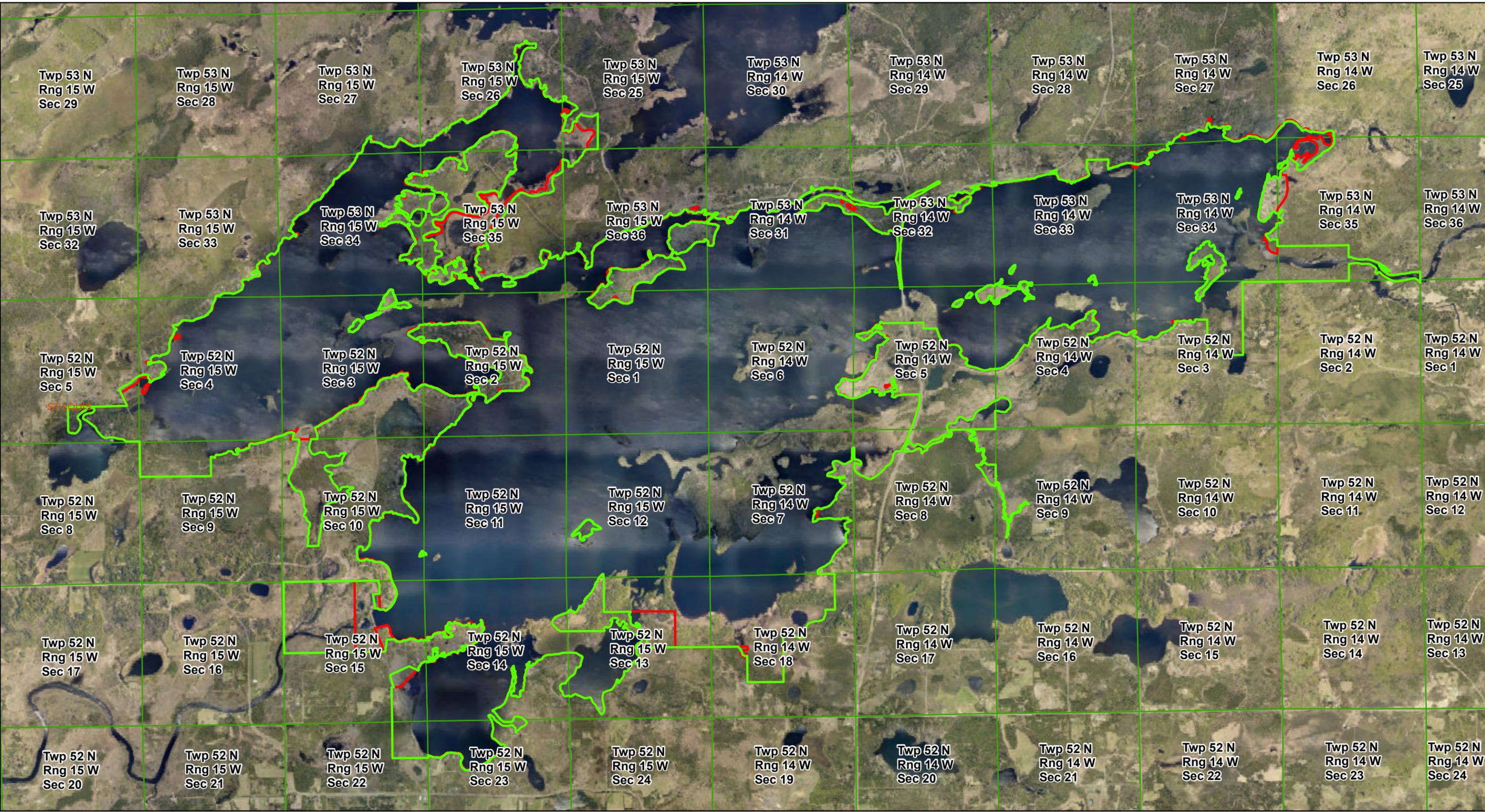
Figure 2

 Island Lake FERC Project Boundary (Proposed)



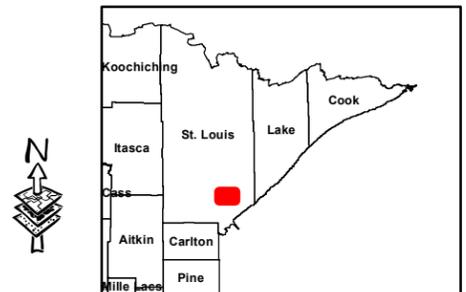
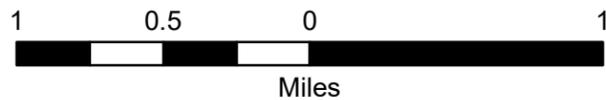
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Figure 3 Island Lake Reservoir Combined map with Current and Proposed Project Boundary



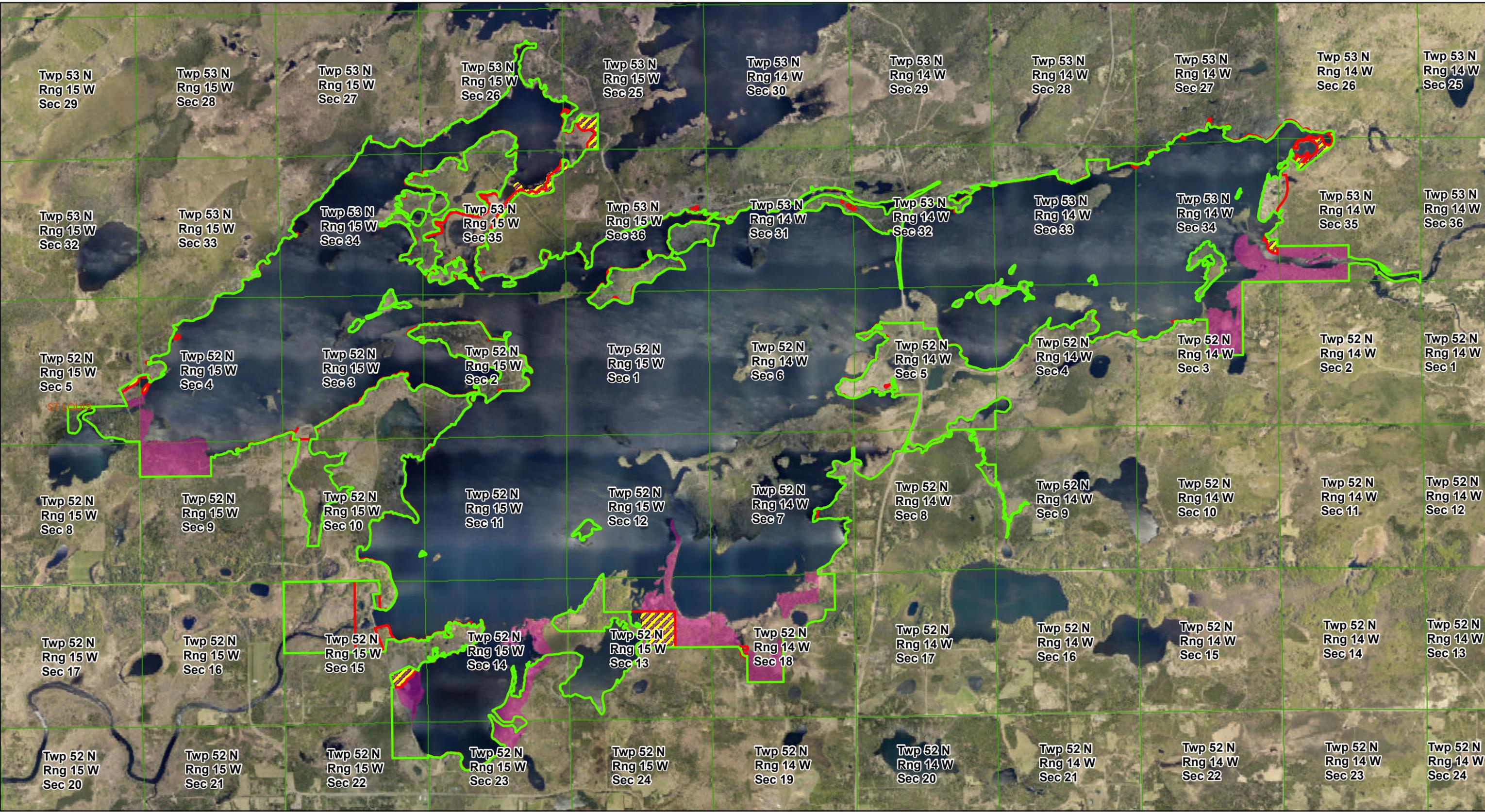
**Island Lake Reservoir
 Combined map with Current
 and Proposed Project Boundary
 Figure 3**

- Island Lake FERC Project Boundary (Proposed)
- Island Lake FERC Boundary (Orig)



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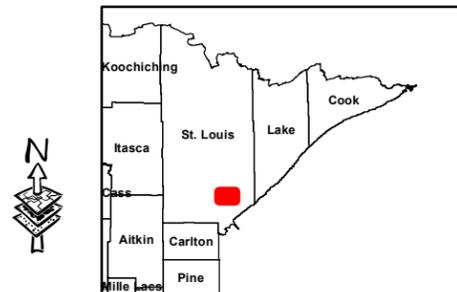
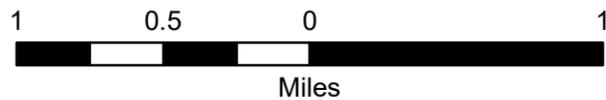
Figure 4a Island Lake Reservoir Proposed Natural Character Area
Inclusions



**Island Lake Reservoir
Proposed Natural Character
Area Inclusions**

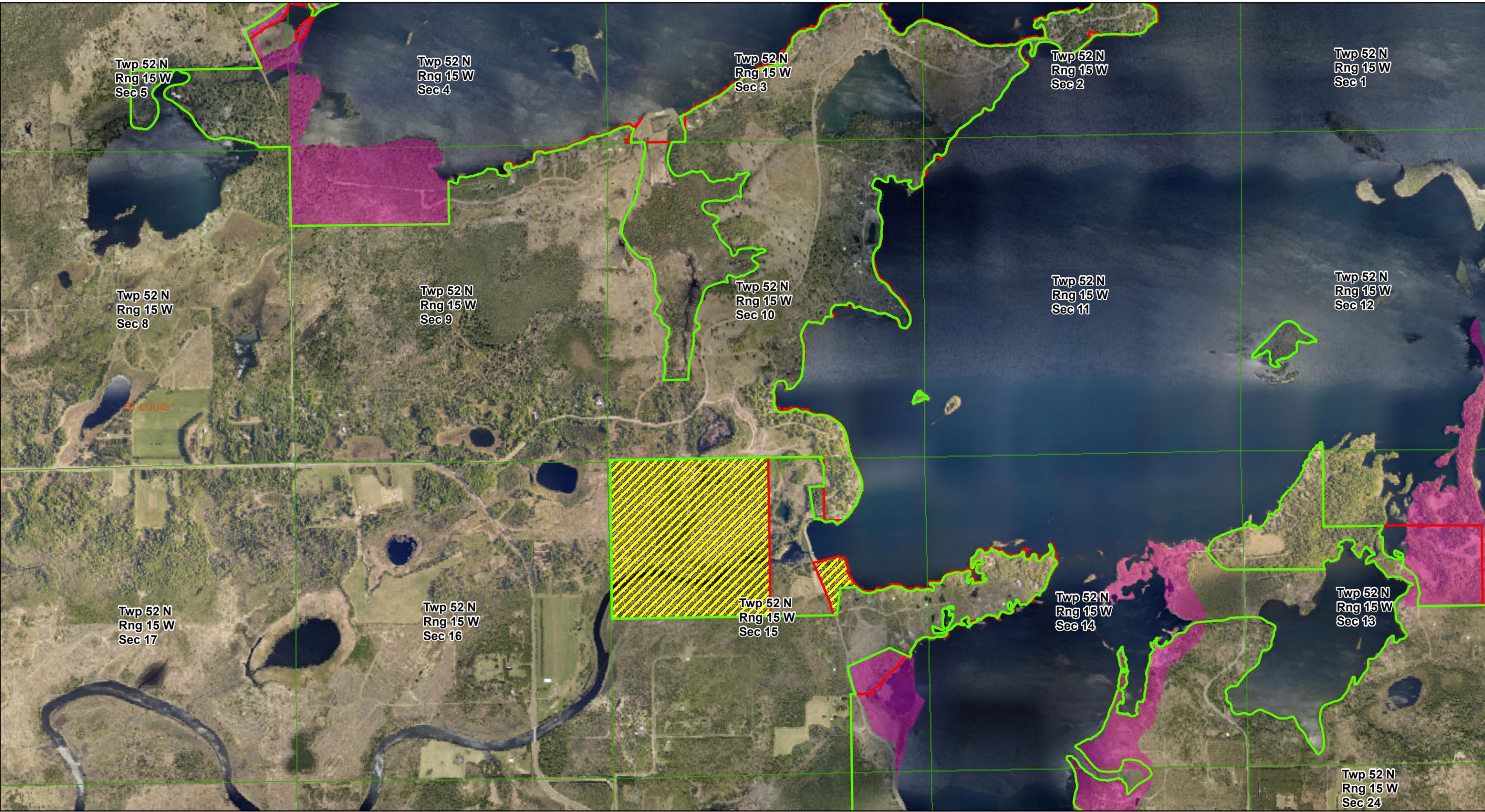
Figure 4a

- Island Lake FERC Project Boundary (Proposed)
- Island Lake FERC Boundary (Orig)
- Natural Character Areas
- Inclusion of Existing Natural Character Areas



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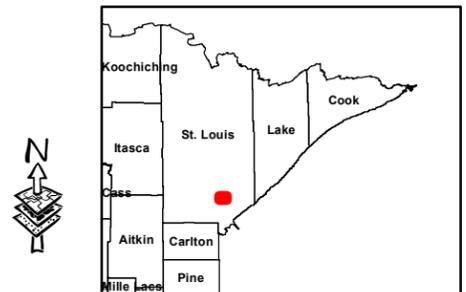
Figure 4b Island Lake Reservoir Dam Proposed Natural Character Area
Addition



**Island Lake Reservoir
Dam Proposed Natural
Character Area Addition**

Figure 4b

- Island Lake FERC Project Boundary (Proposed)
- Island Lake FERC Boundary (Orig)
- Natural Character Areas
- Proposed Natural Character Area



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Figure 4c Island Lake Reservoir North Dike Proposed Natural
Character Area Addition



**Island Lake Reservoir
North Dike Proposed
Natural Character
Area Addition**

Figure 4c

- Island Lake FERC Project Boundary (Proposed)
- Island Lake FERC Boundary (Orig)
- Natural Character Areas
- Proposed Natural Character Area



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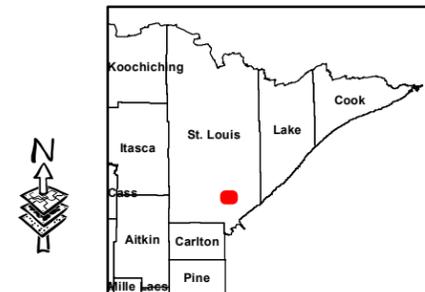
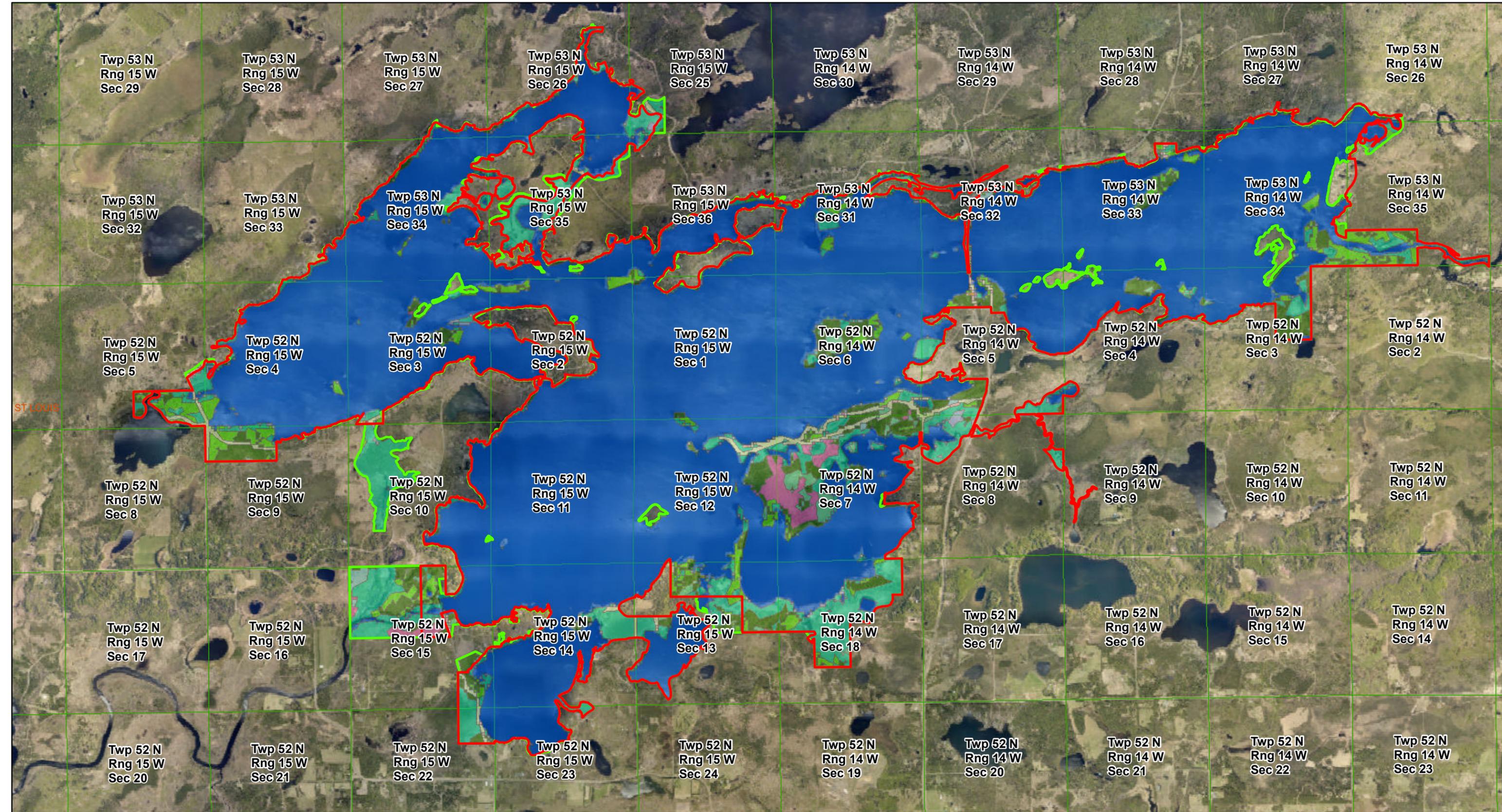


Figure 5 Island Lake Reservoir Project Boundary 2016 National Landcover Dataset (NLCD)



**Island Lake Reservoir
Project Boundary
2016 National Landcover
Dataset (NLCD)**

Figure 5

- | | | | |
|--|-----------------------------|------------------------------|----------------|
| Island Lake FERC Boundary (Orig) | Developed, High Intensity | Emergent Herbaceous Wetlands | Mixed Forest |
| Island Lake FERC Project Boundary (Proposed) | Developed, Low Intensity | Evergreen Forest | Open Water |
| Barren Land | Developed, Medium Intensity | Hay/Pasture | Shrub/Scrub |
| Deciduous Forest | Developed, Open Space | Herbaceous | Woody Wetlands |



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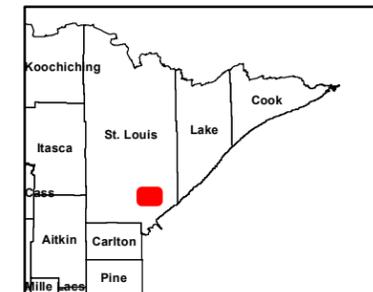
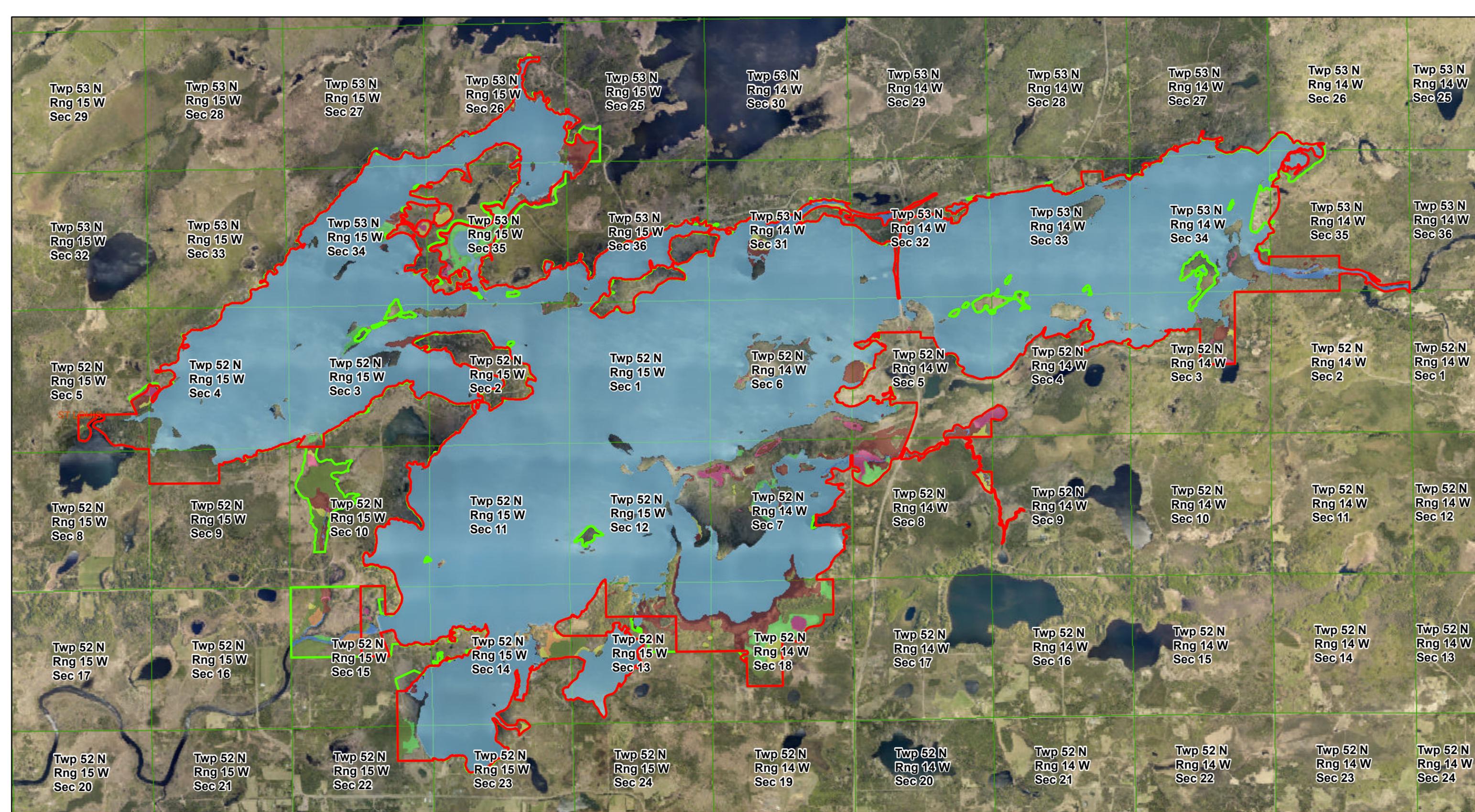


Figure 6 Island Lake Reservoir National Wetland Inventory (NWI)



**Island Lake Reservoir
Project Boundary
National Wetland
Inventory (NWI)**

- Island Lake FERC Boundary (Orig)
- Island Lake FERC Project Boundary (Proposed)
- Freshwater Emergent Wetland
- Freshwater Forested Wetland
- Freshwater Forested/Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Freshwater Shrub/Emergent Wetland
- Lake
- Riverine

Figure 6



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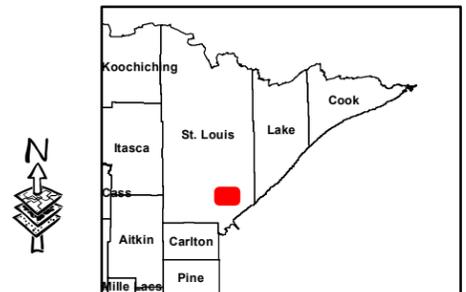
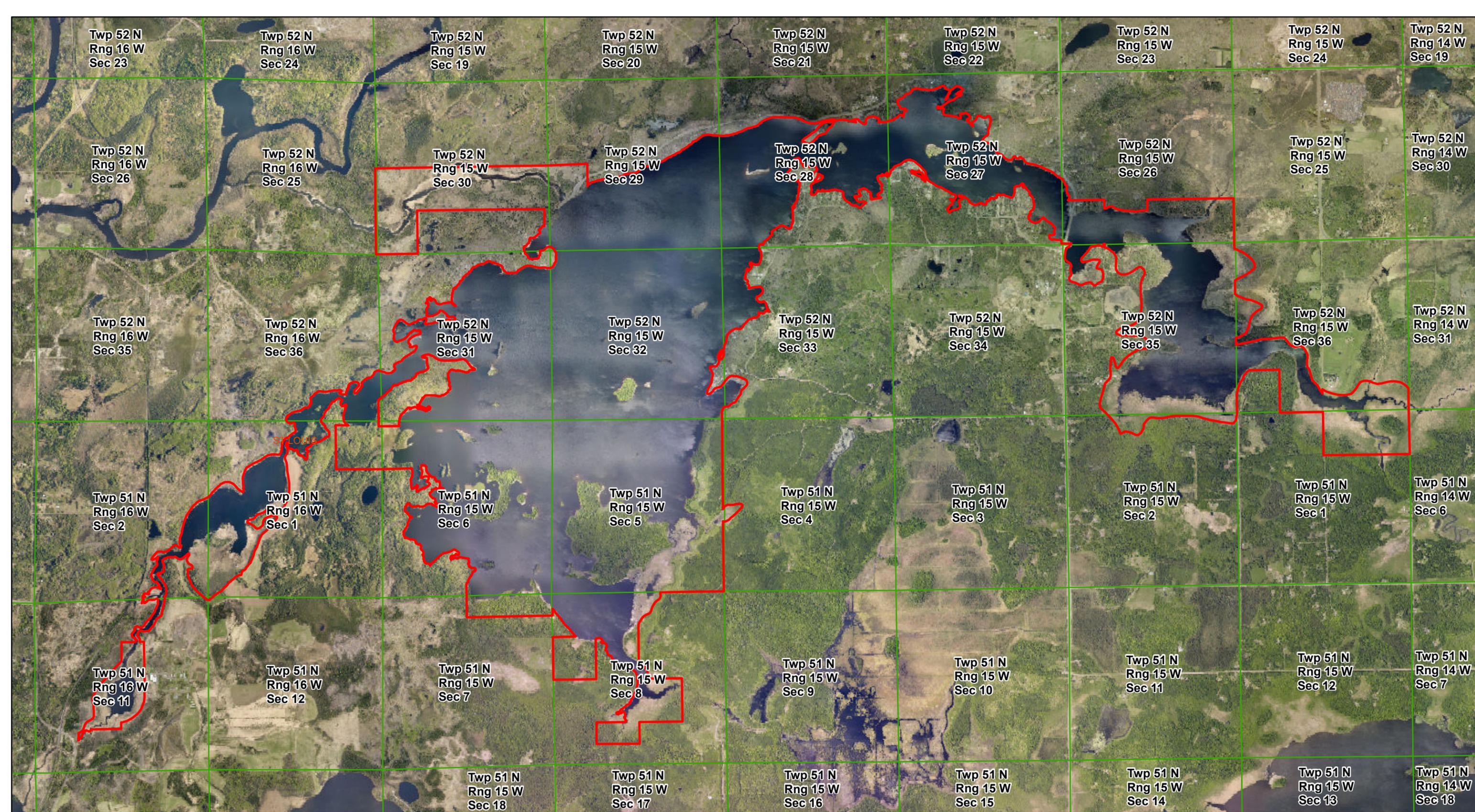


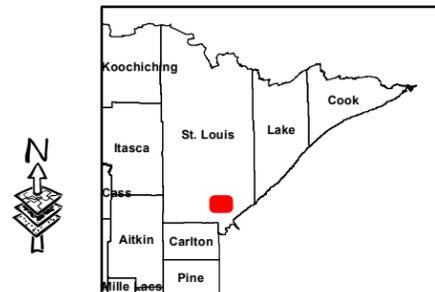
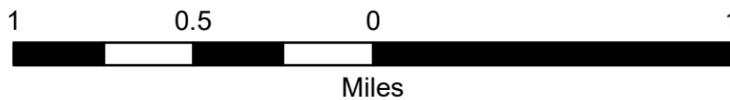
Figure 7 Fish Lake Reservoir Current Project Boundary



**Fish Lake Reservoir
Current Project Boundary**

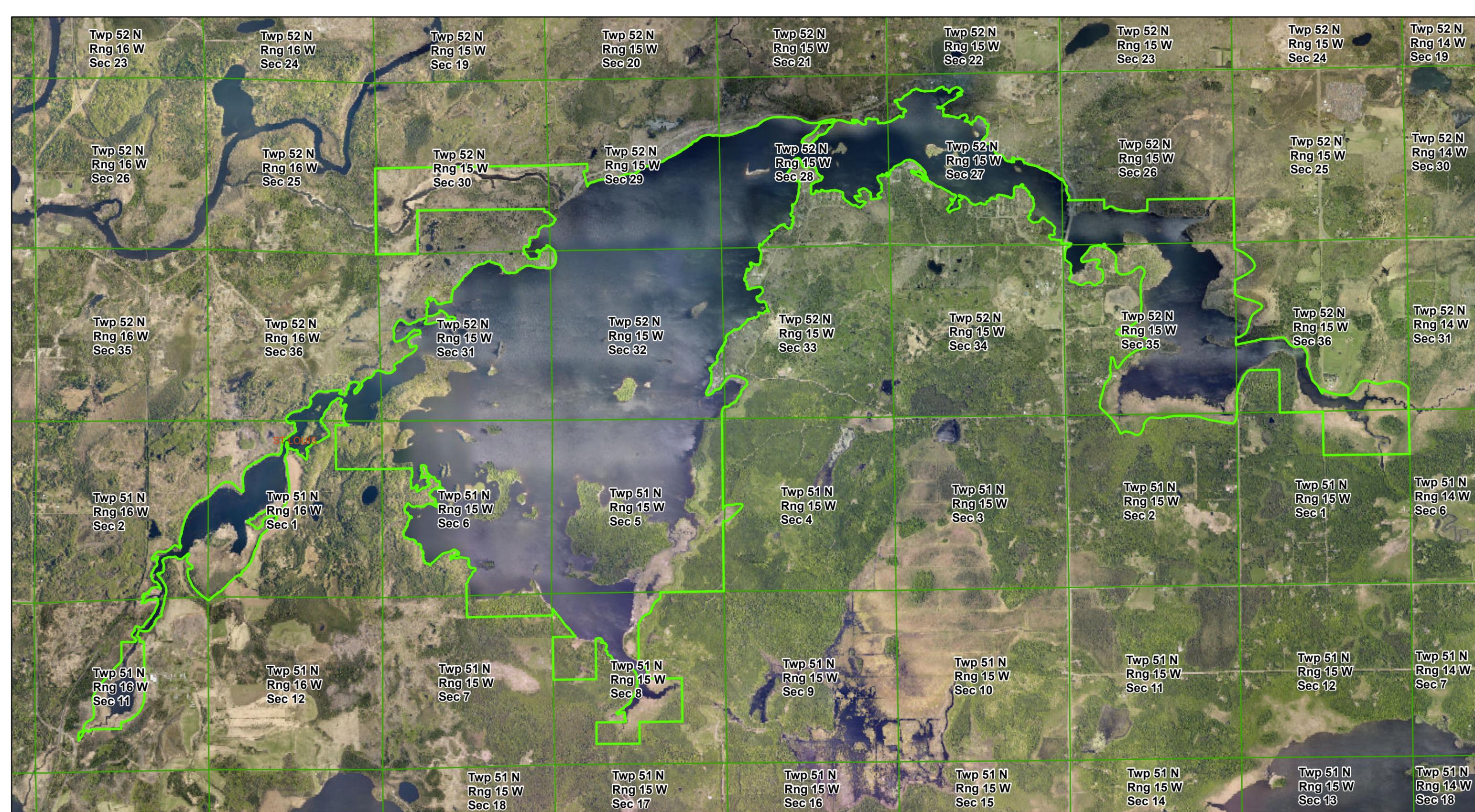
Figure 7

 Fish Lake FERC Boundary (Orig)



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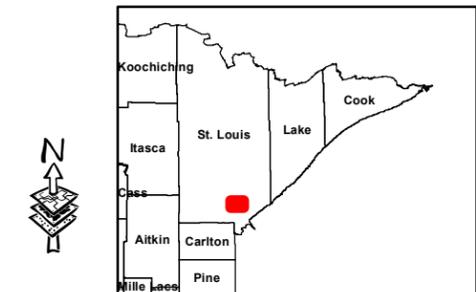
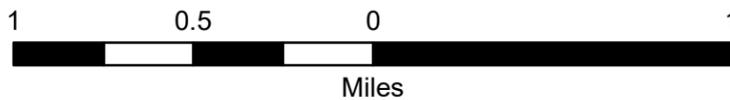
Figure 8 Fish Lake Reservoir Proposed Project Boundary Adjustment



**Fish Lake Reservoir
Proposed Project Boundary
Adjustment**

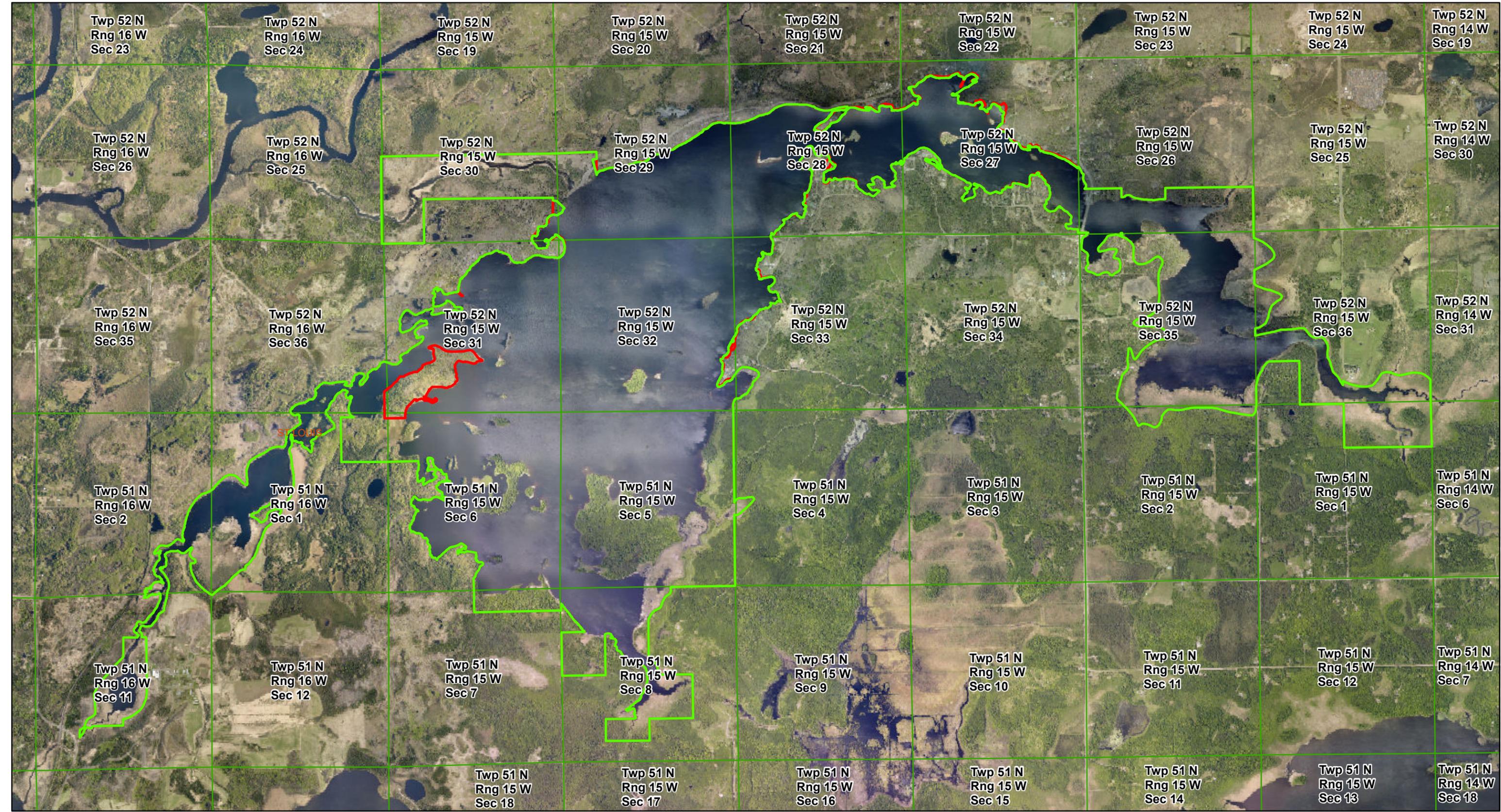
Figure 8

 Fish Lake FERC Project Boundary (Proposed)



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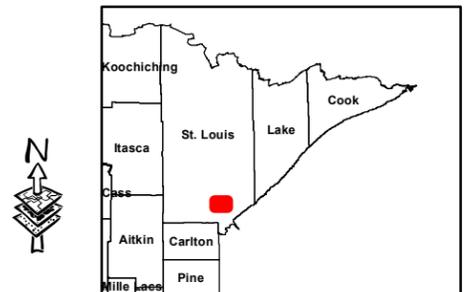
Figure 9 Fish Lake Reservoir Project Boundary Comparison



**Fish Lake Reservoir
Project Boundary Comparison**

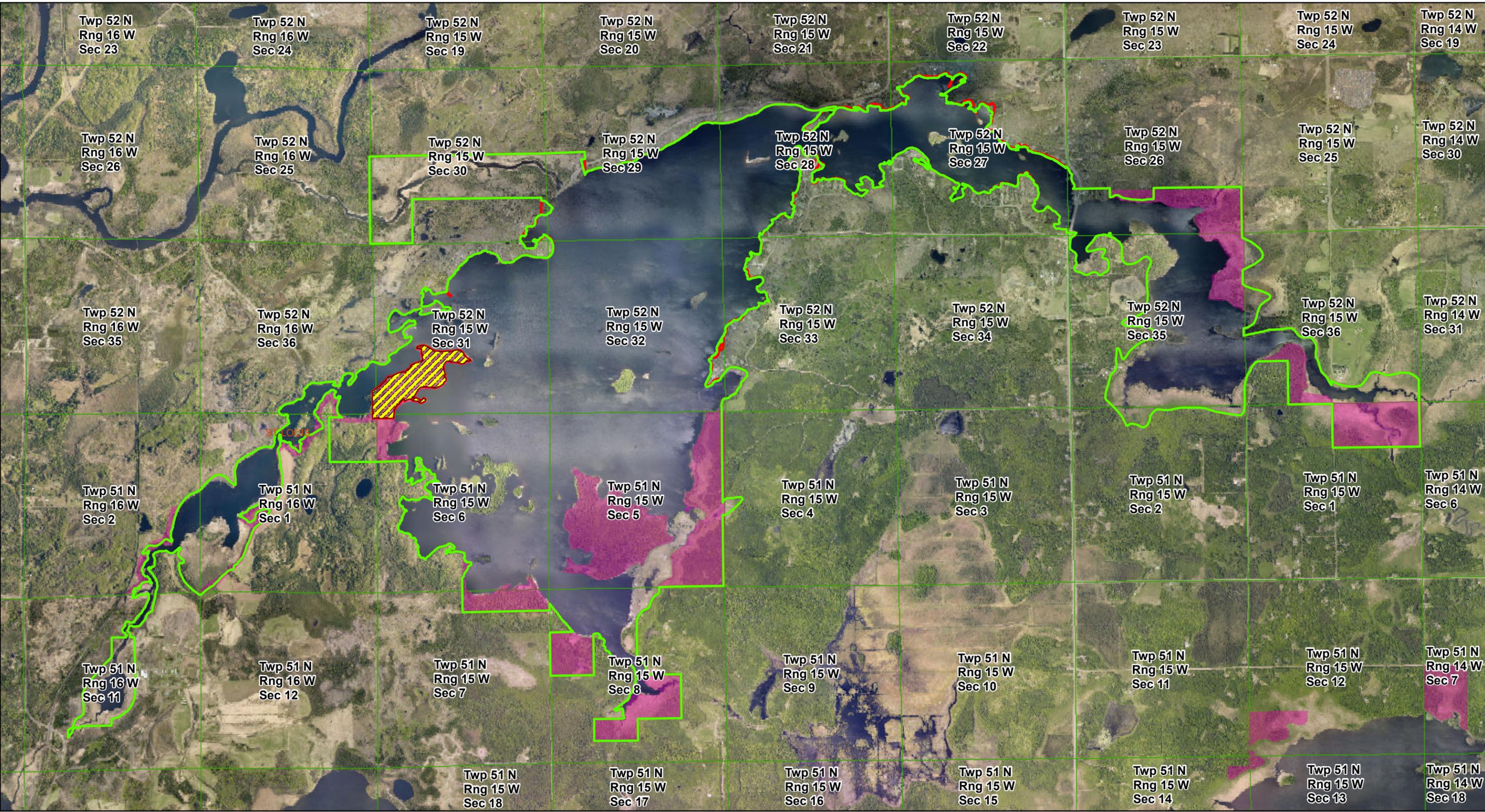
Figure 9

- Fish Lake FERC Project Boundary (Proposed)
- Fish Lake FERC Boundary (Orig)



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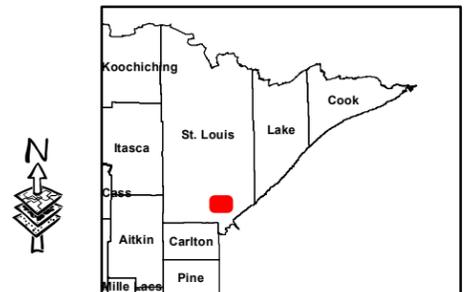
Figure 10 Fish Lake Reservoir Proposed Natural Character Area Addition



**Fish Lake Reservoir
Proposed Natural Character
Area Addition**

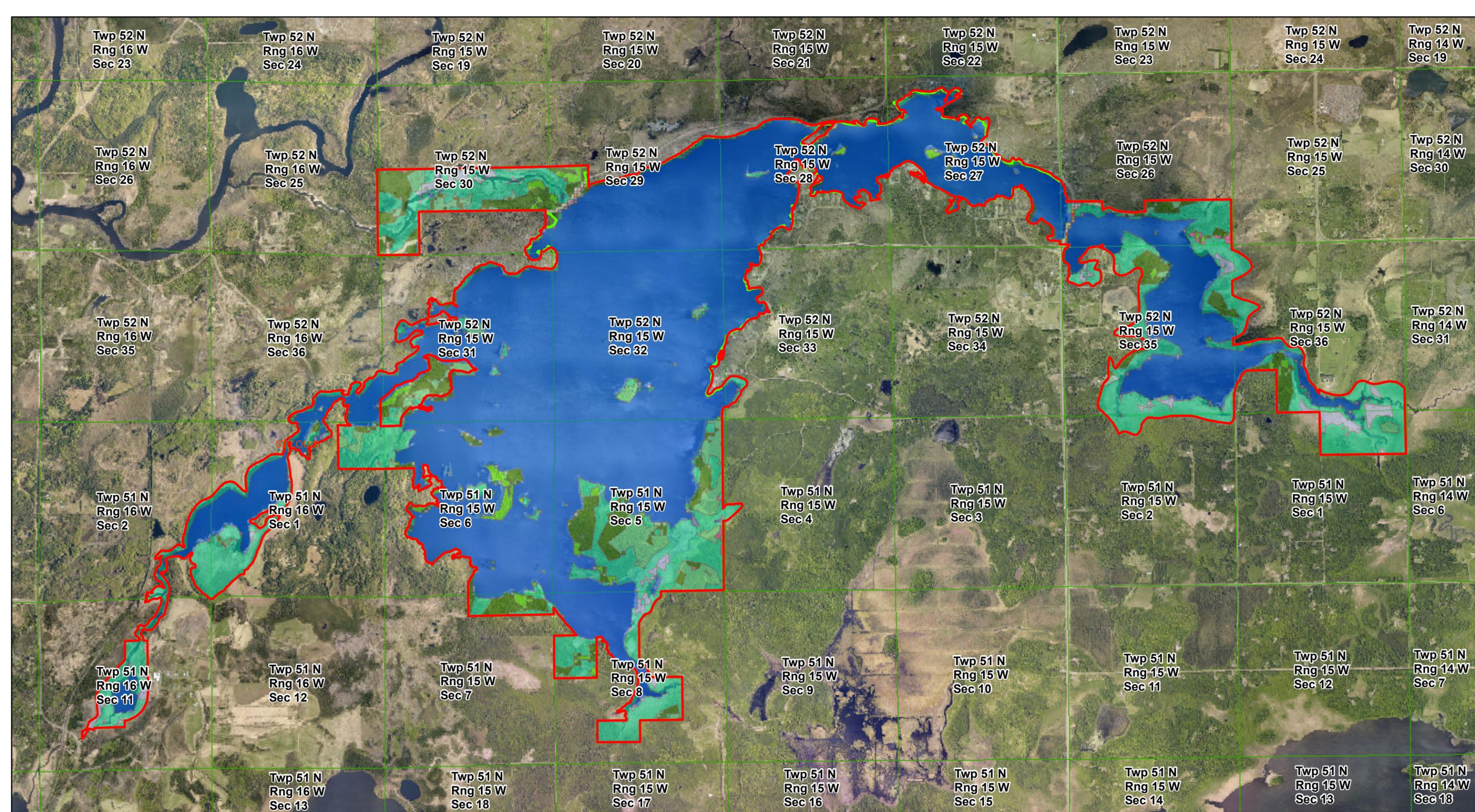
Figure 10

- Fish Lake FERC Boundary (Orig)
- Fish Lake FERC Project Boundary (Proposed)
- Natural Character Areas
- Proposed Natural Character Area

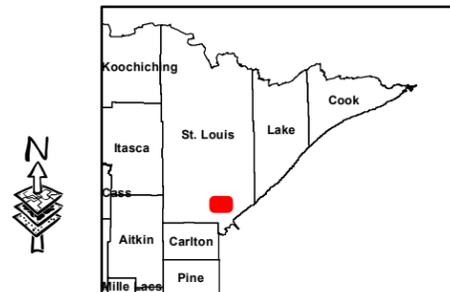
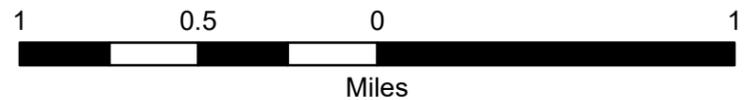
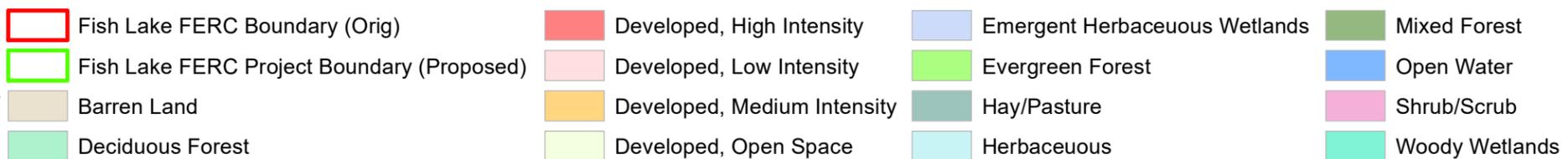


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Figure 11 Fish Lake Reservoir Project Boundary 2016 National Landcover Dataset (NLCD)



**Fish Lake Reservoir
Project Boundary
2016 National Landcover
Dataset (NLCD)**

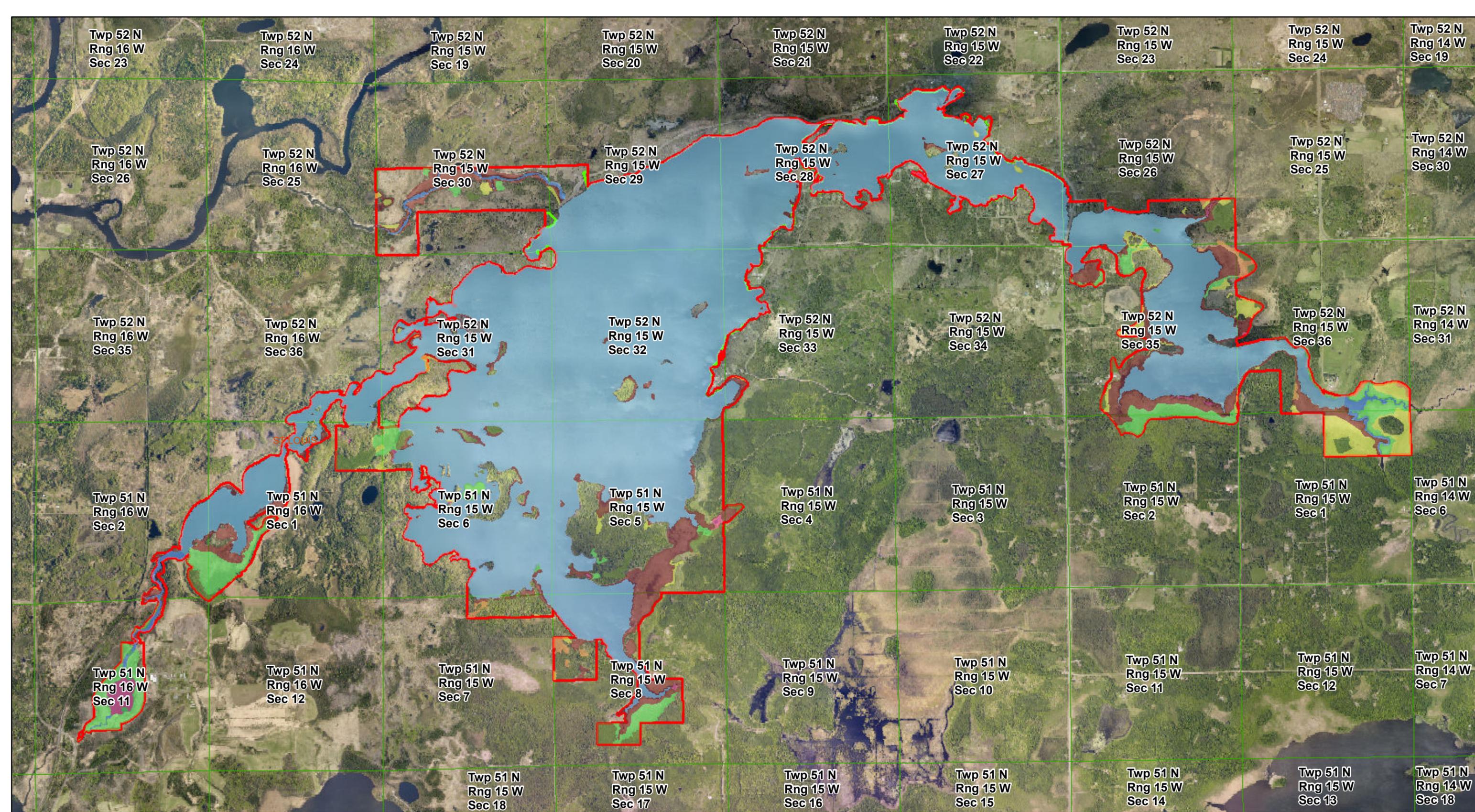


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Figure 11

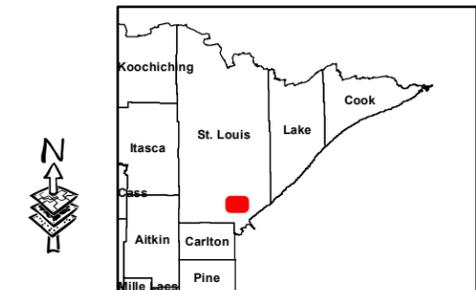
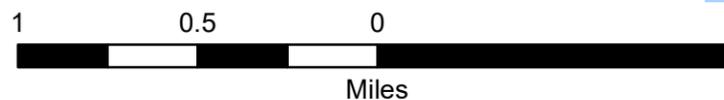
Figure 12 Fish Lake Reservoir National Wetland Inventory Map (NWI)



**Fish Lake Reservoir
National Wetland
Inventory (NWI)**

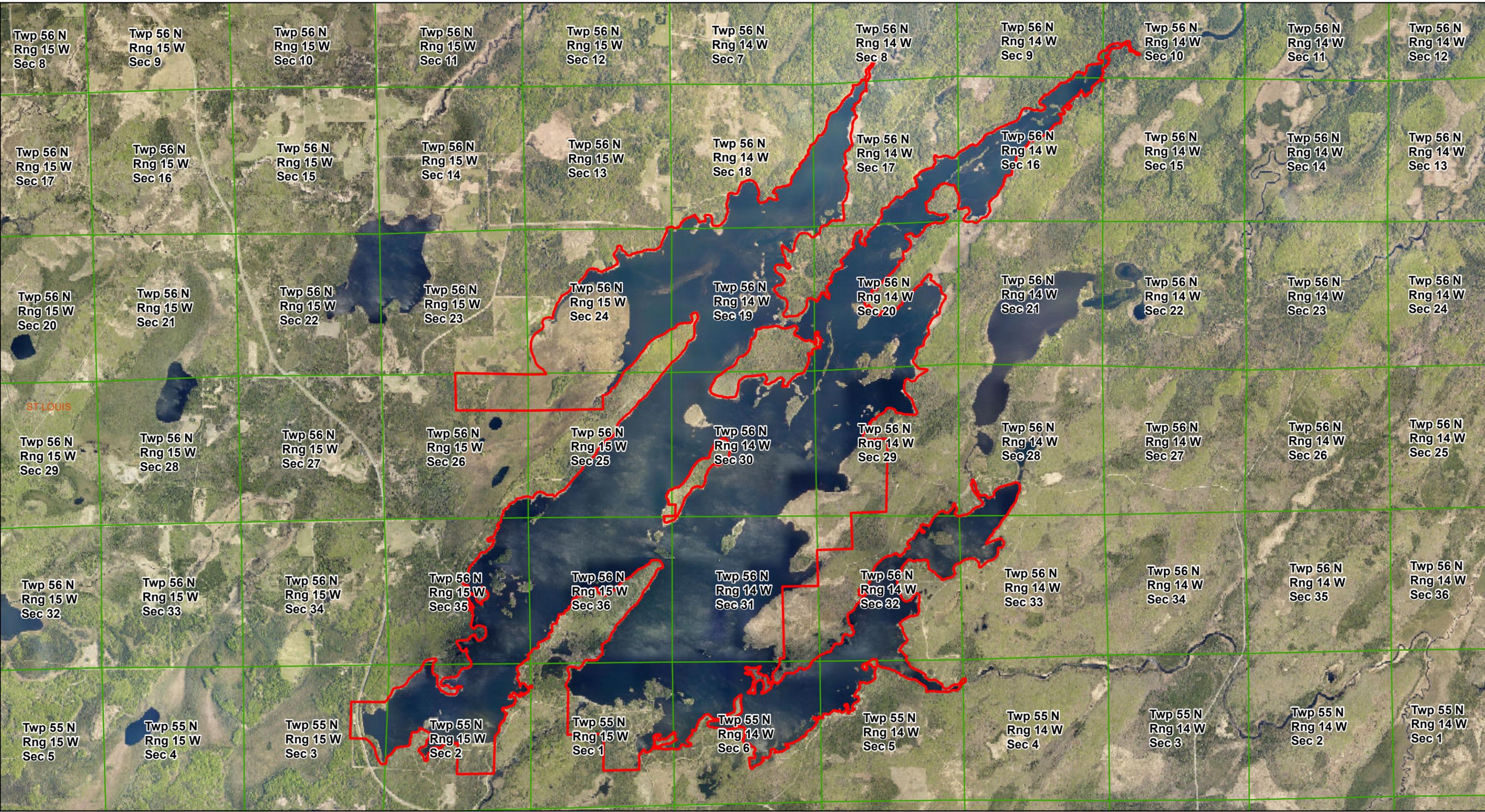
Figure 12

- Fish Lake FERC Boundary (Orig)
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- Freshwater Emergent Wetland
- Freshwater Forested Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Freshwater Shrub Wetland
- Freshwater Shrub/Emergent Wetland
- Lake
- Riverine



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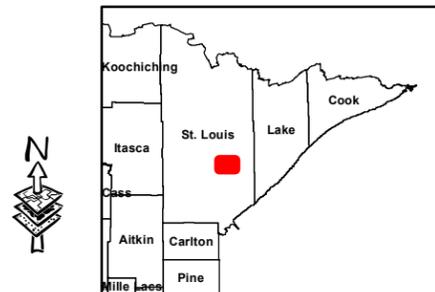
Figure 13 Whiteface Reservoir Current Project Boundary



**Whiteface Reservoir
Current Project Boundary**

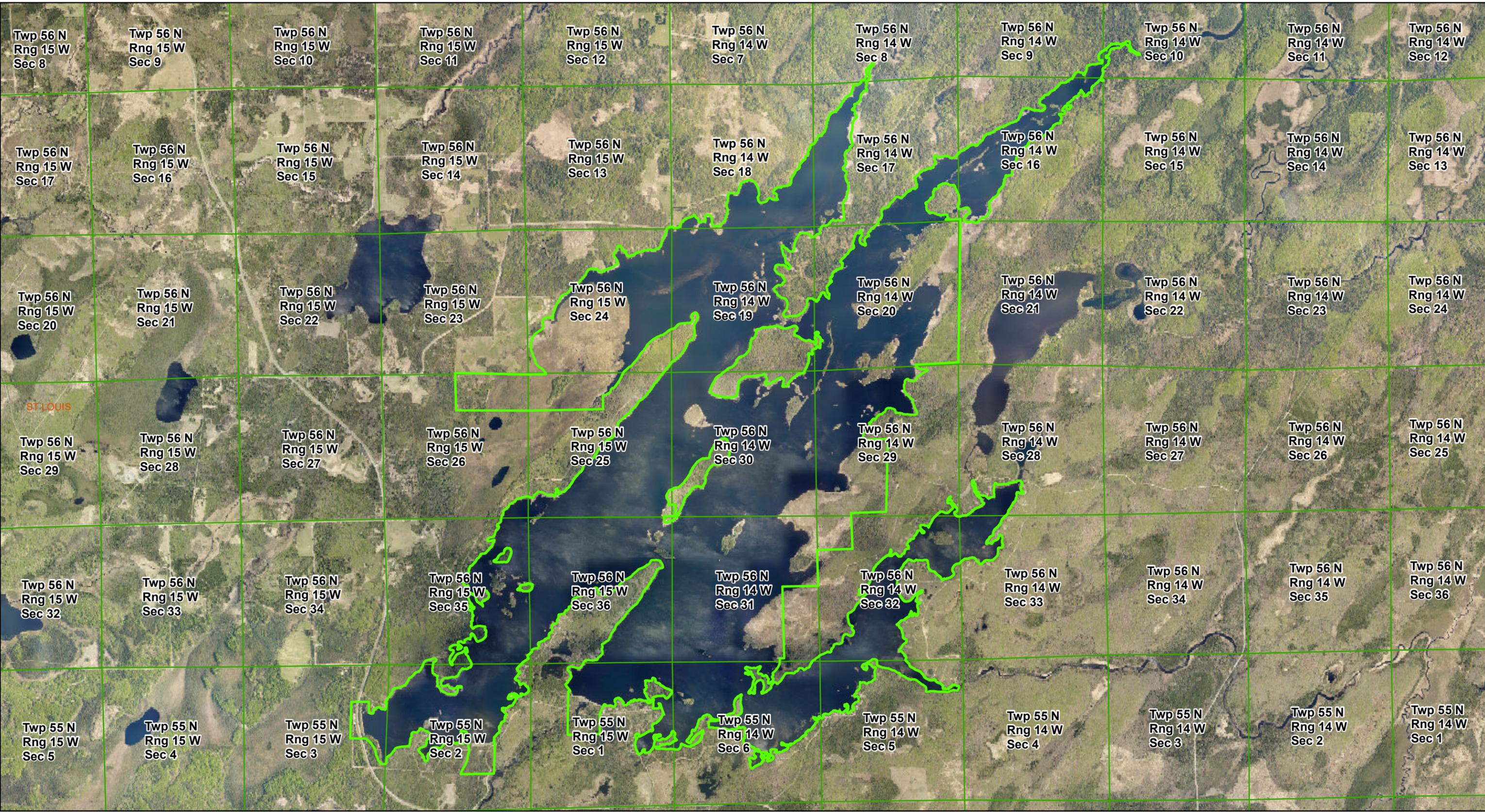
 Whiteface Lake FERC Boundary (Orig)

Figure 13



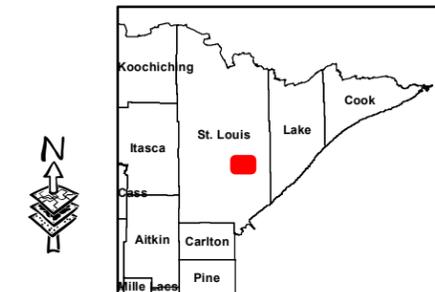
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Figure 14 Whiteface Reservoir Proposed Project Boundary Adjustment



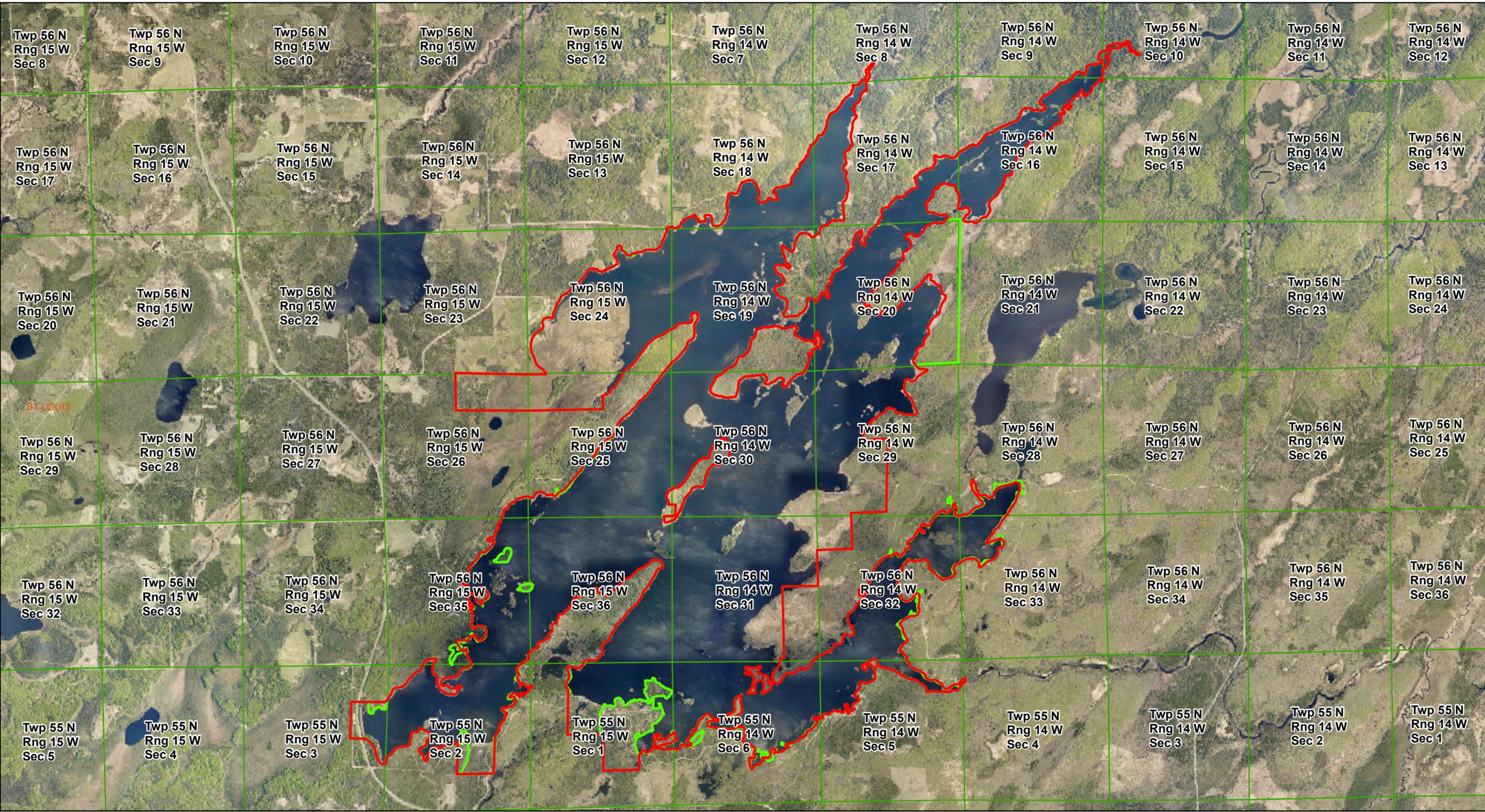
**Whiteface Reservoir
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Figure 14**

 Whiteface Lake FERC Boundary (Proposed)



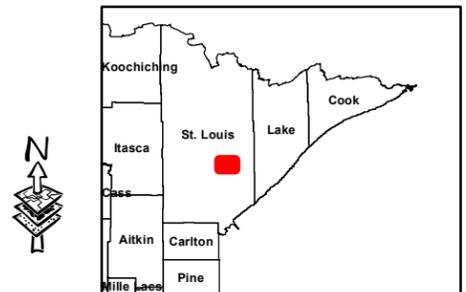
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Figure 15 Whiteface Reservoir Proposed Project Boundary Comparison



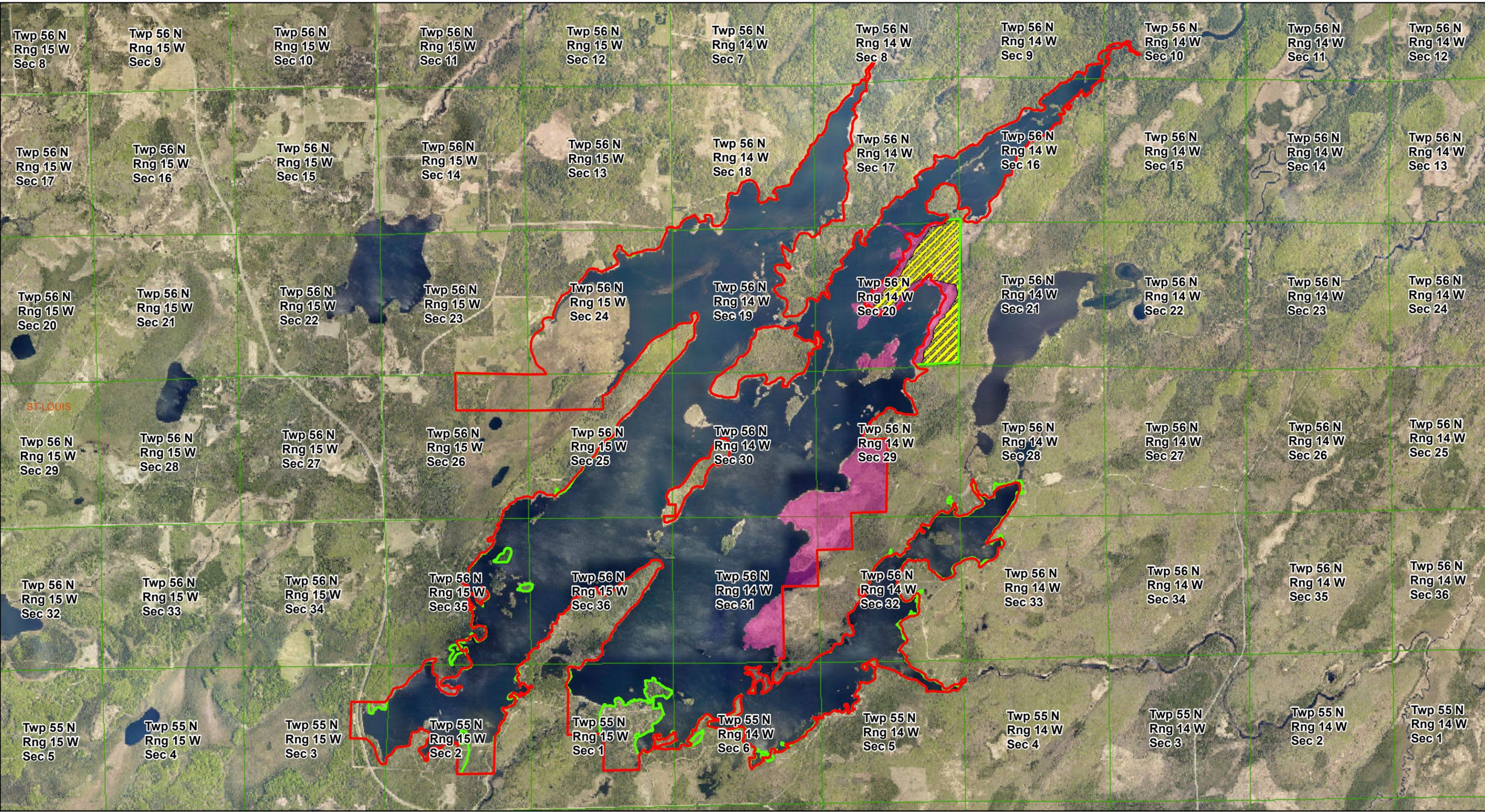
**Whiteface Reservoir
Proposed Project Boundary
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Figure 15**

- Whiteface Lake FERC Boundary (Proposed)
- Whiteface Lake FERC Boundary (Orig)



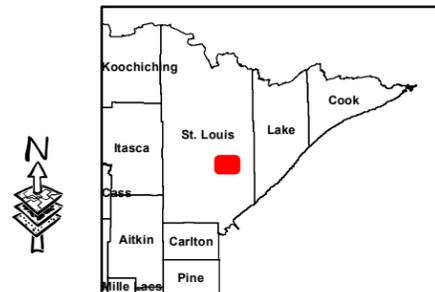
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Figure 16 Whiteface Reservoir Proposed Natural Character Area Addition



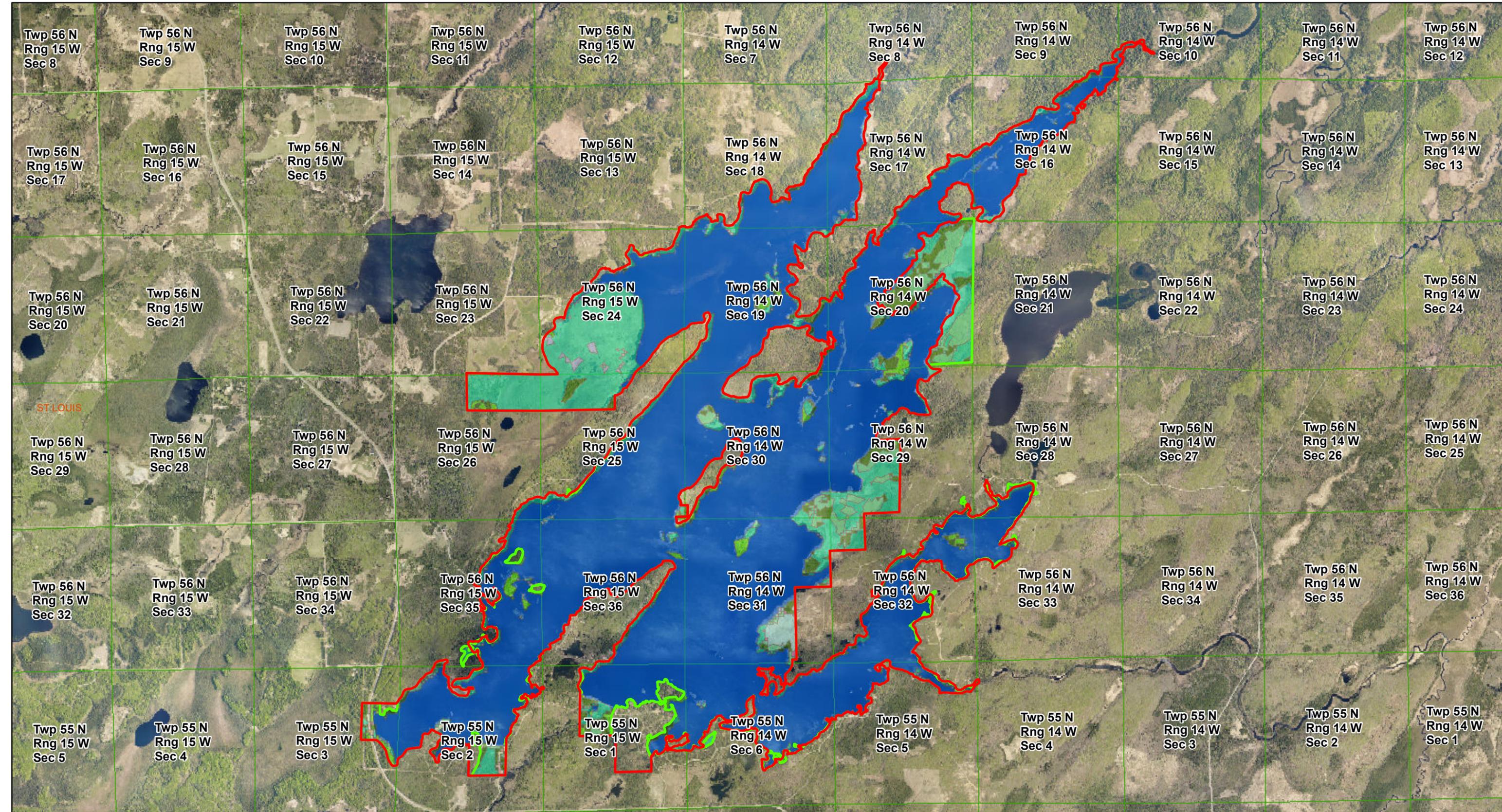
**Whiteface Reservoir
Proposed Natural Character
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- Whiteface Lake FERC Boundary (Orig)
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- Proposed Natural Character Area



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Figure 17 Whiteface Reservoir Project Boundary 2016 National Landcover Dataset (NLCD)



**Whiteface Reservoir
Project Boundary
2016 National Landcover
Dataset (NLCD)**

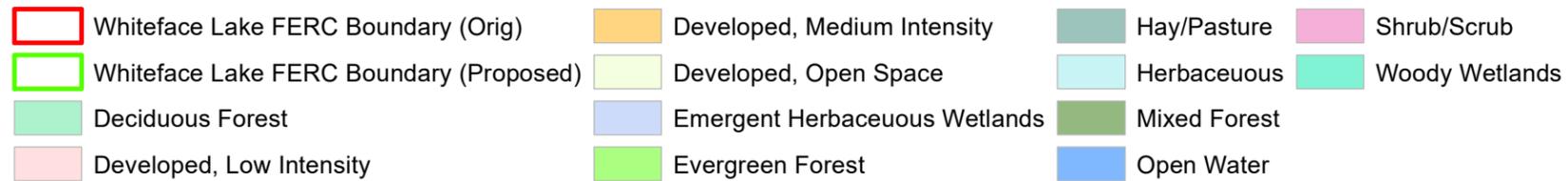


Figure 17



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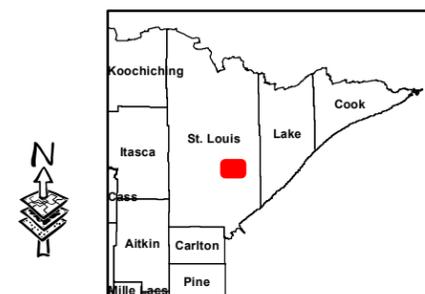
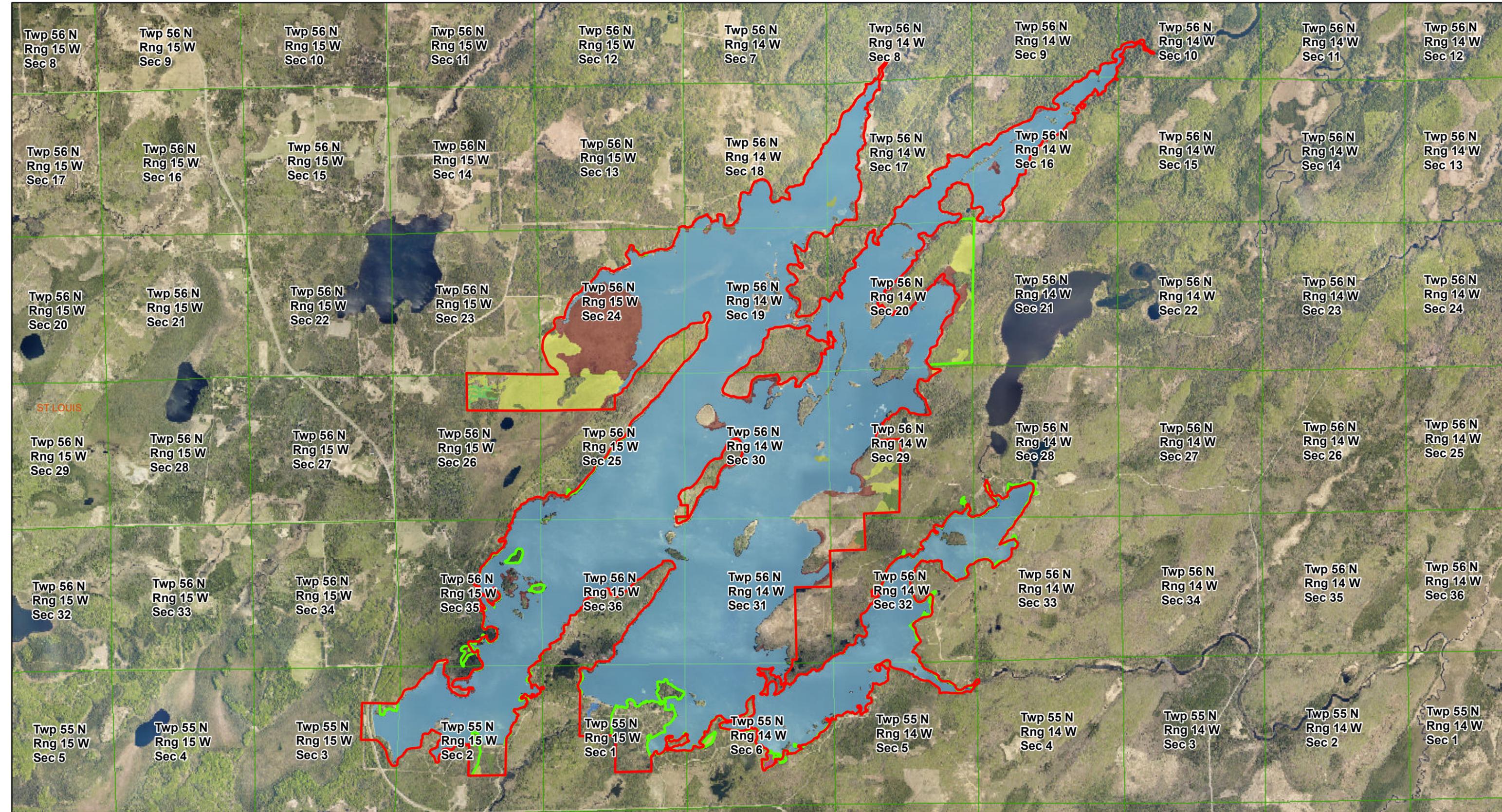


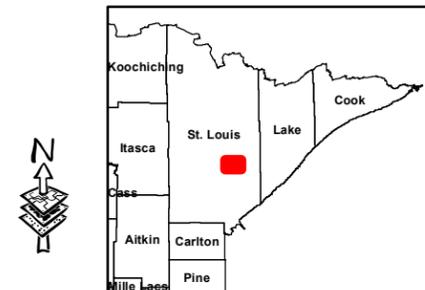
Figure 18 Whiteface Reservoir National Wetland Inventory (NWI)



**Whiteface Reservoir
National Wetland
Inventory (NWI)**

Figure 18

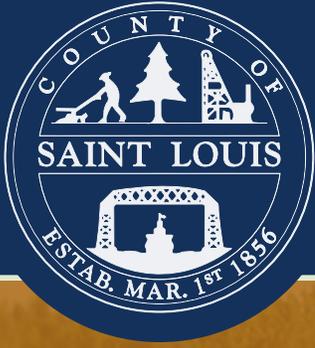
- | | | |
|---|-----------------------------------|-----------------------------------|
| Whiteface Lake FERC Boundary (Orig) | Freshwater Forested Wetland | Freshwater Shrub Wetland |
| Whiteface Lake FERC Boundary (Proposed) | Freshwater Forested/Shrub Wetland | Freshwater Shrub/Emergent Wetland |
| Freshwater Emergent Wetland | Freshwater Pond | Lake |
| | | Riverine |



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8 APPENDICES

APPENDIX 1 St. Louis County Shoreline Management Guide



SHORELAND GUIDE

FOR ST. LOUIS COUNTY, MN

A COMPREHENSIVE PROPERTY OWNER'S GUIDE



SHORELAND GUIDE

A COMPREHENSIVE PROPERTY OWNER'S GUIDE



Planning and Development Department
St. Louis County
Minnesota
USA

This guide is intended to provide general guidance for developing shoreland property. Each project may have special circumstances that require additional planning. Contact the St. Louis County Planning and Development Department for more information.

Obtaining the Guide:

Copies of this guide are available at no cost to all residents. Requests for large numbers of guides should be directed to St. Louis County Planning and Development. Large requests may be charged a minimal fee to cover printing and reproduction.

This project was funded in part by:

Coastal Zone Management Act

NOAA's Office of Ocean and Coastal Resource Management, in cooperation with Minnesota's Lake Superior Coastal Program.

Produced by:

St. Louis County Planning and Development Department
100 Missabe Building
227 West First Street
Duluth, MN 55802
(218) 725 - 5000
Toll Free Minnesota 1 - 800 - 450 - 9777

Revisions:

Revised 2 - 2010



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INTRODUCTION

ABOUT THE SHORELAND GUIDE

KEYS TO SUCCESSFUL SHORELAND DEVELOPMENT:

- Follow the directions in this guide and keep it for a reference
- Keep good records of your property, including extended plans and ideas and refer to them when you make improvements or changes
- Know your property's boundaries and make sure to maintain its markers
- Check to see if permits are required before you start a project
- Know who administers your zoning
- Know the zoning restrictions of the property, if they have been updated, and if there are added restrictions to your lakeshore, rivers, wetlands, or bluffs
- Know your watershed and be aware of storm water runoff on your property
- Take an active part in your community's comprehensive land development and planning



GUIDE OVERVIEW

This guide provides easy to understand information about sustainable shoreland practices which improve management of St. Louis County's lakes and rivers.

WHO IT IS DESIGNED FOR

This shoreland guide is designed to be used by St. Louis County property owners, contractors and professional associates as a reference to develop and maintain shoreland property. The Shoreland Guide offers an effective, low cost means to reach people who make the everyday decisions that impact our lakes and rivers.

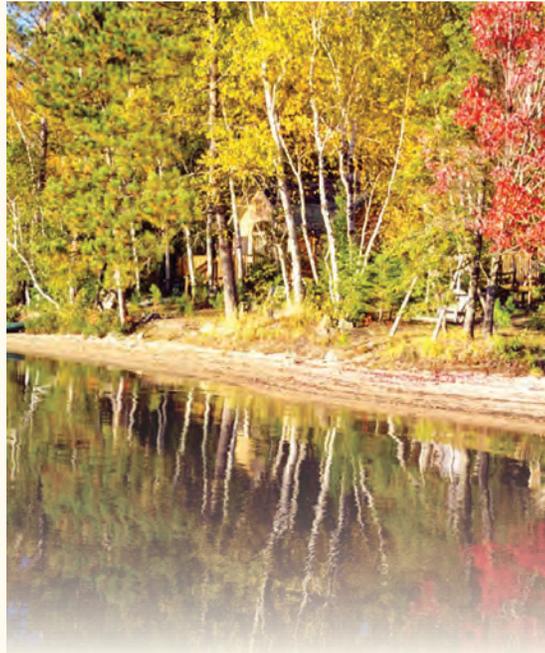
This guide is also directed toward shoreland stewards who have an interest in county lakes and rivers, including resource managers, educators, and volunteers.

The standards in this guide are in accordance with the regulations in the St. Louis County Zoning Ordinance and Comprehensive Land Use Plan. These regulations have been developed and revised by government bodies to reduce negative impacts on the environment while allowing for development and economic growth.

THE GOVERNING PRINCIPLES AND DOCUMENTS

The St. Louis County Zoning Ordinance is a legal document adopted by the county within the regulations and standards set by the State of Minnesota. The zoning ordinance divides the land into land use zones and applies regulations for permitted use of the land and the placement of all structures. The ordinance is intended to encourage the most appropriate use of land and to recognize and preserve the economic and environmental values of all lands within the county.

The St. Louis County Comprehensive Land Use Plan pertains to the policies and interrelated plans for private and public land use, transportation, and community facilities.



PURCHASING SHORELAND

The purchase and development of property is often one of the biggest investments in a person's life, and there are many considerations.

DESIRED USE OF THE PROPERTY: The first and most important consideration is the desired use of the shoreland property. Will it be a wilderness retreat to get away, or a friendly rural neighborhood to enjoy nature and water related activities? Thinking this through will save many frustrations. It is a good idea to spend time in the area and to gather information about the water body and surrounding resources. Various government agencies, including state, county, and local government can provide such information.

PROPERTY ZONING: Before shoreland property is purchased, a prospective owner should confirm it is zoned for the desired use, whether that is a seasonal cabin, year round home, resort or marina.

LOT SIZE: The lot should be large enough to accommodate the desired use and that use should comply with the local zoning requirements. Lots that have been created before the standards took effect are legal to buy and sell, but may be too small to accommodate a building or sewage treatment system.

LOT SHAPE: Although the size of the parcel may meet zoning requirements, the shape can restrict the use and location of the structures. Some shapes may make it impossible to meet requirements such as setbacks and sewage treatment systems.

SETBACKS: When choosing property, be aware of the standard setbacks and plan accordingly.

LAND SURFACES AND ELEVATIONS: Be aware of flood plains, high water levels, bedrock and bluffs. Know the required setbacks for these features and if they will impact a planned building site, a basement, or a sewage treatment system.

SOIL CONDITIONS: The soils should be suitable for the desired use. Wet soils, shallow bedrock or clay soils are generally unsuitable for the water absorption required in sewage treatment systems, and can make building construction difficult. Fill that is added to wetlands is regulated by the DNR, County, and U.S. Army Corps of Engineers. The cost and questionable outcome of trying to develop in these areas may not be worth the effort.

VEGETATION: Plants are part of the aesthetic and ecological value of shoreland property. Local zoning ordinances regulate the amount of vegetation that can be removed along the shoreline. Tilling is not allowed unless it is under an approved conservation plan. If a sandy swimming beach is a desired feature, you should look for a parcel that already has one.

WETLANDS: There are many types of wetlands that perform different, valuable functions. They also have different standards of protection from alteration and use. Contact the Planning and Development Department to identify these areas.

UTILITIES: Find out what utilities are available at the property and building site.

HIDDEN AND "OTHER" COSTS: Consider some of the sometimes "hidden" costs, such as building and maintaining (including snow removal) a road to the site, drilling a well, bussing and distance to school districts, and closest conveniences.

CHECK LIST FOR PURCHASING UNDEVELOPED LAND:

- Is your intended use permitted in the land use district? (land use descriptions can be found on pages 18 - 20)
- Do you know where the property lines are? (See page 10 for further information)
- Is the site compatible with your intended use? (Remember to check the availability of utilities, legal road access, soil type, setbacks and zoning standards.)
- Are there activities present or allowed in the area that may be undesirable to you? (gravel pits, dog kennels, dusty roads)
- Is the road owned and maintained by a government agency?

CHECK LIST FOR PURCHASING DEVELOPED LAND:

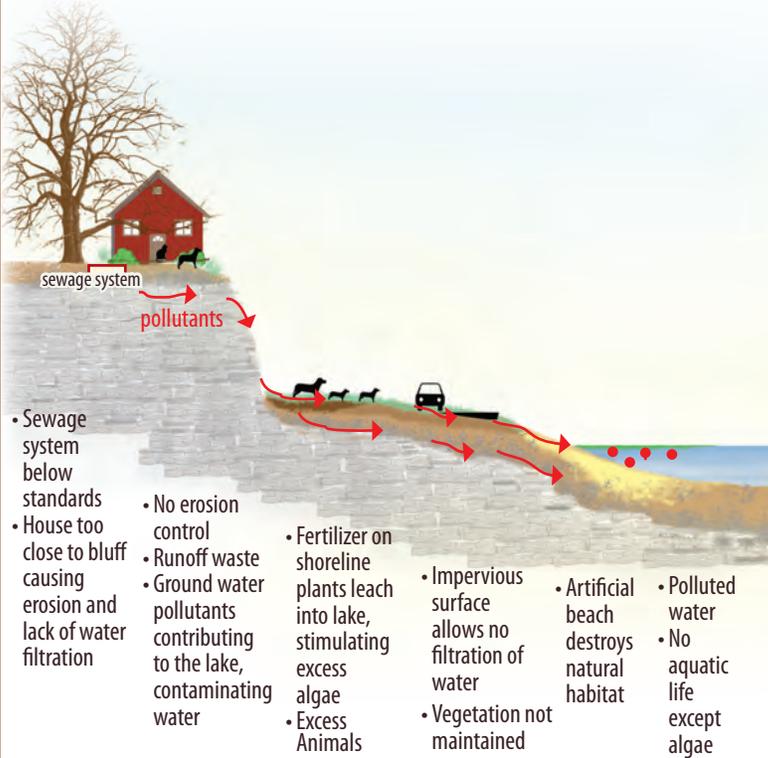
- Are the improvements you have planned within the standards set in the zoning ordinance?
- Has there been a sewage treatment system inspection and water quality test?
- Do you know the utility and property tax costs for the prior two years?
- Have you met the new neighbors?

SUCCESSFUL PARCEL DEVELOPMENT

SHORELAND BENEFITS

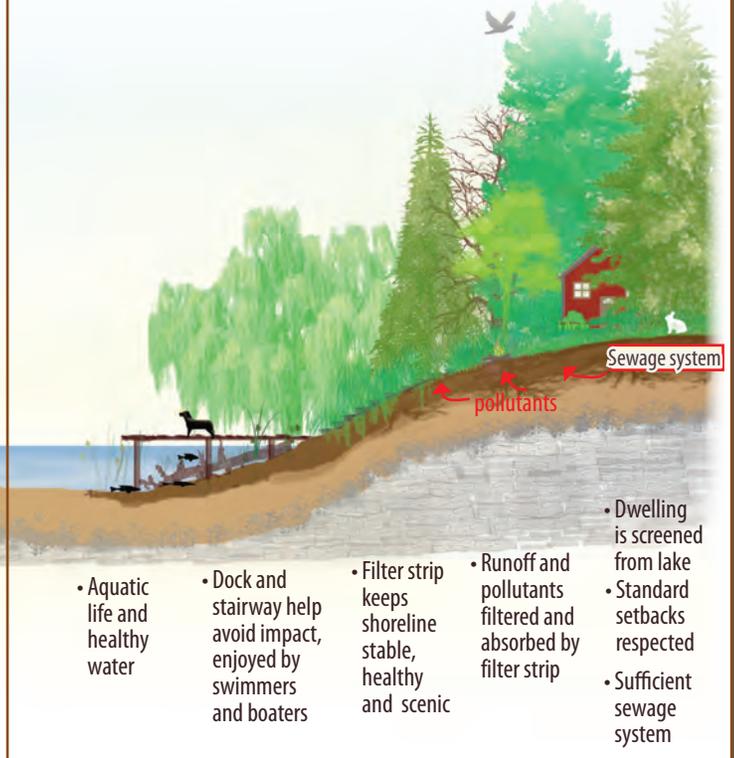
UNSUSTAINABLE SHORELAND ECOSYSTEM

does not promote a healthy community, environment, and economy.



SUSTAINABLE SHORELAND ECOSYSTEM

promotes a healthy community, environment, and economy.



GUIDES ARE AVAILABLE ON BMP'S, including the following subjects. Contact the Minnesota Extension Service. (See p. 10 for contact information.)

- Beaches, Boating and Fishing, Camping, Off-road Vehicles, Preventing Introduction of Exotic Species
- Building near the shore, Docks, Decks and Accesses, Landscaping Plans
- Trees, Vegetation, Filter Strips, Wetlands, Timber Harvesting, Wood Lots, Lawns and Gardens, Yard Waste
- Animals, Farming and Crops, Pesticides and Fertilizers, Encouraging Wildlife
- Septic Systems, Safe Water Supplies, Hazardous Household Products
- Preventing Erosion, Minimizing Runoff, Construction Activities, Developing Landscapes, Alterations and Roads

UNDERSTANDING SHORELAND BENEFITS

Over time, the waterfront environment has developed a natural, delicate balance between water, land, vegetation, and wildlife. This balance can easily be disrupted by humans who rearrange, pollute or destroy any component of this equilibrium. Shoreland property owners have the privilege and the responsibility to preserve and develop their land in harmony with the natural environment. Owners can maintain a high quality and sustainable relationship with their environment.

BENEFITS OF A PROTECTED SHORELAND

Protecting your shoreland includes the following features and benefits:

- Undisturbed vegetative strips along all the shoreline reduces and slows runoff and filters the remaining runoff.
- Healthy wetland complexes contribute to good water quality.
- Floodplains absorb storm water runoff, maintain water quality, secure vegetative diversity, provide wildlife habitat, and contribute aesthetic qualities.
- Diverse plant communities and healthy aquatic and upland habitats result from sensitive developmental plans.

Best Management Practices (BMPs):

BMPs have been established for nearly all activities that have potential impact to the shoreland. Voluntary compliance with BMP's, in addition to the setbacks, lot sizes, and other requirements mandated by local zoning, will help achieve a healthy shoreland area.

- Development that follows established best management practices and land use standards minimizes negative effects on the natural environment.
- Sustainable outdoor recreational pursuits allow people to enjoy the outdoors without damaging the environment.
- An untouched or "natural" look to landscaping sustains scenic value and visual quality.

SUCCESSFUL PARCEL DEVELOPMENT

SHORELAND PROTECTION

PROTECTING THE SHORELAND

Activities that focus on the waterfront are primary reasons people choose to live by a lake or river. Sustainable shoreland ecosystems promote a healthy community, environment, and economy by protecting the water quality, the natural resources, and the shoreline quality.

WATER QUALITY PROTECTION

Water quality is protected by implementing these Best Management Practices:

- Follow land use standards impacting the watershed.
- Plant and maintain healthy vegetative buffer along the shoreline.
- Maintain wetlands.

NATURAL RESOURCE PROTECTION AND BALANCED LAND USE

Creation of healthy communities where people work and live together balanced by protected natural resources includes:

- Preservation of natural vegetation and habitats.
- Implementation of established best management practices.
- Integration of commercial developments into the environment in ways that minimize negative effects on the natural environment.

SHORELINE PROTECTION

Shorelines are vulnerable to impact and are vital to water quality. The entire shoreland benefits by protecting the shoreline in the following ways:

Vegetative Screening: See standards on the right.

Structures: Design structures to be eco-sensitive, since buildings often make the most dramatic change to the appearance of the shore.

Size: Minimize the overall size of any structure and the profile facing the water.

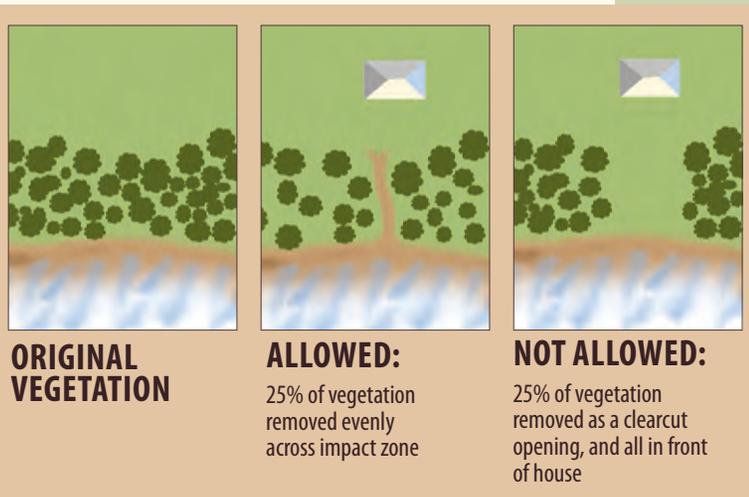
Building Materials: Select materials that are natural or have a natural appearance.

Color: Select earth tones for your structure color to blend in with the surroundings. Flowers and vegetation hues provide good accent colors.

Accessory Structures: If an accessory structure is needed, build only one.

Docks and Boat Storage: If these structures are necessary, limit their impact by keeping the size to minimum standards and designing them to blend in with the shoreline.

Shoreline Alteration: Any shoreline alteration should be carefully considered, well designed, and approved by the Planning and Development Department.



ORIGINAL VEGETATION

ALLOWED:

25% of vegetation removed evenly across impact zone

NOT ALLOWED:

25% of vegetation removed as a clearcut opening, and all in front of house

VEGETATIVE REMOVAL STANDARDS

The removal of natural vegetation within the shore and bluff impact zones should be limited to the following:

- A. The removal of dead, diseased, dangerous, and storm or fire damaged trees, shrubs, and plants.
- B. The trimming and pruning of trees, shrubs and plants.
- C. The removal of 25% of trees (greater than two inches in diameter at breast height), shrubs and plants.
- D. Authorized removal of trees, shrubs and plants should not be done with heavy equipment.

EXEMPTION TO VEGETATIVE REMOVAL STANDARDS

Removal in excess of 25% of existing vegetation is allowed, with approval, under the following conditions:

- A. The vegetation removed is replaced with other plants that have similar or more beneficial shoreland values (ecological, erosion preventive, and screening) than previously existed.
- B. The vegetation removed is part of a forest management activity or timber producing area and will not to be converted to other more intensive use.

STATE STANDARDS

The Department of Natural Resources prepares minimum statewide development standards for shoreland, floodplain, and wild and scenic river areas.

The Shoreland Management Program provides orderly development of the shoreland and protects lakes and rivers from pollution by individual sewage treatment systems and other non-point sources.

The Floodplain Management Program is intended to minimize the threat to life and property resulting from flooding. This program restricts development in floodplains by preventing structures from being built at too low an elevation in areas that have a high risk of flooding. It also controls encroachment so that the floodplain's capacity to hold flood water will not be reduced, causing flooding to properly located areas.

The Wild and Scenic Rivers Program is a program intended to preserve and protect rivers with outstanding scenic, recreational, natural, historical, and scientific values.

SUCCESSFUL PARCEL DEVELOPMENT

IDENTIFYING THE SHORELAND

GLOSSARY:

Shoreland Area: The land located within a set distance of public waters as follows: 1,000 feet from a lake or flowage; 300 feet from river or stream.

OHWL: Ordinary High Water Level. Typically the level where the water is highest during an average spring thaw.

Shoreline Setback: A set distance from the shoreline that restricts development between it and the shoreline, or OHWL.

Shore Impact Zone: Measured standard distance landward from the Ordinary High Water Level of general development and recreational development lakes.

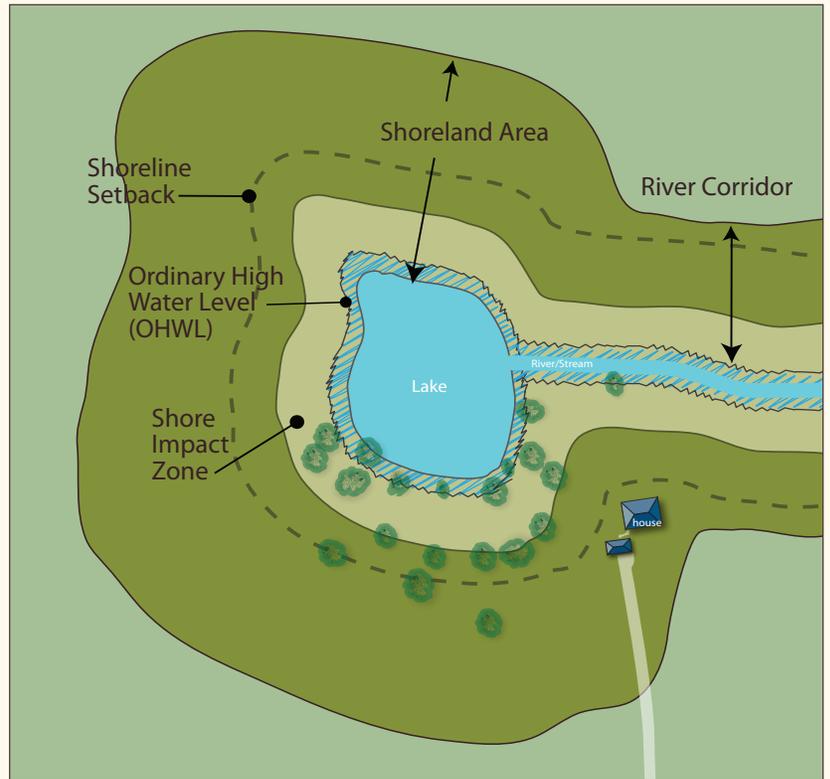
Bluff Impact Zone: Typically includes the bluff, or steeply sloped area, plus 20 feet out from it.

River Corridor: Measured standard distance landward from the ordinary high water level of rivers.

SHORELAND

Shoreland is identified as the land located within a distance of public waters as follows: 1,000 feet from a lake, pond, or flowage; 300 feet from a river or stream.

IDENTIFYING SHORELAND AREAS: Identification of shoreland areas includes the Ordinary High Water Level (OHWL), the shore impact zone, the shoreline setback, and the river corridor.



Q. I have a land use question I'd like to ask the Planning & Development Department. What information might the county ask me for?

A. Your parcel ID number and your property address.

In some areas, concerned citizens and/or lake associations have informally established restrictions for recreational use of surface water. Some of these, such as "no wake" zones, are intended to help protect water quality. Others are more social and are designed to enhance community enjoyment, such as noise reductions, curfews, etc. Check with your lake or property owners' association for information on such regulations.

RIVER CORRIDOR WIDTH		
Vermilion River	500'	
St. Louis, Cloquet, Whiteface	1/4 mile: Remote, Rural Agriculture, Recreational River Classes 1/2 mile: Primitive Class	
All Other River Classes	300'	
RIVER DIMENSIONAL STANDARDS:		
(Includes dimensions for land immediately adjacent to 300' shoreland river districts)		
RIVER	DIMENSIONAL DISTRICT*	
Vermilion River Remote	4a	
Vermilion River Forested	5	
St. Louis County Primitive	Primitive	1a
	Remote	2
	Rural Agriculture	3a
	Recreation	4
* See Dimensional Standards graph on page 17 for correlating dimensional standards for your district.		

SHORELAND SETBACK & IMPACT ZONE		
RIVER, LAKE OR STREAM	SHORE SETBACK	SHORE IMPACT ZONE
Natural Environmental Lakes	150'	75'
Recreational Development Lakes	100'	50'
General Development Lakes*	75'	50'
Mine Pit Lakes	150'	75'
Trout Streams	150'	75'
DNR Remote Rivers	200'	100'
Forest Rivers	150'	75'
SLC Primitive	300'	150'
SLC Remote Rivers	200'	150'
SLC Urban	100'	75'
Rural Agricultural Rivers	200'	150'
Recreation	150'	75'
All other Protected Lakes and Rivers	100'	75'
*May be reduced to 37.5' with performance standards		



SUCCESSFUL PARCEL DEVELOPMENT

IMPACT SENSITIVE AREAS

	20'	60'	15'		15'	60'	20'	
CROPLAND	RUNOFF CONTROL	MANAGED FOREST	UNDISTURBED FOREST	STREAM BOTTOM	UNDISTURBED FOREST	MANAGED FOREST	RUNOFF CONTROL	PASTURE
Sediment, fertilizer and pesticides are carefully managed.	Concentrated flows are converted to dispersed flows.	Plants filter, enrich, use and modify the sediments and chemicals in runoff water.	Maturing trees stabilize bank, provide detritus to stream and lower its water temp.	Debris stabilizes creek bottom, releases nutrients and provide shelter and cool shade for aquatic dwellers.	Tree removal is generally not permitted in this zone.	Periodic harvesting is necessary to remove nutrients sequestered in them and to maintain nutrient uptake through vigorous tree growth.	Controlled grazing or haying can be permitted under certain conditions.	Watering facilities and livestock are kept out of the Riparian Zone.

Vegetative buffers next to water bodies are impact sensitive areas.

IMPACT SENSITIVE AREAS

These areas have more restrictive standards due to their sensitivity to impact and their value to the ecosystem.

VEGETATIVE BUFFERS: Consideration is given to the vegetative buffer strip along rivers, streams and lakes because their presence shelters, or buffers these areas and the waters from the surrounding impact.

BLUFFS: Consideration is given to the bluff area because of their vulnerability to erosion through runoff.



Characteristics of a bluff are:

- Land slopes toward water.
- Elevation rises a minimum of 25 feet above OHWL.
- Land has a slope of 30% but does not include a break in slope, where the slope is less than 18% over a 50 ft. run.

The bluff impact zone: This area includes the bluff plus the land located within 20 feet from the top of the bluff (away from the shore).

Shallow soil bluff standards: Apply to bluffs where the soil depth over the ledge rock averages 24 inches or less. 150% of structure setback requirements with following conditions:

- Suitable area for sewage available.
- Erosion control standards followed.
- Shore impact zone shall be 1/2 the new structure setback.
- Structures may be placed within standards if all the following conditions are met:
 - a. Approved sewage treatment and expansion area exists.
 - b. Sufficient screening and vegetative filter strip exists.
 - c. Erosion control standards consistent with Soil and Water Conservation District guidelines.

Break in Slope

A break in slope is determined as a slope of 18% or less over 50 feet. Bluff impact zone does not apply to these areas.



SUCCESSFUL PARCEL DEVELOPMENT

OBTAINING FURTHER INFORMATION

GLOSSARY:

Lot of Record: A lot which is recorded in the office of the county recorder or registrar of titles.

Nonconforming Lot of Record: A lot that has been lawfully created and recorded that no longer meets the acreage and width requirements of current lots.

County Plat Book: A map book that shows each township and parcel ownership.

Corner Monument: A property corner mark placed by a licensed surveyor. A public corner monument is a section or quarter corner land marker that is maintained by the Land Survey Division of the Public Works Department.

OBTAINING LEGAL INFORMATION

Knowing the property boundaries and its dimensions is important for all land owners. It is best to keep them marked and maintain the marks at all times. A "County Plat Book" (resource information on the right) can assist in general property layout, but a private, licensed surveyor must determine official boundaries. The Land Survey Division of the County Public Works Department maintains all section and quarter landmarks and associated survey records throughout St. Louis County. Most parcel information is available online or from the county auditor's office.

Splitting or consolidating parcels must meet current zoning standards; check with the Planning and Development Department or the appropriate township clerk. Named subdivision plats are available online in PDF format or through the St. Louis County Recorder's Office. Scanned plats include all originals and any rearrangements or modifications. Subdivision regulation guides are also available.

Restrictions on a nonconforming lot of record: Lots of Record may be permitted as a buildable lot if all of the following criteria can be met:

- The lot has a minimum of 1/2 acre suitable for development and sewage treatment system, unless connection to a municipal sewer system is available.
- It is a lot of record.
- The lot created complied with regulations in effect at the time.
- Sewage treatment and building setbacks are met.

TYPE OF INFORMATION	DEPARTMENT & LOCATION	WEB SITE & PHONE
Parcel and Tax Information	St. Louis County Auditor	www.co.st-louis.mn.us/auditor/parcelinfo Phone: 218-726-2380
County Plat Book	St. Louis County Auditor Extension Office	www.stlouiscounty.org/MapProducts.htm Phone:(218)725-5134 Extension Office (218)733-2870
Surveyors	See Yellow Pages "Surveyors or Engineers" for private businesses	
Corner Monuments (Public)	St. Louis County Public Works	www.co.st-louis.mn.us/PublicWorks/Surv/Surveyor.htm Phone: Duluth: 218-625-3878 Virginia: 218-742-9800
Subdivision Plats	Recorder's Office	www.co.st-louis.mn.us/webplats/ Phone: 218-726-2677
Ordinance Standards, Land use planning, permits and guides	St. Louis County Planning & Development Department 100 Missabe Bldg. Northland Office Cntr. 227 W. 1st St. 307 1st St. S. Duluth MN 55802 Virginia, MN 55792	www.co.st-louis.mn.us Phone: 218-725-5000 1-800-450-9777 (MN only) Phone: 218-749-7103
Site reviews for wetlands, Ordinance Standards, Land use planning, permits and guides	St. Louis County Planning and Development Northland Office Center 307 1st St. S. Virginia, MN 55792	www.co.st-louis.mn.us Phone: 218-749-7103 1-800-450-9777(MN only) Fax: 218-749-7194
Wetland regulations on all lands on the Fond du Lac Reservation and information and support on water quality and other natural resources	Fond du Lac Reservation Office of Water Protection 1720 Big Lake Rd. Cloquet, MN 55720	Phone: 218-878-8022 Fax: 218-879-4854
Regulates deposition of fill or dredge material in waters of the U.S. or adjacent wetlands (Work with local contact first)	U.S. Army Corps of Engineers 1554 Hwy 2. Ste 2 Two Harbors, MN 55616	www.mvp.usace.army.mil/phone Phone: 218-834-6630
State administration of the Mn Wetlands Conservation Act (Work with local contact first)	State of Minnesota Board of Water & Soil Resources (BWSR) 394 S. Lake Ave., Ste 403 Duluth, MN 55802	www.bwsr.state.mn.us Phone: 218-723-4923 Fax: 218-723-4794
Regulations and permits on public waters and some wetland types (Work with local contact first)	DNR Waters Duluth Area: 1568 Hwy. 2 Two Harbors, MN 55616 Remainder of St. Louis County: 7979 Hwy 37 Eveleth, MN 55734	www.dnr.state.mn.us Phone: 218-834-6612 Fax 218-834-6639 Phone: 218-744-7450 Fax: 218-744-7451
Educational info in protecting water and natural resources	Minnesota Extension Service 111 GSC 320 W. 2nd Duluth, MN 55802	www.extension.umn.edu/Environment Phone: 218-726-7512
Technical, educational, and financial resources to land occupiers in order to implement practices and projects that preserve, protect and enhance water quality and other natural resources	North St. Louis SWCD Northland Office Center 307 1st St. S. Ste 114 Virginia, MN 55792 South St. Louis County SWCD 25 N. 1st Ave. E., Rm 301 Duluth, MN 55802	www.nslswcd.org Phone: 218-742-9505 Fax: 218-742-9515 www.southstlouisswcd.org Phone: 218-723-4867 Fax: 218-723-4731

ZONING

LOT DESIGN AND LANDSCAPING

START A LANDSCAPE PLAN

Two important steps in getting started on your plan are to draw a detailed map of your property (see page 16) and to check with your planning and development department for local requirements. Accurately chart on your map:

- Sloping areas and drainage patterns
- Location of roads and driveways
- Potential building site
- Existing vegetation and wildlife habitat
- Land features such as shoreline, wetlands and rock outcrops
- Well, septic, future septic areas
- Outbuildings and other accessory structures

OTHER HELPFUL HINTS:

Economical screening: Bulk supplies of native and/or hearty seedlings of evergreens, leaf trees, fruit trees, shrubs, flowers and vines are available each spring through St. Louis County Soil and Water Conservation District (SWCD). See page 10 for contact information.

Lawn or native vegetation: A large lawn may seem attractive, but natural vegetation will have lower maintenance, be of greater value to the environment and wildlife, and can be just as visually appealing.

THE FOLLOWING BMP GUIDES

are available from the Minnesota Extension Service. See Page 15 for contact information.

- Developing Shoreland Landscapes and Construction Activities
- Stabilizing your Shoreline to Prevent Erosion
- Minimizing Runoff from Shoreland Property
- Valuing your Shoreland Trees
- Preserving Wetlands

LOT DESIGN

The first step to good lot design is to map your property. A guide is available on page 16. A topographical map may also be very helpful.

When working on lot layout and design, consider water runoff and practice stormwater management. If you have the option to arrange your buildings and grounds, you can reduce water and runoff. Runoff can be a major source of pollution and erosion for lakes and shoreland and can back up and pool in undesirable places. Natural landscapes, distribution of runoff, reduced impervious surfaces and Best Management Practices (BMPs) are common ways to manage stormwater.

Do not wait to fix erosion problems. They will become more difficult and costly as time passes.

PRESERVE NATURAL AREAS

Natural landscapes, including forests, wetlands, and grasslands trap rainwater and snowmelt. This allows the water to slowly filter into the underlying soil. (See General Guidelines for Landscaping in the left edge of the page.)

MINIMIZE IMPERVIOUS COVER IN YOUR LOT LAYOUT

When too much of the natural surface of a site is covered by nonabsorbent (impervious) surfaces such as roads, parking lots, and buildings, runoff does not soak into the soil properly. This can lead to flooding, erosion and the transport of pollutants into lakes and streams.

DISTRIBUTE RUNOFF

The best design directs yard drainage toward the landward side of the rise, or where water does not run directly downhill into the lake. This practice limits the influence of water runoff.

Building on the waterside of the drainage divide directs runoff directly to the lake. These sites are prone to increased erosion and sedimentation, and will not maintain value as well as a site which drains away from the lake.

Locate driveways, walks, rails, yard and garden edges to follow level contours and gentle slopes. Do not direct water directly downhill. This gives it maximum speed and cutting power for erosion. Long, steep slopes have the greatest erosion potential. Redirect concentrated runoff into rain gardens or natural swales to filter surface water.

Use pervious (absorbent) areas such as grass swales or terraces to help redirect and filter runoff from roads and buildings.

Place structures and roads away from steep slopes which may escalate erosion problems.

GENERAL GUIDELINES FOR LANDSCAPING

- Any disturbance of ground cover (grass or shrubs) will expose soil. This often leads to erosion and slope failure. Use hay or straw as mulch to cover disturbed areas after reseeding. Consider working only in a small area and stabilizing that site before disturbing another.
- Store topsoil or black dirt in a separate pile to redistribute back to the top layer when you are finished with your project. Cover the pile to minimize erosion.
- Minimize disturbance to plants and trees. Select and save trees to gain time in landscaping later. Protect trees from heavy equipment by encasing them with heavy planks tied vertically around the trunks. Large trees, especially birch, can be killed by heavy traffic that compacts the soil. Putting fill material too deeply over the roots can also kill trees.
- Maintain a filter strip of natural vegetation along the banks of lakes and streams. The best filter strip is mature woodland with undisturbed grass and shrub layers.
- After your grounds have been graded to minimize and control runoff, plant a permanent cover on all areas that have been disturbed. Along with grass, trees and shrubs are excellent and practical erosion-control measures. Use native species of trees and shrubs wherever possible. They are well adapted to our region.
- Combine plants of diverse types, height, color, flowers and fruits. They will provide windbreaks, wildlife habitat, privacy screens and shade.
- Use Best Management Practices. BMP guide sources are at the bottom left of this page.

USE BEST MANAGEMENT PRACTICES

BMPs are proven erosion and sediment control measures, and should be an important component of construction plans. BMPs include seeding and mulching disturbed areas, installing silt fences to trap eroded soil, and using rock check dams to slow water flow in ditches. Proper maintenance of these practices is critical to their effectiveness.

ZONING

BUILDING OR REMODELING

Land use guides with complete standards for most types of structures and land use are very helpful and informative: they are available at the Planning and Development Department's office or website.

BUILDING OR REMODELING YOUR PRINCIPAL STRUCTURE

Setbacks and standards must be considered when building or remodeling your property's structure or deck.

CHOOSING A LOCATION FOR A HOME

Whether you are landscaping your property, building a cabin, or designing a resort, each parcel of land has limitations for development. These may include the type of soil, steep slopes, wetlands, native vegetation, and other natural features. Further information can be found on page 5 when purchasing shoreland. An important first step is to draw a detailed map of your property. Site sketch information can be found on page 16.

BUILDING

Land use standards for principal and accessory structures can be found beginning on page 25.

REMODELING

Certain types of alterations to the interior or exterior of an existing structure, or remodeling, may or may not require a land use permit.

Remodeling Alterations Include:

- Work performed on the interior of a structure
- Replacement of siding, windows, doors, soffit, fascia, and ornamentation
- Replacement of roofing, provided there is no change in roof pitch or projection
- Adding windows or doors

Alteration is NOT Remodeling when:

- It increases the number of bedrooms
- It increases water usage
- It replaces or changes the main structural frame or exterior walls
- It changes the roof pitch or projection
- It changes the exterior dimensions of the structure

This type of work is considered beyond remodeling, or new construction. As a result, a land use permit is required, the structure must meet all of the applicable performance standards of the zoning ordinance and loses its grandfathered rights as a nonconforming structure.

Remodeling Nonconforming Structure: Nonconforming structures are located on the lot in such a manner that the minimum requirements for setbacks and other standards for the dimensional district are not met.

You may remodel nonconforming structures, such as homes, cabins, other principal structures or decks.



ADDITIONS

An addition is a structure that alters the original home or cabin and increases the original building's dimensions in any direction.

Additions to Conforming Structures: On the side of the lot facing the water, the maximum width of the existing structure including the addition can not exceed 40 percent of the lot width. If your home or cabin conforms to the standards in the zoning ordinance and the addition also meets all of these standards, there are no other size restrictions.

Additions to Nonconforming Structures: Additions to nonconforming structures may require a variance from the zoning ordinance as there are many standards that apply. A guide titled "Home and Cabin Additions" is available online and/or through the county Planning and Development office.

DECKS AND PLATFORMS

You must obtain a land use permit prior to constructing a deck, but not a platform (see the glossary), considering certain conditions are met.

Attached Decks: An attached deck is defined as a horizontal, unenclosed platform that is attached to or functionally related to a home, cabin or other structure. An attached deck may not have a roof, extended soffit or walls, but may have railings, seats, or other related features.

Screened or Enclosed Decks: A screened or enclosed deck is considered an addition and must meet the performance standards for additions. They are not allowed within the setback.

If you are building a new home or cabin and would like an enclosed deck on the lake side, consider placing your home further back than the minimum setback. Contact the Planning and Development Department for more information.

Additional Standards for a Deck Attached to a Nonconforming Home/ Cabin: You may construct an attached deck addition for a nonconforming home or cabin, as long as all of the performance standards are met. Contact the Planning and Development Department for more information.

GLOSSARY

Principal Structure: A structure with the primary focus of activity as full or part-time residency

Topographical Map: A land map specifically designed with lines to signify the changing of elevation.

Conforming: Meets the ordinance standards

Nonconforming: Does not meet the standards

Platform: A horizontal surface, without rails, seats, or other elevated features, that is no greater than 18 inches in height.

NO LAND USE PERMIT IS REQUIRED FOR THE FOLLOWING:

- Remodeling of existing structures
- Accessory structures (used solely for storage) of 100 square feet or less that meet all setbacks and standards
- Sanitary privies (although they need a sanitary permit, must not be used for storage, and must meet standards and setbacks)



Top soil is conserved and erosion plans are in use before, during and after a land alteration.



Rain gardens are an excellent way of protecting shoreland that is impacted by alterations.

SOME COMMONLY ASKED QUESTIONS:

Q. Do I need to “tell” anyone I am building a structure?

A. Yes. You must obtain a land use permit from the St. Louis County Planning & Development Department.

Q. How do I know if my land is buildable?

A. This is determined by a number of factors, including how wet the site is, if the site is on rock, if the land can support a structure and sewage treatment system, and the minimum lot size. Structures and roads must also meet required setbacks.

Q. Do I need a land use permit to change the size and shape of my house, including a deck?

A. Yes.

Q. Do I need a land use permit to re-side or re-roof my house?

A. No, unless you are changing the size or shape of the building. If you live in the city, you should check with your local zoning authority.

SHORELAND ROADS, DRIVEWAYS AND PARKING

Standards have been designed for roads, driveways and parking to reduce their impact on the shoreland benefits.

DRIVEWAY ACCESS:

Driveway access to any parcel or lot from any public roadway is limited to one single driveway entrance per parcel, may not be located within 100 feet of the right-of-way line of any intersecting road, and needs to meet the recommendations of the road authority. Check with your local county garage or Public Works Department.

PARKING SPACE STANDARDS:

- An off-street parking space shall comprise an area with dimensions of 9 feet by 18 feet plus necessary maneuvering space.
- Total area for parking and maneuvering shall not encroach upon any public right-of-way.

ADDITIONAL ROAD, DRIVEWAYS AND PARKING STANDARDS:

- Must be designed to be screened from public waters.
- Must meet structure, bluff, and shore impact zone setbacks. Design criteria and grading and filling provisions of the ordinance must be met.

ROAD SETBACKS:

Road setbacks are determined by Zoning Ordinance #46 of St. Louis County. To determine your road classification, review the zoning map. Questions about your right-of-way can be addressed by contacting St. Louis County Public Works at (218) 625-3830.

SHORELAND ALTERATIONS

Standards have been set for shoreland alterations to reduce erosion and other impact.

MINIMUM STANDARDS FOR ALL ALTERATIONS, WITH OR WITHOUT PERMIT:

- Smallest amount of bare ground exposed for as short a time as possible.
- Use mulches or similar materials for temporary exposure and establish permanent vegetation as soon as possible.
- Avoid creation of a slope or bluff.
- Erosion and sediment control methods shall be employed.

EROSION AND SEDIMENT CONTROL PLANS ARE REQUIRED FOR THE FOLLOWING EXCAVATIONS:

- Greater than 1000 sq. ft or 100 cubic yards
- 1000 cubic yards of fill
- 10 cubic yards within the shore impact zone
- Within 300 feet of the shore or in the bluff impact zone

ALTERATION NOT PERMITTED WITHIN SHORELAND AND WETLAND AREAS:

- Alterations that cause unnecessary potential for soil erosion.
- Alterations that cause water backup on adjacent properties.
- Intensive vegetation clearing in shore and bluff impact zone and steep slopes.
- Wetland area alterations according to government regulations.

ZONING

OBTAINING PERMITS

RESOURCE	DEPARTMENT/AGENCY	CONTACT
Land Use Permits, Conditional Use Permits, Variances, Subdivisions Plats, Borrow Pits, Nonconforming Lot of Record	St. Louis County Planning & Development Department	Duluth: (218)725-5000 Virginia: (218) 749-7103 www.co.st-louis.mn.us
Sewage Treatment System Permit	St. Louis County Environmental Services Department 307 First St. S., Ste. 115 Virginia, Minnesota 55792	www.co.st-louis.mn.us 218-725-5200 in Duluth area 1-800-450-9278 for regional contact info.
All recorded documents, including easements that currently exist or were vacated	St. Louis County Recorder	100 N. 5th Ave. W., Room 101 Duluth MN www.co.st-louis.mn.us/recordersoffice/Recorder.html
Access Across Private Land	You must work with the existing owners to gain access if you need to access your property by way of privately owned land.	
Access Across State Lands	MN Dept. of Natural Resources (DNR)	Phone: (218) 999-7890 www.dnr.state.mn.us/lands_minerals/index.html
Access Across County Tax-Forfeit Land	St. Louis County Land Department	Phone: (218)726-2606 www.co.st-louis.mn.us/Land.html
Access Across County Fee Lands	St. Louis County Property Management	Phone: (218)733-2781 www.co.st-louis.mn.us/PropertyManagement/HomePage.htm
Driveway Entrance and Culvert Permits	County Roads: St. Louis County Public Works: Please Contact your local county garage City/Township Roads: Contact City/Township	If unknown call (218)625-3830 www.co.st-louis.mn.us/PublicWorks/pubwk_faqs.htm

OBTAINING PERMITS

The St. Louis County Planning and Development Department oversees many different types of permits for land use. These include the land use permit, conditional use permit, performance standard permit, borrow pit permits, communication tower permits, home occupation/business permit, subdivision and variance permits.

Land Use Permits are required if you alter a parcel in any way including, but not limited to, erecting, constructing, reconstructing, moving, or altering a structure. Land use permit applications and their guides are available from the St. Louis County Planning and Development Department and/or their website. The applications and the guides are designed to work together to assist property owners and contractors to successfully complete land use permit applications. The most difficult and time consuming part of the land use permit process is adequate research of a parcel of land and to describe your intentions on the application.

Conditional Use Permits are required for uses, including, but not limited to, a home-based business, resort, campground, B & B, repair shop, rural industry, mini storage, convenience store and/or gas station. Permits are also required for non conforming lots of record, variances, subdivision plats, borrow pits, communication towers, driveways and septic systems. Applications are available from the county land office or website.

Sewage Treatment Systems must have approval from St. Louis County's Environmental Services Department for each new residence or addition with a bedroom, bathroom, laundry or kitchen facilities. See the chart above for contact information.

Individual Utilities are not regulated by the county. Wells must be registered with the state, which is usually handled by the well driller. Electrical and plumbing standards are set by the state. It is the responsibility of the utility to obtain utility easements. Electrical inspections are required by inspectors assigned by the state to specific areas.

Do you know if you need the following permits?

- Land Use Permit
- Variance
- Wetland Permit
- Land Alteration
- Property Address Application
- Water Permit
- Storm Water Permit from MPCA

GLOSSARY

Shoreland: Land located within the following distances from public waters: 1000 feet from ordinary high water level of a lake; and 300 feet from a river.

Nonconforming use: Legal use recorded prior to the adoption of the ordinance which would not have been permitted had the ordinance been in effect.

Conditional use: A land use with restrictions in relation to the rest of the neighborhood and county plans.

Performance standard permit: Authorization given for a use which must meet a minimum set of predefined standards or criteria.

Variance: Any modification from a county land ordinance determined by the Board of Adjustment that the enforcement or ordinance would cause unnecessary hardship.

Storm water: Surface water run off from rain or snow melt.

Things to Consider:

- A construction permit will become void after 12 months. Permit extensions may be granted if the proposal meets ordinance requirements.
- Restrictions apply limiting the percentage of lot that may be covered with impervious material, including roofs, gravel and paved driveways, turnarounds and sidewalks.
- Standards for a principal structure can be found on page 25.



ZONING

PERMIT SKETCHES

GLOSSARY

Side yard near: The closest distance from your side property line to your proposed project.

Side yard far: The longer distance from your side property line to your proposed project.

Rear yard: The distance from your proposed project to the property line opposite the road.

Lot width: The measurement of the property between the side property lines at the principal structure site.

Road center line: The distance from the center of the road to a specified structure.

Maximum lot coverage: shall include all structures, driving surfaces including graveled surfaces, and all other altered surfaces.

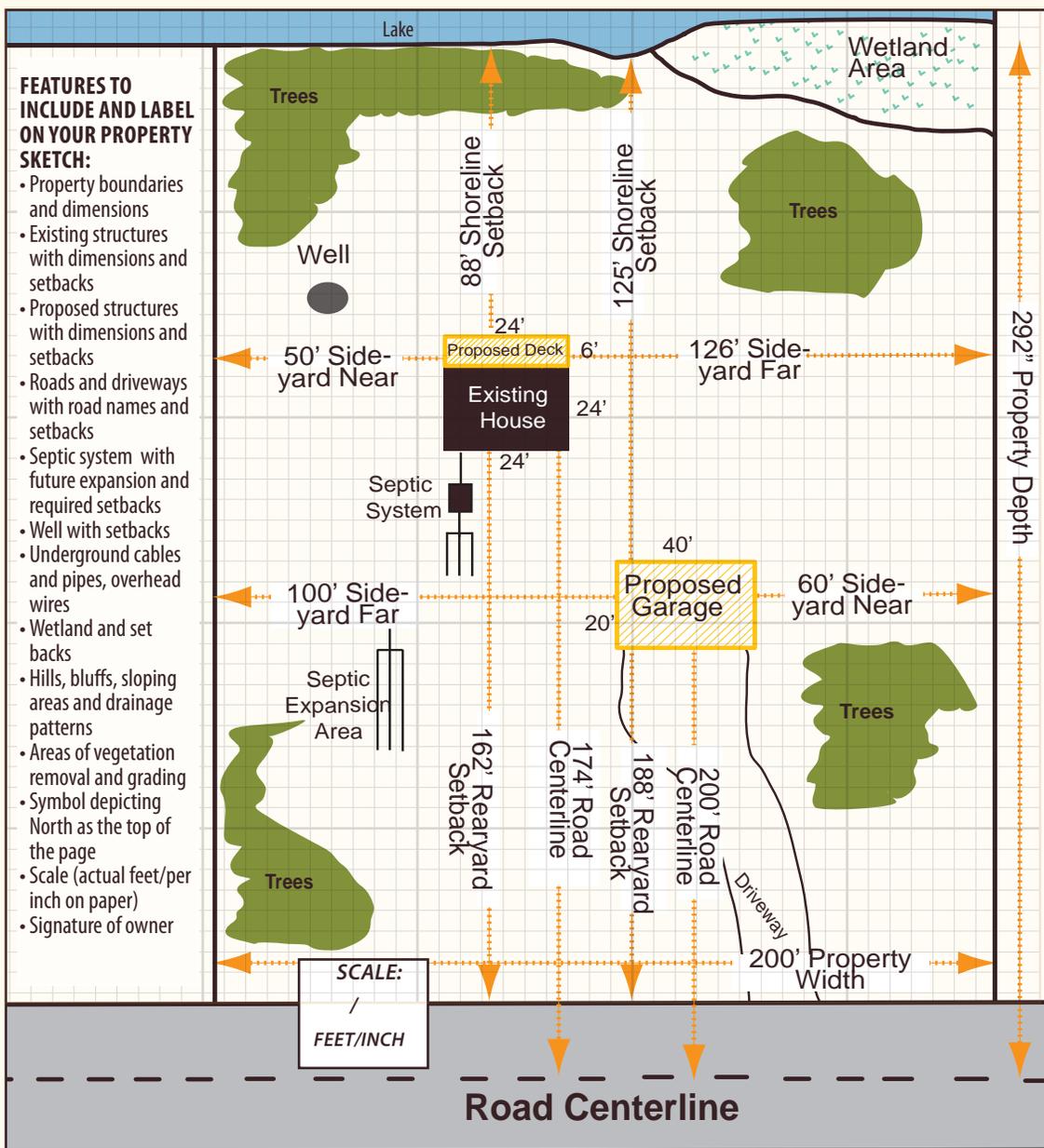
Bluff area: Land that rises at least 25 feet above the OHWL and has a slope of 30% or more over a 50 ft distance. Stricter standards may apply on some rivers.

River corridor: Area of measurement from the ordinary high water level of a river landward for the distance that is set in the ordinance.

A sketch of your property is required when you submit an application for a land use permit. A permit will not be issued without a sketch.

APPLICATION FEES, DEADLINES, and dates of possible hearings are available by contacting the Planning and Development Dept. of office or website.

AN APPLICATION GUIDE and Land Use permit application are available in an easy downloadable PDF format on the county website or office.



This example of a permit sketch can be a useful reference when preparing your own property sketch.

PERMIT SKETCHES:

Your sketch is an important part of the permit application. It identifies the location and distances of your project in relation to other features of the surrounding property. A permit will not be issued without a sketch. A complete guide for the permit application is available from the St. Louis County Planning and Development office or website.

Before you begin your sketch, it is best to review an example and make sure your research is complete. Completeness, accuracy, good lot design, and communication with the County (especially on wetland impact) prior to the permit application will influence review time and issuance of a

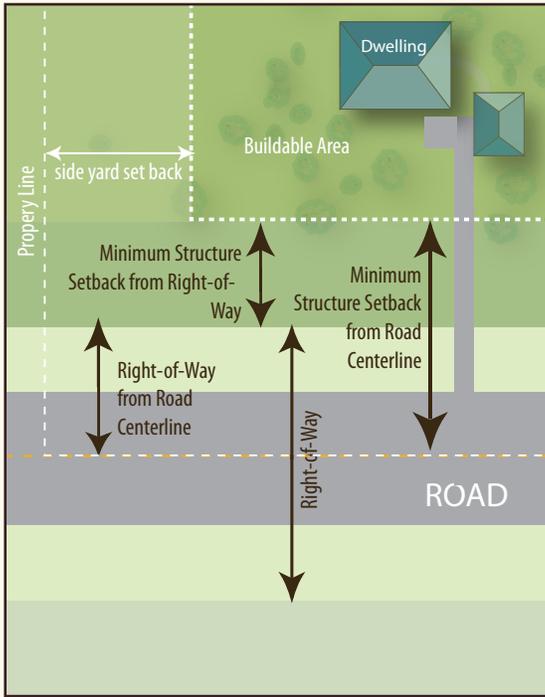
permit. Additional information may be attached to your sketch to address specific zoning criteria.

After submitting your application to the St. Louis County Planning and Development Department, it will be reviewed using the criteria for approval found in the corresponding zoning ordinance. The three criteria that must be met are:

- The proposed use conforms to the land use plan.
- The proposed use is compatible with the existing neighborhood.
- The location and character of the proposed use is consistent with the desirable pattern of development for the area.

ZONING

GENERAL SETBACKS AND STANDARDS



An example of identifying road setbacks.

GENERAL SETBACKS:

All parcels have **road and structure setbacks**, or requirements, for their zoning district.

Dimensional setbacks for your zone can be obtained from the dimensional standards chart below. Lake, river and stream shore and road setbacks will apply if you are near one of these areas. Additional standards for these setbacks may also apply in certain circumstances, such as: nonconforming lots of record, size of proposed structure, location near bluffs, rock out cropping, or protected impact zones. Information on your regulations can be obtained from the Planning & Development Department (See page 10).

ROAD STANDARDS

ROAD CLASSIFICATION	ROAD CENTER LINE	RIGHT-OF-WAY
Principal & Major Arterials	110'	35'
Major Collectors	85'	35'
Accessory Structures*	48'	15'
Minor Collectors & Local Roads	68'	35'

* Accessory structures on local roads (privately maintained), or on publicly maintained roads that serve ten principal uses or less.

GLOSSARY

Zoned Land Use: Land use under the jurisdiction of the Zoning Ordinance.

Zone District: A type or area of land that falls under the jurisdiction of the Zoning Ordinance.

Dimensional Standard: Regulations set by the Zoning Ordinance on the size of property.

Setback Standard: Regulations set by the Zoning Ordinance on the distance away from structure.

Structure Standards: Regulations set by the Zoning Ordinance on structures.

Performance Standards: Regulations set by the Zoning Ordinance on what can be done to your land.

DIMENSIONAL STANDARDS FOR LAND USE DISTRICTS (FAM, RES, SMU, LCO, SENS, LIU, LSO)																	
DIMENSIONAL DISTRICT	1	1a	2	3	3a	4	4a	5	6	7	8	9	10	11	12		13
Minimum Lot area (acres)	35	35	17	9	9	4.5	4.5	2.5	2	1	1	1	2	0.5	0.33*	.25**	2
Minimum Lot Width (ft)	600	1,200	600	300	600	300	400	200	200	150	200	150	200	100	100	75	200
% Max Lot Coverage	2	2	2	10	2	10	10	25	25	25	30	25	25	25	35	35	30
Side Yard (ft)	Principal	100	100	100	50	50	50	20	20	20	20	15	15	15	10	10	25
	Accessory	100	100	100	25	25	25	10	10	10	10	10	10	10	5	5	25
Rear Yard (ft)	Principal	100	100	100	100	100	50	50	45	45	45	45	40	40	40	40	50
	Accessory	100	100	100	50	50	50	10	10	10	10	10	10	10	5	5	50
Maximum Structure Height	35'																
Minimum Shoreline Frontage	Same as "Minimum lot width"																

*with public sewer **with public water and sewer Special standards apply for Plat of Soudan, Town of Breitung



DISTRICT ZONING

LAND USE STANDARDS

LAND USE STANDARDS

All land in St. Louis County is within a **zoned land use district**. All land use districts have a title and a **dimensional standard** based on State Shoreland Regulations, the County Ordinance, and the adopted Comprehensive Land Use Plan.

The zone district is labeled and identified by an abbreviation signifying the type of zone, followed by a number designating the **dimensional district**. Each land use district has a purpose statement,

permitted uses, permitted uses with performance standards, and conditional uses. Compliance with these standards is reviewed by county officials when any land use permit application is submitted. These are not the only standards. Wetlands, bluffs, or other characteristics or structures may have standards that also apply.

Land Use Guides for each land use district are available at the Planning & Development Department's office or website. They have more information for your land use requirements.



LAND USE DISTRICT: LAKESHORE COMMERCIAL OVERLAY (LCO)

PURPOSE STATEMENT: Intention of overlay is to allow limited expansion of certain waterfront commercial activities, while protecting residential lifestyles and property values.

PERMITTED USES: Remodeling, water oriented accessory structures, home business and occupation, expansion of existing resorts for guest purposes.

PERMITTED USE WITH PERFORMANCE STANDARDS: Alterations of cabins, redevelopment of resort cabins within standards, signs, recycling centers, single family dwellings, public project borrow pits.

USES AUTHORIZED BY CONDITIONAL USE PERMIT: New commercial operations, Planned Developments, utility facilities, general purpose borrow pits, mineral exploration, airports.



LAND USE DISTRICT: RESIDENTIAL (RES)

PURPOSE STATEMENT: This district shall be used to promote a high quality residential living environment where non-residential uses are restricted and used where there is extensive residential development. This district may be used in shoreland and non-shoreland areas that are typically platted, or if not platted, have a development density of dwellings of more than one dwelling per 300 lineal feet of road or shore frontage.

PERMITTED USES: Single-family dwellings, home-occupations.

PERMITTED USE WITH PERFORMANCE STANDARDS: Two-family dwellings, signs, accessory structures larger than 1,000 square feet, residential density controls and density transfer.

USES AUTHORIZED BY CONDITIONAL USE PERMIT: Multiple and three and four family dwellings, residential planned unit developments, home business, group home, public/semi-public uses, mineral exploration and evaluation, utility facilities, mobile home park, neighborhood commercial.

DISTRICT ZONING

LAND USE STANDARDS

LAND USE TERMS

A land use guide for each zoning district is available from the St. Louis County Planning and Development Department. To best understand zoning standards and their purpose, land owners should be familiar with the following terms:

Purpose Statement: Provides guidance for the zone district. The district can not be used contrary to the purpose statement of the district.

Permitted Uses: Uses that are allowed with a permit from the county, provided all standards are met.

Permitted with Performance Standards: Uses that are permitted if the standards are met. If the standards cannot be met, the use may be allowed with a variance or conditional use permit, depending on the conditions.

Uses Authorized by Conditional Use Permit: Uses that require approval by the planning commission in accordance with the criteria set forth in the ordinance. Uses other than those stated in the ordinance may be permitted though the conditional use process if they are similar to the uses listed under the performance standard or conditional use standard of that zone district, and they are consistent with the purpose of that district.

LAND USE DISTRICT: LIMITED INDUSTRIAL USE (LIU)

PURPOSE STATEMENT: This district is designed to accommodate those industrial and manufacturing uses that foster orderly economic growth, without adversely affecting the residential and recreational character of the surrounding area. This district may be used in a shoreland area if permitted by an adopted land use plan.

PERMITTED USES: Manufacturing and light industrial uses consistent with the purpose of this district, warehousing, storage, and wholesaling, borrow pits-public works, single site contaminated soils facility.

PERMITTED USE WITH PERFORMANCE STANDARDS: Manufacturing and light industrial uses consistent with the purpose of this district, warehousing, storage, and wholesaling, borrow pits-public works, single site contaminated soils facility.

USES AUTHORIZED BY CONDITIONAL USE PERMIT: Planned unit development (PUD), transportation terminal, borrow pits, mineral extraction, but not processing, recreational facilities, public/semi-public, multiple site contaminated soils disposal facility including incineration.



LAND USE DISTRICT: FOREST AGRICULTURAL MANAGEMENT (FAM)

PURPOSE STATEMENT: This district is intended to recognize and promote the development of the county's forestry and agricultural industry and to encourage recreational use of such areas. This district is typically used in areas with land developed at very low densities and often there is considerable government and corporate ownership.

PERMITTED USES: Temporary wood processing activities, home-occupation, public recreational facilities, hunting shacks/other primitive dwellings, accessory uses, livestock, seasonal residences.

PERMITTED USE WITH PERFORMANCE STANDARD: Single-family dwellings, recycling centers (public), signs, on-site and off-site, borrow pits-public works, mineral exploration and evaluation, community center facilities, residential density controls and density transfer, single-site contaminated soil disposal, home business.

USES AUTHORIZED BY CONDITIONAL USE PERMIT: Aquaculture operations, feedlots, rural industry, utility facilities, electric generation facility, sanitary landfills and recycling, slaughterhouse, junk or salvage facilities, peat extraction and processing, airport, commercial or private recreational uses which by their nature require large land areas, highway commercial, neighborhood commercial, permanent forest processing, borrow pits, and similar operations.



DISTRICT ZONING

LAND USE STANDARDS

LAND USE DISTRICT: SENSITIVE AREAS (SENS)

PURPOSE STATEMENT: This district is intended for areas that are unsuitable for intensive development due to wetlands, steep slopes, flooding, inadequate drainage, hazardous waste sites, high susceptibility to groundwater contamination, significant wildlife habitat areas, severe erosion potential, or features likely harmful to the community if development is not properly managed.

PERMITTED USES: Forestry management, permanent open space, wild rice farming and related aquaculture.

PERMITTED USE WITH PERFORMANCE STANDARDS: Temporary forest processing, home occupation, recreation trails, accessory uses and structures.

USES AUTHORIZED BY CONDITIONAL USE PERMIT: Public/semi-public uses, public facility renovation, livestock, aquaculture, peat harvesting and processing.



LAND USE DISTRICT: LAKE SUPERIOR OVERLAY (LSO)

PURPOSE STATEMENT: This district is intended to allow limited expansion of certain waterfront commercial activities, while safeguarding residential lifestyles and property values. This overlay applies only to those areas near Lake Superior where it has been determined that nodes of residential and commercial land uses coexist, with neither being the predominant use.

PERMITTED USES: Single family residence, home occupation, accessory uses and structures, public, non-commercial recreational uses.

PERMITTED USE WITH PERFORMANCE STANDARDS: Home business, neighborhood commercial, highway commercial, signs.

USES AUTHORIZED BY CONDITIONAL USE PERMIT: Multiple family dwelling: waterfront commercial, planned unit development (PUD), other uses similar to above.



LAND USE DISTRICT: SHORELAND MIXED-USE (SMU)

PURPOSE STATEMENT: This district is intended to provide a balance between lake and river use and the water resources by allowing a wide range of uses that are consistent with adjacent land uses and the recreational and natural attributes of the water body.

PERMITTED USES: Single-family dwellings, seasonal dwellings, public/semi-public uses, non-commercial uses, including trails, parks, beaches, waysides, etc., accessory uses, home-occupation.

PERMITTED USE WITH PERFORMANCE STANDARDS: Signs, accessory structures larger than 800 square feet, water-oriented accessory uses, two-family dwellings, residential density control and density transfer, single site contaminated soils disposal, home business.

USES AUTHORIZED BY CONDITIONAL USE PERMIT: Planned unit developments, multiple, two and three family dwellings, mobile home park, waterfront commercial, neighborhood commercial, public/semi-public uses, utility facilities, borrow pits, mineral exploration and evaluation, livestock, public facility renovation, group home, airports, temporary wood processing, off-site signs, aquaculture, multiple site contaminated soils disposal facility, including incineration.

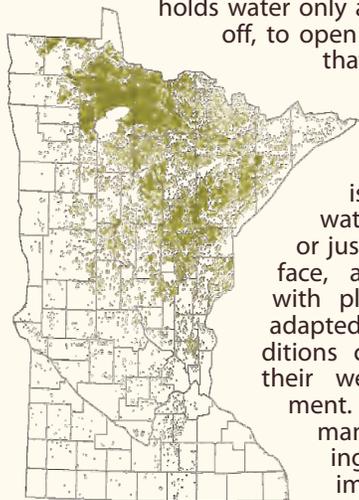


WETLANDS

CHARACTERISTICS AND IMPACT

WETLAND:

Wetland describes a wide variety of wet environments varying from a slight depression, which holds water only after spring runoff, to open water wetlands that never draw down. By most standards, a wetland's soil is saturated with water either above or just below the surface, and is covered with plants that have adapted to the wet conditions characteristic to their wetland environment. Since there are many laws protecting wetlands, it is important to identify wetlands and their boundaries.



IDENTIFYING WETLAND CHARACTERISTICS:



Water influences the vegetation and soil found on any site. Therefore, the vegetation, soil, and hydrologic factors must all be addressed in identification of a jurisdictional wetland.

Wetland Plants: In undisturbed sites, vegetation is the most visible criterion and can be useful in wetland observations. Some common wetland plants are willow, alder, black ash, black spruce, balsam fir, aspen, cattails, sphagnum moss, red osier dogwood, and sedges.

Wetland Soils: Two common types of soil are found in wet conditions. One is organic soils, or peat. The second is mineral soils that do not drain well because of high water table, low land, ground water seepage, or a slowly permeable soil layer, such as clay. These are called hydric soils.

Mineral soils that are saturated much of the time become dull colored or gleyed. Gleyed soils are neutral gray and occasionally greenish or bluish.

Mineral soils that are saturated for short periods develop spots or blotches of different colors. These spots can be an indication of hydric or wetland soils.

Wetland Hydrology: Hydrology refers to the presence or flow of water through a site. Some wetlands are relatively dry during drier times of the year. Often, aerial photographs, personal interviews with residents, and visual evidence are used to determine wetland hydrology.

WETLAND IMPACT

Wetland impact is a term used to describe actions that effect the environment of a wetland. Since most wetlands are in prime condition in their undisturbed state, any change is usually referred to as a negative impact.

TYPICAL ACTIVITIES THAT CAUSE IMPACT:

Filling: Adding any material to change the bottom level of a wetland.

Draining: Removing the water from a wetland by ditching, tilling, pumping, or other such techniques.

Excavating: Dredging and removing soil and vegetation from a wetland.

Diverting water: Preventing the flow of water into a wetland by removing water upstream, lowering lake levels, or lowering groundwater tables.

Clearing: Removing vegetation by digging or scraping.

Flooding: Raising water levels, either behind dams or by pumping or otherwise channeling water into a wetland so that water levels are too high for wetland vegetation and animals to survive (i.e., converting a wetland to a lake or pond).

Diverting or withholding sediment: Trapping sediment through the construction of dams, channelization or other such projects that inhibit the regeneration of wetlands in natural areas of deposition, such as deltas.

Shading: Placing pile supported platforms or bridges over wetlands, causing vegetation to die.

Conducting activities in adjacent areas: Disrupting the interactions between wetlands and adjacent land areas, or indirectly impacting wetlands through activities at adjoining sites.

GLOSSARY:

Hydrology: The study of water and its effects in a given area.

Obligate plants: A plant that has adapted to a certain condition and lives primarily in these conditions.

Sequencing: A step - by - step review process used to determine possibility of wetland development.

Organic soils: Soil containing decomposed plants; typically, peat or composted vegetation.

Mineral soils: Clay, sand, or silt with little organic (or composted) material.

Hydric soils: Soils that do not drain well, or that have a layer of soil that slows drainage.



WETLANDS

SEQUENCING

SEQUENCING: THE WETLAND IMPACT REVIEW PROCESS



Prior to any draining, filling or excavating in a wetland, proposed impacts to nonexempt wetlands undergo a process known as sequencing. Sequencing is a step-by-step process used to assess the efforts made by the applicant to avoid, minimize, reduce or eliminate impact over time, and

replace lost wetland at the location. Wetland permits are approved using the following principles in this order:

1. Avoid Impacts: If a project can be redesigned or relocated to eliminate any wetland impact, you must select this option.

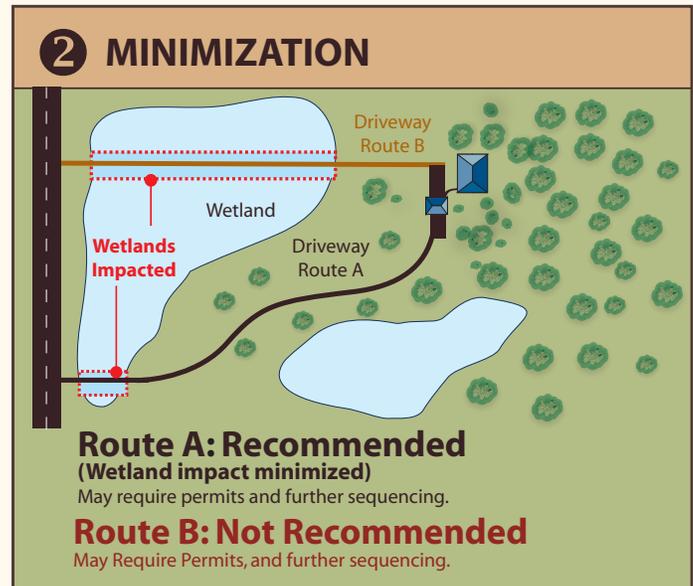
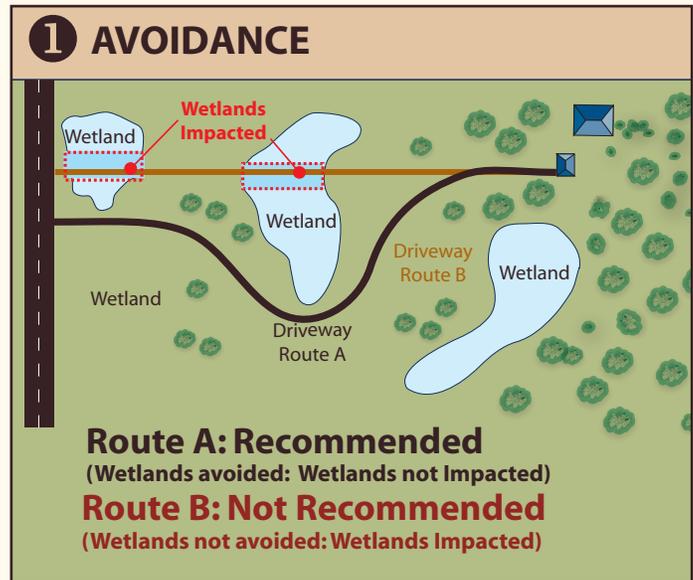
2. Minimize Impact: If St. Louis County determines that wetland impacts are unavoidable, you must demonstrate that the project minimizes wetland impacts to the greatest extent possible. The county will consider:

- The purpose of the project
- Size requirements of the project
- Location
- Sensitivity of the site design to the natural features of the site, including topography, hydrology, and existing vegetation
- The function and value of the wetlands on the site
- Applicant's efforts to show alternatives to modify the size and scope of project

3. Rectify Impact: There may be times that a wetland impact is impossible to avoid, but the impact either is temporary or results in no net loss of wetlands. Temporary impacts may be approved by the county if the activity is completed and the physical characteristics of the wetland are restored within six months from the start of the activity. For example, a temporary road through a wetland that is needed for a short term project, and after the project is completed, the road is removed. A performance bond must be provided to the county for an amount sufficient to cover the cost of restoring the wetland to pre-project conditions.

4. Reduce or Eliminate Impact Over Time: Further impact from draining or filling must be reduced or eliminated by managing the project in a manner that preserves remaining wetland functions and values. The county requires the applicant to implement best management practices (e.g. silt fences) to protect wetland functions and values.

5. Replace: Wetland replacement must restore the functions and values that are lost from a wetland that is drained or filled. This can be accomplished through either restoring a previously drained or filled wetland, creating a new wetland in an upland area, or purchasing credits from an approved wetland bank. Contact the Planning and Development Department for more information.



Avoidance and minimization are two important steps in reducing impact to wetlands.

WETLANDS

CLASSIFY & IDENTIFY



FLOODPLAIN FOREST: WETLAND TYPE 1

CHARACTERISTICS: Floodplain forest wetlands are poorly drained, shallow depressions located in the floodplain of a watercourse with no well defined inlets or outlets. These wetlands may have standing water for a few weeks each year, but are dry for much of the growing season. They are frequently cultivated. When they are not, wetland vegetation can become established. Alternating periods of flood and drought can eliminate perennial plants so annual plants typically dominate the community.

FUNCTION & VALUES: Floodplain forest wetlands are important for reducing shoreline erosion by pooling and absorbing flood waters, stabilizing the shoreline, and providing a filter for surface runoff. Especially in the spring, these temporary water holding basins frequently have an abundance of plant seeds and invertebrates, which makes them ideal nesting, feeding and resting areas for migrating waterfowl and shorebirds.

VEGETATION: Floodplain forest wetlands are dominated by mature, deciduous hardwood trees growing on soils associated with riverine systems. The shrub layer, although usually lacking, is sparse. Floodplain forest wetlands are vegetatively productive because nutrients are periodically added to the system by flooding.



SEASONALLY SATURATED BASINS: WETLAND TYPE 1 & 2

CHARACTERISTICS The primary difference between the two seasonally saturated basin wetlands is in the seasonal length of standing water and duration of the soil saturation. Seasonally flooded basins may have alternating periods of flood and drought; high water table found in wet meadows may allow the soil to remain saturated.

FUNCTION & VALUES: These nutrient rich temporary water holding basins frequently have an abundance of plant seeds and invertebrates, making them ideal habitats for rare plants and migrating waterfowl and shorebirds, especially in spring. During periods of high rainfall, seasonally saturated basin wetlands collect runoff which reduces the likelihood of seasonal flooding to downstream low-lying areas and acting as a natural filter.

VEGETATION: Seasonally saturated basin wetlands are dominated by non forested vegetation that can tolerate their roots and lower stem submerged in water over a period of time. Seasonally saturated basin wetlands are generally dominated by aquatic and submergent vegetation, and are not populated by shrubs or trees.



OPEN WATER: WETLANDS TYPE 3, 4 & 5

CHARACTERISTICS: The primary difference between these three open water wetlands is in the depth of standing water and duration of the soil saturation. Shallow marshes are in 6 inches of water during the growing season while deep marshes are in 6 inches to 3 or more feet of water during the growing season. Shallow open water wetlands have up to 6.6 feet of water and are rarely, if ever, drawn down preventing emergent aquatic vegetation to become established.

FUNCTION & VALUES: Open water wetlands are included as some of the most desirable of all wetlands for water birds and fur bearers, and they can also provide spawning and nursery habitat for some fish species. Submergent plants and aquatic invertebrates provide food for waterfowl. Excellent winter habitat can be provided for upland wildlife, including deer, muskrat and mink. Other functions include flood-water retention, protection of shorelines from erosion, aesthetics, and water quality functions involving the trapping of sediments and absorption of excess nutrients.

VEGETATION: Open water wetlands are dominated by non forested vegetation that can tolerate their roots and lower stem submerged in water over a period of time. Open water wetlands are generally dominated by aquatic and submergent vegetation, and are not populated by shrubs or trees.



OPEN-CONIFEROUS BOG: WETLANDS TYPE 8

CHARACTERISTICS: Bogs are one of the most distinctive kinds of wetlands, and are characterized by a growth of evergreen trees and shrubs and a floor covered by a thick carpet of sphagnum moss. Bogs form in very wet places. Some have considerable amounts of open water surrounded by floating boggy vegetation; in others, vegetation may have completely filled a lake. Bog wetlands soil is usually waterlogged and supports a spongy covering of mosses. Bogs occur mostly in shallow basins, on flat uplands, and along sluggish streams.

FUNCTION & VALUES: Open-coniferous bog wetlands provide important habitat for wildlife, including migratory birds which use bogs on their flight paths to breed, nest and feed. Bog wetlands are often valuable as reservoirs for streams (especially trout streams) and habitat for many unique plants.

VEGETATION: Open bog vegetation is woody or herbaceous or both. Typical plants are shrubs, sphagnum moss, and sedges. Although scattered, black spruce and tamarack also occur in open bog wetlands, but their growth is stunted. In coniferous bog wetlands, the plant communities are similar except with mature trees of black spruce and tamarack dominating the area.



WETLANDS

CLASSIFY & IDENTIFY



SHRUB CARR: WETLAND TYPE 6

CHARACTERISTICS: Shrub Carr wetlands occur on organic soils (peat/muck) as well as on the mineral soils of a floodplain. These wetlands are waterlogged much of the growing season and often covered with as much as six inches of water. The Shrub Carr soil is typically saturated to the surface and may have as much as six inches of standing water after spring snowmelt and heavy rainfall events.

FUNCTION & VALUES: Shrub Carr wetlands are important because of the biological and chemical processes that occur within. These wetlands also perform the function of flood control reduction, water table maintenance, and reducing stream sedimentation. Important breeding habitat for birds are provided by Shrub Carr wetlands. White-tailed deer often choose Shrub Carr wetlands to graze on the abundant ground cover.

VEGETATION: Floodplain forest wetlands are dominated by mature, deciduous hardwood trees growing on soils associated with riverine systems. The shrub layer, although usually lacking, is sparse. Floodplain forest wetlands are vegetatively productive because nutrients are periodically added to the system by flooding.



HARDWOOD-CONIFEROUS SWAMP: WETLANDS TYPE 7

CHARACTERISTICS: Hardwood-coniferous swamp wetlands are forested wetlands dominated by mature conifers and/or lowland hardwood trees. They are usually associated with ancient lake basins and former riverine oxbows. These swamps are distinguished by whether the dominant trees are deciduous, hardwood or coniferous. The soil in these wetlands is waterlogged at least to within a few inches of the surface during the growing season and is often covered with as much as one foot of water.

FUNCTION & VALUES: Hardwood-coniferous swamp wetlands support diverse plant and animal species assimilation. Pools within the forest may provide habitat for amphibians and invertebrates. Adjoining areas of open sand may provide habitat for reptiles. During high water periods, they provide habitat for fish and are important for storm and floodwater storage. Diking of wooded swamps can increase both upstream and downstream flooding.

VEGETATION: Hardwood-coniferous swamp wetland vegetation includes tamarack, white cedar, black spruce, balsam fir, red maple, and black ash. Northern evergreen swamps usually have a thick ground covering of mosses. Deciduous swamps frequently support beds of duckweeds, smartweeds, and other herbs. Hardwood-coniferous swamp wetlands are vegetatively productive because nutrients are periodically added to the system by flooding.

WETLAND PLANTS

Being able to identify wetland plants can help identify wetlands.

ADAPTED

PLANTS:

If you see the following obligate wetland plants, you may be looking at wetland:

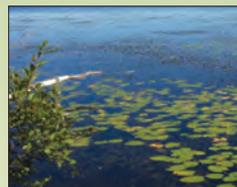
- bog rosemary
- bog birch
- cotton-grass
- black willow
- labrador tea
- cattail
- swamp milkweed
- sand bar willow
- skunk-cabbage
- sphagnum moss
- wild rice



Pink weed



Wild Calla Lily



Waterlilies



Cattails



Black Spruce



White Cedar



Black Ash



Alder

STRUCTURE STANDARDS

PRINCIPAL & ACCESSORY STRUCTURES

STRUCTURE STANDARDS

In an effort to maintain a healthy ecosystem and quality community for all, standards have been set for all structures. Other standards, such as setbacks and zoning standards, will still apply.

PRINCIPAL STRUCTURES

Single-family homes and cabins are principal structures, and all other buildings are accessory structures.

ACCESSORY STRUCTURES

Specific water-orientated accessory structures are allowed at a reduced shoreline setback in certain zone districts with performance standards. These include saunas, boathouses, storage buildings,

fish cleaning houses, screen houses, gazebos, detached decks, and satellite dishes. These structures may be located within the shore impact zone or at the principal structure setback or beyond. The maximum slope allowed for the construction site is 20%, and must meet setbacks for slopes. Only one accessory structure, including satellite dishes, is allowed within the normal shoreland setback. Bathroom and sleeping quarters (except bunkhouses) are not allowed at this setback. The standard also requires that the structure be stained or painted an unobtrusive color, and screened from the shore by natural means. These structures are not allowed in Voyageurs National Park, on trout streams, or on Natural Environmental Lakes.

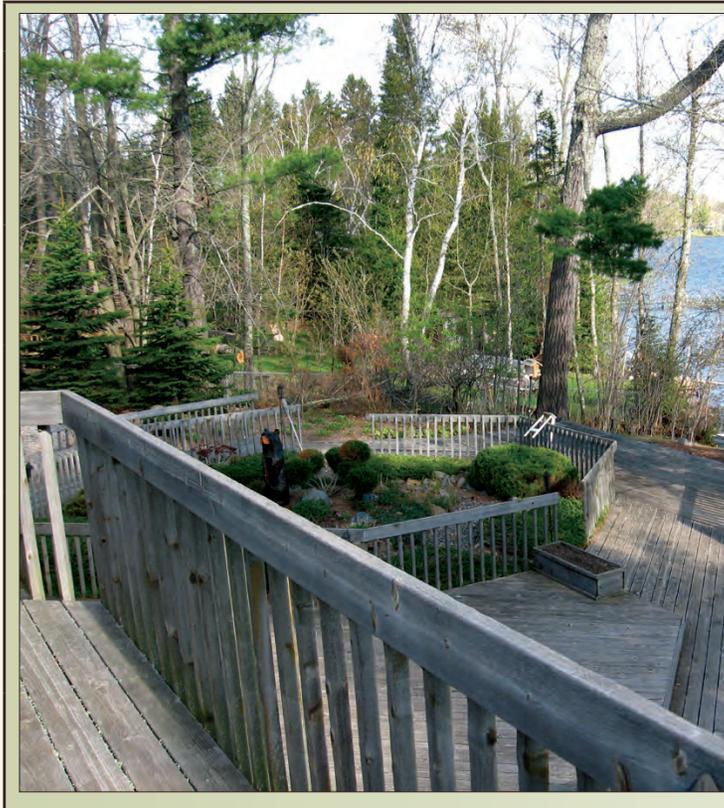


PRINCIPAL STRUCTURES: HOMES AND CABINS

Single-family homes and cabins are called "principal structures," and the primary focus of the activity is full or part-time residential use. The maximum allowable width of the water facing side of the structure cannot exceed 40% of the lot width. One principal structure is allowed per standard lot. A land use permit must be obtained prior to construction.

See dimensional standards on page 16 and land use regulations on following pages, depending on zone district.

A permit to construct a Subsurface Sewage Treatment System (SSTS), a certificate of compliance of SSTS, or an SSTS exemption must accompany the land use permit application. Driveways with direct access to a public road are required to obtain an entrance permit. Driveways without direct access to a public road are regulated depending how much the structure is occupied. For more information see page 27 or contact the Planning and Development Department.



DECKS & PLATFORMS

Attached decks: An attached deck is defined as a horizontal, unenclosed platform that is attached to or functionally related to a home, cabin or other structure. It may not have a roof, extended soffit or walls, but may have railings, seats, or other related features. A screened or enclosed deck is considered an addition and must meet the performance standards for additions, which are not allowed within the shoreland setback. More information is available through the Planning and Development Department.

Decks on nonconforming Homes/Cabins are allowed if all of the following performance standards are met: Stairs and landings are considered part of the deck; maximum depth is 12 feet; the distance between the deck and the OHWL is less than 50% of the required setback for the zone district.

Deck additions on the side and no closer to the shoreline: Stairs and landings are considered part of the attached deck, maximum depth of 12 feet within the impact zone or 16 feet outside of the impact zone, distance between the deck and the OHWL is less than 50% of the required setback for the zone district. Deck additions to the rear are allowed if the maximum depth is no more than 16 feet.

Detached decks: A detached deck is defined as a horizontal, uneven platform that is freestanding and greater than 18 inches in height at any point. It has no roof or extended walls, but may have railings, seats, or other related features and must meet the following performance standards if the deck is within the shore or bluff impact zone: Maximum size of 150 sq. feet, max. height from ground to top of railing - 12 feet, painted/stained an unobtrusive color, screened from lake by natural vegetation, no other accessory structures or satellite dishes located within the shore impact zone.

Platforms: A platform is a freestanding, horizontal surface that is no more than 18 inches high at any point and does not have rails, seats, or other elevated features. No land use permit is required if the following standards are met: no larger than 120 sq. ft., no higher than 18 in., setback at least 10 ft from shoreline, not within a bluff zone.



STRUCTURE STANDARDS

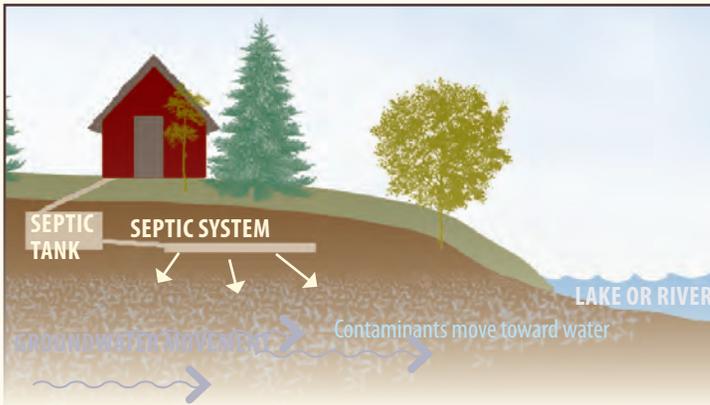
ACCESSORY STRUCTURES

	<p>DETACHED GARAGES & POLE BUILDINGS</p> <p>Garages and pole buildings are accessory structures primarily used for storage.</p> <p>Use: May include a loft which is used only for storage purposes.</p> <p>Nonconforming lot of record: Maximum total building footprint allowed is 15% of lot area.</p> <p>Setback and Standards: If over 800 square feet, must meet the normal setback requirements, and the following minimum setbacks: Side-yard lot line setback is 20 feet; General Development Lakes setback of 125 feet; Recreational Development Lakes setback 150 feet; Natural Environment Lakes and all River Classes setback of 200 feet.</p> <p>Design standards: If over 800 square feet, a standard unobtrusive color is recommended.</p>				
	<p>BUNKHOUSES</p> <p>Bunkhouses shall be reviewed as added living and bedroom space, and the septic treatment system of the principal structure shall be sized to take into account the added water use. A septic review will be required.</p> <p>Bunkhouses on shoreland lots shall not exceed 260 square feet, and 14 feet height, unless they are located on lots that have twice the minimum width and lot area requirements, in which case the mentioned standards do not apply.</p>				
	<p>BOAT HOUSES</p> <p>A boat house is a structure designed and used solely for the storage of boats or boating equipment. A permit is required prior to construction. They are allowed on all general and recreational development lakes.</p> <p>Use: May not include the following: deck or roof used as a deck, storage or garage for items unrelated to water sports.</p> <table border="1" data-bbox="570 936 1549 1041"> <tr> <td data-bbox="570 936 618 1041">Size:</td> <td data-bbox="618 936 1549 999">On lakes under 5,000 acres: The maximum size is 400 sq. ft. with maximum width 20 feet on side most parallel to shoreline, and a maximum depth of 26 ft.</td> </tr> <tr> <td></td> <td data-bbox="618 999 1549 1041">On lakes over 5,000 acres: The maximum size is raised to 520 sq. ft. Other standards remain the same.</td> </tr> </table> <p>Setback and Standards: Setback is minimum 10 feet and maximum 25 feet from shore line, maximum width 20 feet on side most parallel to shoreline, and a maximum depth of 26 ft. The maximum height is 14 feet from ground to roof peak, and limited to one story.</p> <p>Design standards: Boathouse must have a garage type door that faces the water.*</p>	Size:	On lakes under 5,000 acres: The maximum size is 400 sq. ft. with maximum width 20 feet on side most parallel to shoreline, and a maximum depth of 26 ft.		On lakes over 5,000 acres: The maximum size is raised to 520 sq. ft. Other standards remain the same.
Size:	On lakes under 5,000 acres: The maximum size is 400 sq. ft. with maximum width 20 feet on side most parallel to shoreline, and a maximum depth of 26 ft.				
	On lakes over 5,000 acres: The maximum size is raised to 520 sq. ft. Other standards remain the same.				
	<p>GAZEBOS AND SCREEN HOUSES</p> <p>Gazebos and screen houses are accessory structures used for shelter purposes, and a permit is required before construction. It may not have pressurized water, kitchen, bathroom, or sleeping facilities.</p> <p>Setbacks and Standards: Limited to 150 sq. feet in size, one story and 12 ft. high, minimum setback of 30 ft., no decks.*</p>				
	<p>SAUNAS</p> <p>A sauna is an accessory structure used for the sole purpose of a steam bath and changing room, and storage of related items. You must obtain a land use permit prior to construction and must be served by a grey water septic system, approved by the St. Louis County Environmental Services Department.</p> <p>Setbacks and Site Design: 50 ft. from the shoreline on General Development; 75 ft, on Recreational Development lakes.</p> <p>Performance Standards: 200 square ft. maximum size, and 12 ft. high; may include changing room but no bathroom, and may not be used for storage of combustible petroleum products; shall not be attached to a structure where combustible products are stored; deck is allowed but must be included as part of floor plan.*</p>				
	<p>STORAGE & FISH CLEANING BUILDINGS</p> <p>A storage building is an accessory building used to store miscellaneous items. A fish cleaning building is an accessory building used to clean fish. Permits are required before construction.*</p> <p>Use: May not have an attached deck; waste from fish cleaning house must conform to county regulations and policies regarding waste disposal.</p>				

*Unobtrusive colors are a required standard for exterior building materials used.

STRUCTURE STANDARDS

SEWAGE SYSTEMS, WELLS & UTILITIES



Groundwater moving toward the lake can carry contaminants in saturated soil. If your system is improperly designed or located too close to the water, contaminants may reach your lake.

SEWAGE TREATMENT SYSTEMS: In shoreland areas, it is important to install a septic system correctly because soil and water conditions near shore may make the system less efficient in treating wastewater. Location and construction are especially critical in shoreland areas to ensure that the system is effective. Incomplete treatment can result in health risks for humans and reduce water quality. For more information on how septic systems work and on proper maintenance, contact the St. Louis County Environmental Services Department. Their contact information is available on page 15.

BEFORE YOU BEGIN: Before purchasing undeveloped property, evaluate whether it has a suitable area for construction of a septic system and consider the following: depth to the ground water table or bedrock, soil types and conditions, slope of land, and setback requirements from well, waterfront, buildings, property lines.

INDIVIDUAL SEWAGE TREATMENT SYSTEM PERMITS:

St. Louis County, in conjunction with the state, regulates sewage treatment system installation and setbacks for areas that do not have public treatment systems. Contact the St. Louis County Environmental Services Department for permits or more information.

PUBLIC SEWAGE TREATMENT REQUIREMENTS (HOOK-UPS):

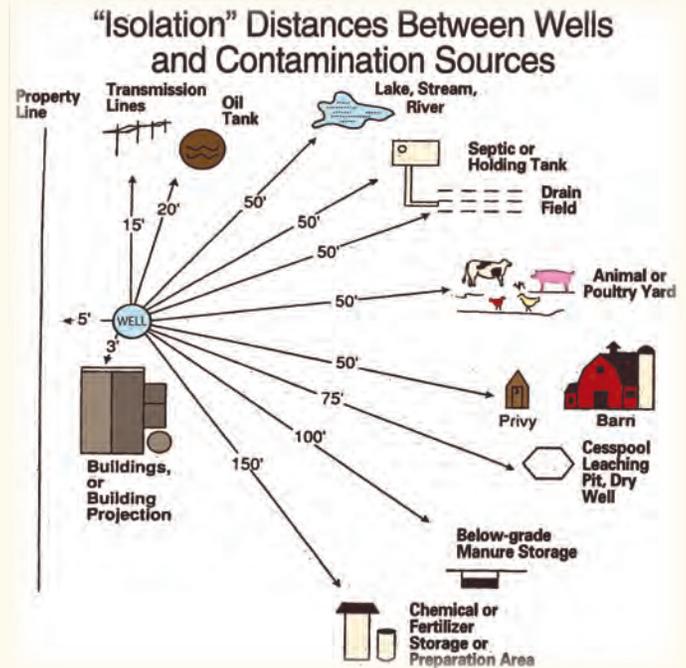
Parcel owners receiving sewage treatment from a local provider need to contact that provider to begin service.

SANITARY PRIVY:

The sanitary privy, or outhouse, has the following set backs: Any water supply, well, or unprotected water suction pipe*50ft. Occupied buildings.....20ft. Property lines.....10ft.

*If well is cased less than 50 feet in depth or does not encounter at least 10 feet of impervious material, this distance must be increased to 100 feet.

GREY WATER TREATMENT SYSTEM: A grey water treatment system treats water draining from laundry, dishes, and showers, but not toilets or sewage. They are usable only with seasonal use building using non-pressurized water systems, and the sewage tank must be 10 feet from structure and 50 feet from a well, and the trench system must be 100 ft away from the well. The bottom of the trench must be 3 feet above bedrock or seasonal high water table, and requires sandy soil to a depth of 4 feet or more.



WELLS AND SAFE WATER:

ENSURING A SAFE DRINKING WATER SUPPLY: Most people take a safe water supply for granted and assume their water is safe to drink as it comes from the faucet. Most shoreland properties have a private water supply that needs to be tested regularly to confirm safe water.

Most wells are drilled, dug, or driven. It is important to know what type of well you have and, if you are putting in a new well, what is best suited for your parcel.

It is also important to ensure that the well driller you choose operates in conformance with local requirements.

Seasonal or vacation homes that are used infrequently often have wells that go untested for years. It is important to test water annually if the well is not used continuously.

OTHER UTILITIES:

Electrical, plumbing and HVAC must meet standards set by the State of Minnesota. The Building Codes and Standards Division can be reached at their web site at www.doli.state.mn or 1-800-627-3529. Natural gas, propane, telephone, electrical, plumbing, HVAC, are available through private providers. Easements across tax-forfeit managed lands can only be granted to the utility.





SHORELAND PROPERTY RECORDS

PARCEL QUICK REFERENCE

PROPERTY LEGAL INFORMATION
(Contact information P. 15)

Property Address:

Parcel ID#:

Legal Description:

Date of Record:

Number of Acres:

Other:

PROPERTY STANDARD & REFERENCE PAGE		COUNTY STANDARD	MY PROPERTY RECORD	NOTE
Property dimensions:				
Building & structure setbacks (page 17)	Road Center line (p.16)			
	Shoreline (p. 8)			
	Side yard near			
	Side yard far			
	Rear yard			
Road setback (p.17)				
Well Setback (p. 27)	From any part of septic	100 ft		
	From house	3 ft		
	From river, lake or OHWL			
Septic setback (p. 27)	From house	20 ft (10 ft to tank)		
	From well	100 ft.		
	From river, lake or OHWL			
Bluff setback (p. 9)				
Shore line setback (p. 8)				
Shore impact zone (p. 8)				
Vegetation restrictions (p. 7)				
Do I need to include erosion control?				
Is my use compatible with existing neighborhood?				
Wetland area				
Wetland area				
Wetland area				

APPENDIX 2 USFWS Information for Planning and Consultation (IPaC)
and MN DNR National Heritage Information System (NHIS) Search Result

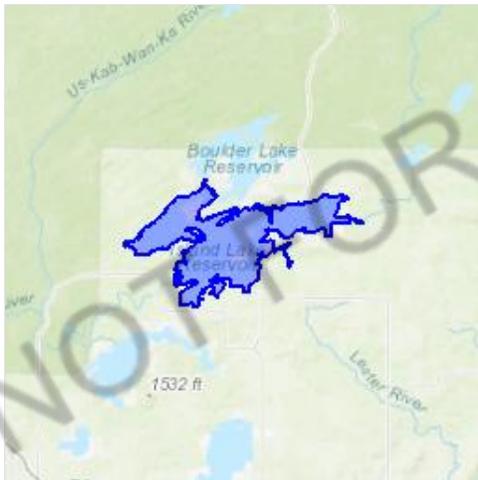
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

St. Louis County, Minnesota



Local office

Minnesota-Wisconsin Ecological Services Field Office

☎ (952) 252-0092

📅 (952) 646-2873

MAILING ADDRESS

4101 American Blvd E

Bloomington, MN 55425-1665

PHYSICAL ADDRESS

4101 American Blvd E

-

Bloomington, MN 55425-1665

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Canada Lynx *Lynx canadensis* Threatened

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

<https://ecos.fws.gov/ecp/species/3652>

Gray Wolf *Canis lupus* Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/4488>

Northern Long-eared Bat *Myotis septentrionalis* Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9045>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Canada Lynx <i>Lynx canadensis</i> https://ecos.fws.gov/ecp/species/3652#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the [FAQ below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
<p>American Bittern <i>Botaurus lentiginosus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6582</p>	<p>Breeds Apr 1 to Aug 31</p>
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626</p>	<p>Breeds Dec 1 to Aug 31</p>
<p>Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	<p>Breeds May 20 to Aug 10</p>

Connecticut Warbler *Oporornis agilis*

Breeds Jun 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Evening Grosbeak *Coccothraustes vespertinus*

Breeds May 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker *Melanerpes erythrocephalus*

Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

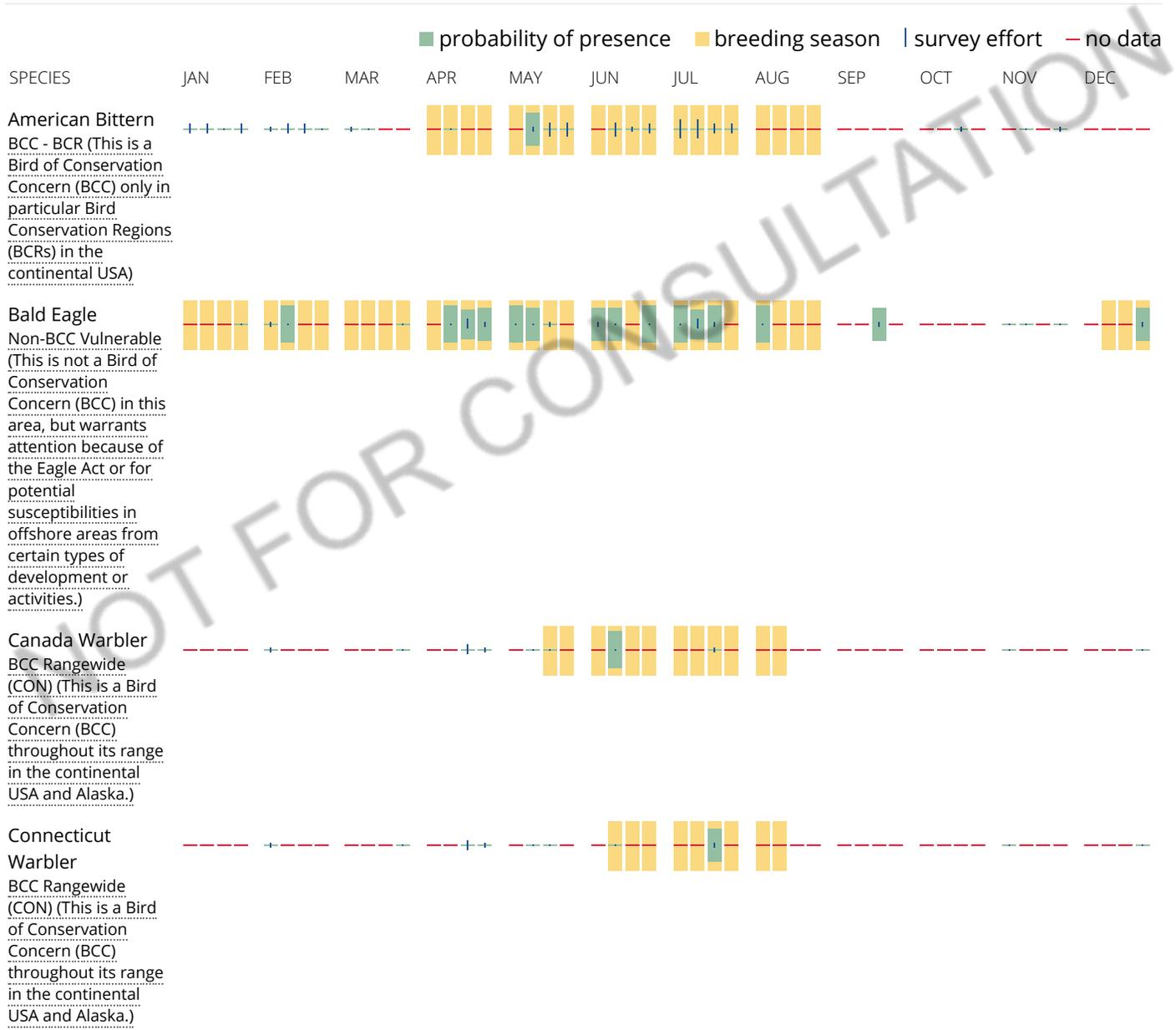
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

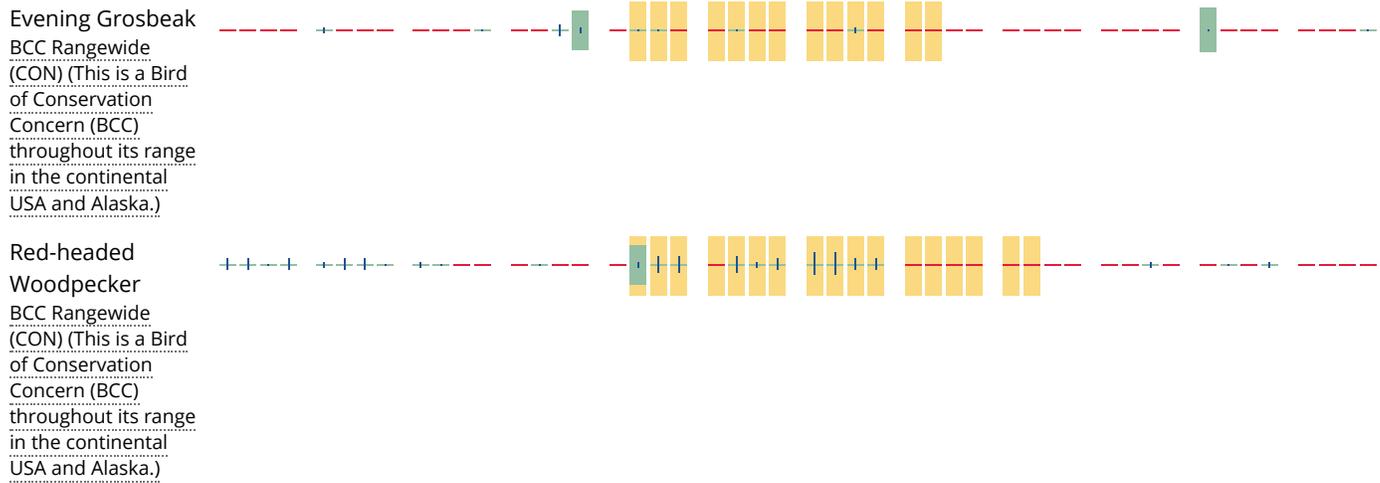
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to

confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1C](#)

[PEM1F](#)

[PEM1D](#)

[PEM1A](#)

[PEM1Cd](#)

[PEM1Cb](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PFO4D](#)
[PFO2Dg](#)
[PSS1D](#)
[PFO1/4D](#)
[PSS3/EM1Dg](#)
[PSS1/EM1C](#)
[PFO4Dg](#)
[PFO2/4D](#)
[PFO1D](#)
[PSS1/EM1A](#)
[PSS1/EM1D](#)
[PFO4/SS1D](#)
[PSS2/3Dg](#)
[PFO2/4Dg](#)
[PFO2/SS3Dg](#)
[PSS3Dg](#)
[PSS1C](#)
[PSS2/EM1D](#)
[PFO1/SS1D](#)
[PSS1/3Dg](#)
[PFO1A](#)
[PSS1/4D](#)
[PFO1/EM1C](#)
[PSS2Dg](#)

FRESHWATER POND

[PUBG](#)
[PABG](#)
[PUBF](#)

LAKE

[L1UBH](#)
[L2UBH](#)
[L2UBG](#)
[L2EM2G](#)
[L2ABH](#)
[L2USA](#)

RIVERINE

[R2UBH](#)
[R2UBG](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error

is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

St. Louis County, Minnesota



Local office

Minnesota-Wisconsin Ecological Services Field Office

☎ (952) 252-0092

📠 (952) 646-2873

MAILING ADDRESS

4101 American Blvd E

Bloomington, MN 55425-1665

PHYSICAL ADDRESS

4101 American Blvd E

-

Bloomington, MN 55425-1665

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Canada Lynx *Lynx canadensis* Threatened
 There is **final** critical habitat for this species. Your location overlaps the critical habitat.
<https://ecos.fws.gov/ecp/species/3652>

Gray Wolf *Canis lupus* Threatened
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/4488>

Northern Long-eared Bat *Myotis septentrionalis* Threatened
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/9045>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Canada Lynx <i>Lynx canadensis</i> https://ecos.fws.gov/ecp/species/3652#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the [FAQ below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626</p>	Breeds Dec 1 to Aug 31
<p>Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 20 to Aug 10
<p>Connecticut Warbler <i>Oporornis agilis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jun 15 to Aug 10
<p>Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Aug 10

Rusty Blackbird *Euphagus carolinus*

Breeds May 10 to Jul 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

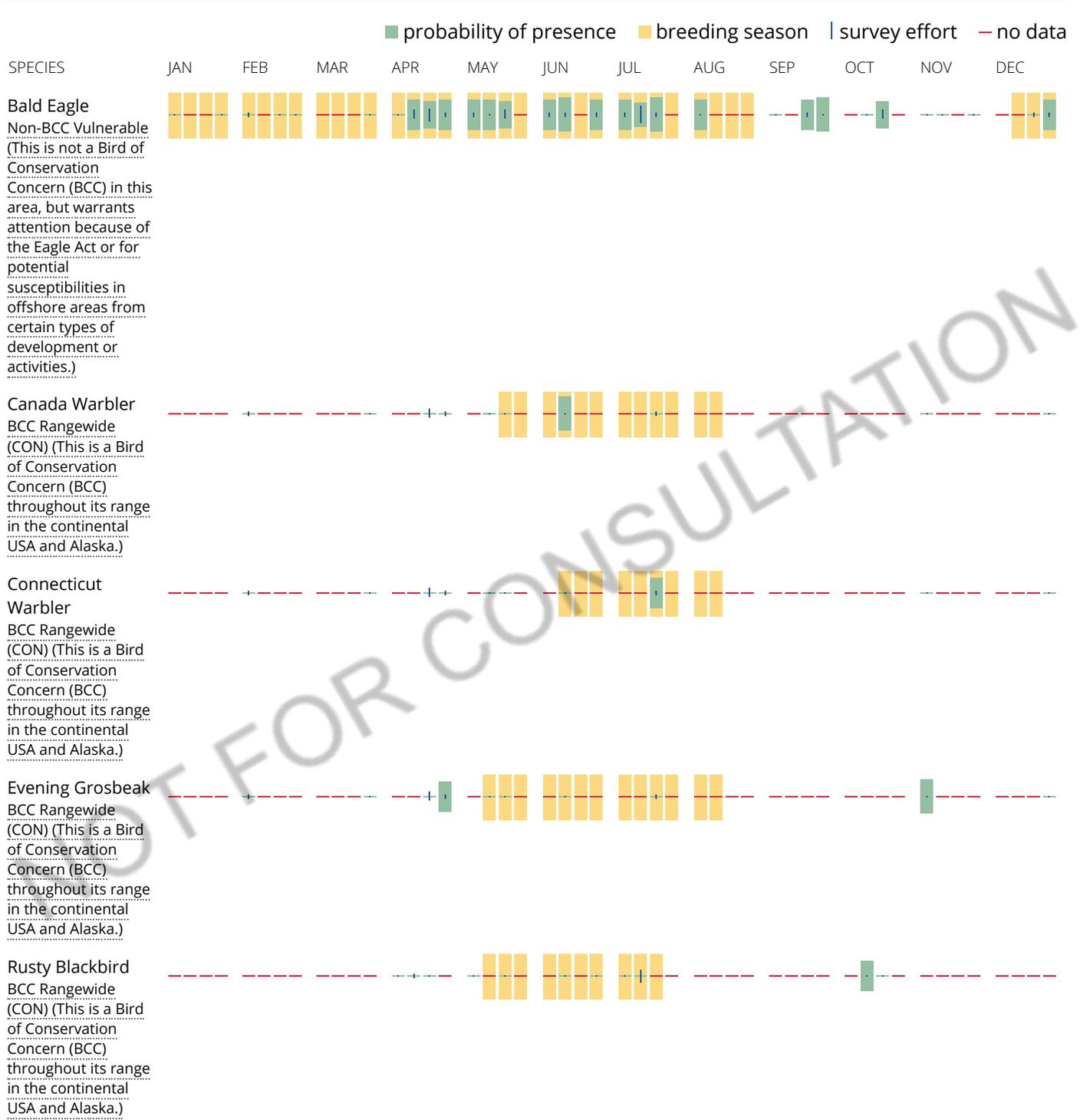
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to

occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

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What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1C](#)
[PEM1F](#)
[PEM1D](#)
[PEM1A](#)
[PEM1Cb](#)

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[PSS1/EM1D](#)
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[PFO1D](#)
[PFO1/SS1D](#)
[PFO4Dg](#)
[PFO2/4Dg](#)
[PSS1/2D](#)
[PSS3/EM1Dg](#)
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FRESHWATER POND

[PUBG](#)[PABG](#)[PUBGb](#)

LAKE

[L2UBH](#)[L1UBH](#)[L2EM2G](#)

RIVERINE

[R2UBG](#)[R2UBH](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

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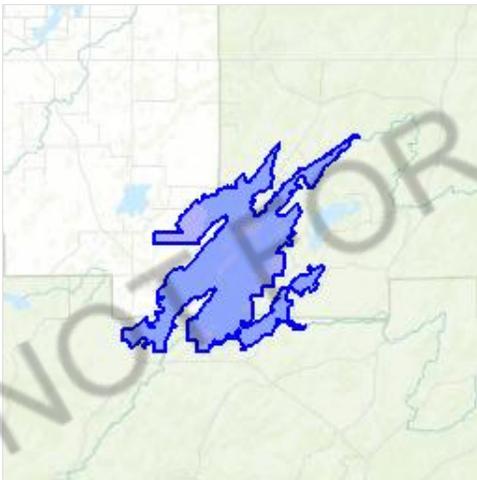
IPaC resource list

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Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

St. Louis County, Minnesota



Local office

Minnesota-Wisconsin Ecological Services Field Office

☎ (952) 252-0092

📠 (952) 646-2873

MAILING ADDRESS

4101 American Blvd E

Bloomington, MN 55425-1665

PHYSICAL ADDRESS

4101 American Blvd E

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Bloomington, MN 55425-1665

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Canada Lynx *Lynx canadensis* Threatened
 There is **final** critical habitat for this species. Your location overlaps the critical habitat.
<https://ecos.fws.gov/ecp/species/3652>

Gray Wolf *Canis lupus* Threatened
 There is **final** critical habitat for this species. Your location overlaps the critical habitat.
<https://ecos.fws.gov/ecp/species/4488>

Northern Long-eared Bat *Myotis septentrionalis* Threatened
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/9045>

Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Canada Lynx <i>Lynx canadensis</i> https://ecos.fws.gov/ecp/species/3652#crithab	Final
Gray Wolf <i>Canis lupus</i> https://ecos.fws.gov/ecp/species/4488#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

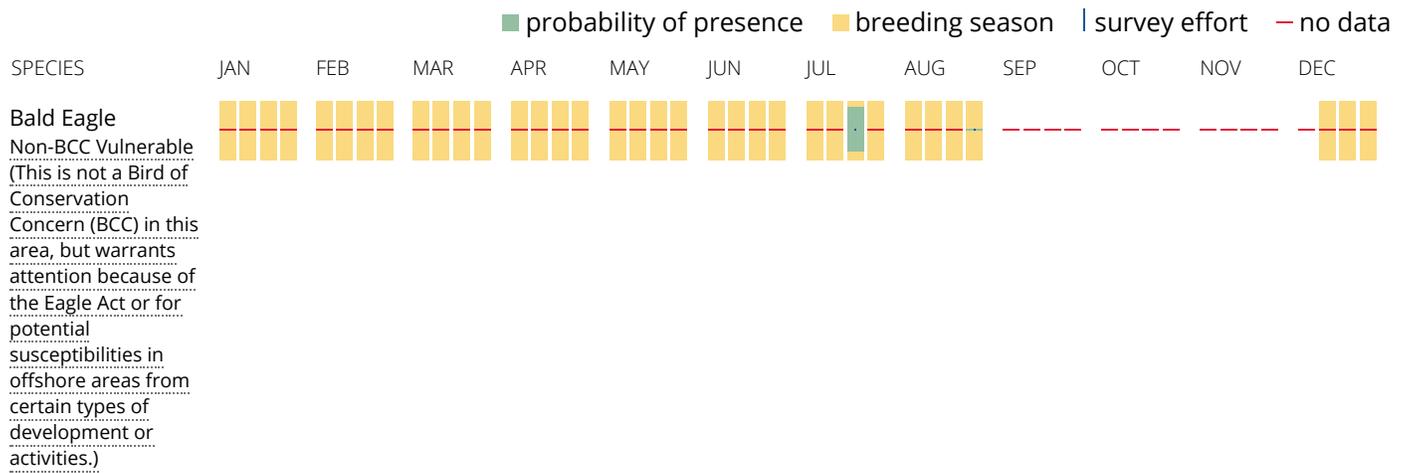
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to

confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1C](#)

[PEM1F](#)

[PEM1Cb](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PSS1/4Dg](#)

[PFO4D](#)

[PSS4Dg](#)

[PSS1D](#)
[PFO4Dg](#)
[PFO4/SS1Dg](#)
[PSS1C](#)
[PFO2Dg](#)
[PFO1/4D](#)
[PFO2/4Dg](#)
[PSS1/EM1D](#)
[PSS2/3Dg](#)
[PSS1/EM1C](#)
[PSS1/4D](#)
[PFO2/SS3Dg](#)
[PFO1C](#)
[PSS3Dg](#)
[PSS2/4D](#)
[PSS2Dg](#)
[PFO1D](#)

FRESHWATER POND

[PUBG](#)
[PABGb](#)

LAKE

[L1UBH](#)
[L2UBH](#)
[L2UBG](#)

RIVERINE

[R2UBH](#)
[R2UBG](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Natural Heritage Information System (NHIS) – MnDNR

Fish Lake – 7 species found within the 1 mile buffer

Bald Eagle (2)

Common Tern (2)

Three-stamened Waterwort

Colonial Waterbird Nesting Site

American Bittern

Whiteface Lake – 2 species found within the 1 mile buffer

Bald Eagle

Northern Poor Fen

Island Lake - 8 species found within the 1 mile buffer

Discoid Beggarticks

Allegheny Vine

Common Tern

Colonial Waterbird Nesting Site

Three-stamened Waterwort (2)

Black Sandshell (2)

APPENDIX 3 Draft Riparian Access Easement

(the space above is reserved for recording data)

RIPARIAN EASEMENT AGREEMENT

This Agreement is made on this _____ day of _____, 2020, by and between Minnesota Power, a division of ALLETE, Inc., a Minnesota Corporation (“Grantor”), and _____ (“Grantee”).

RECITALS

WHEREAS, Grantor is the owner of certain real property located in St. Louis County, Minnesota, legally described as follows:

>>>

WHEREAS, Grantee is the owner of certain real property located in St. Louis County, Minnesota, legally described as follows:

>>>

WHEREAS, the lands of Grantor and Grantee abut one another; and

WHEREAS, Grantor is willing to grant unto Grantee an easement over the above-described lands owned by Lessor for access and certain purposes subject to certain conditions and restrictions; and

WHEREAS, Grantee is willing to accept said easement along with said certain conditions and restrictions.

NOW, THEREFORE, in consideration of the promises, conditions and covenants contained herein, Grantor and Grantee hereto do hereby agree as follows:

1. Grantor, for itself, its successors and assigns, hereby grants, bargains and conveys to Grantee, their heirs, successors and assigns, a non-exclusive easement over the above-described land owned by Grantor in favor of the above-described land owned by Grantee for the purposes set forth herein.

2. The easement area owned by Grantor is set forth on **Exhibit A** attached hereto and made a part hereof.

3. Grantee's rights include access to the shore of Island Lake Reservoir, the right to boat, place a dock subject to regulatory rules and regulations, right to fish, swim, and for other associated recreational purposes.

4. Grantee shall not be allowed to construct any permanent structures located within the easement area.

5. Grantee shall maintain said easement area in a clean and safe manner.

6. Grantee shall conduct appropriate soil erosion control on said easement area, at Grantee's expense, as may be required by Grantor. Grantor shall have the right to enter upon said easement area, over Grantee's property upon the easement set forth in the recorded Plat of _____, to conduct such erosion control, at Grantee's expense, as may be necessary if Grantee fails to exercise such erosion control.

7. This easement is subject to the regulatory authority of the Federal Energy Regulatory Commission ("FERC") and may be modified as required by FERC in order for Grantor

to maintain compliance with its operating license. Further, this easement is subject to all laws, statutes, ordinances and regulations which affect said easement.

8. Grantor reserves flowage rights over said easement area to an elevation of _____1375' NGVD 1929_____.

9. Grantee agrees to hold Grantor harmless and indemnify Grantor from any and all claims, property damage, personal injury, and/or death claims, suits, expenses and costs, including court costs and attorney fees of whatever kind or nature, which may result from the use by Grantee, their contractors, guests, assignees, and any and all damages, liability, expenses, and causes of action, including, but not limited to, damage to persons or property resulting from Grantee's use of said easement pursuant to the granting of this easement.

10. This easement is perpetual and shall run in favor of the lands owned by Grantee as forth above.

11. This Agreement may be signed in one or more counterparts, each of which shall be deemed to be one and the same instrument. Each party shall provide an executed copy to the other. This Agreement or any counterpart may be executed and delivered by electronic communications by portable document format (.pdf), each of which shall be deemed an original.

(signature pages on following pages)

IN WITNESS WHEREOF, the parties have caused this Easement Agreement to be executed as of the date(s) indicated herein.

Dated _____, 2020

GRANTOR:

Minnesota Power,

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2020,
by _____, Lessee.

Notary Public

Instrument Drafted By:
HANFT FRIDE, A Professional Association
Charles H. Andresen, #2604
130 W. Superior Street
1000 US Bank Place
Duluth, MN 55802
(218) 722-4766

APPENDIX 4 Consultation (To be added in Final Application)