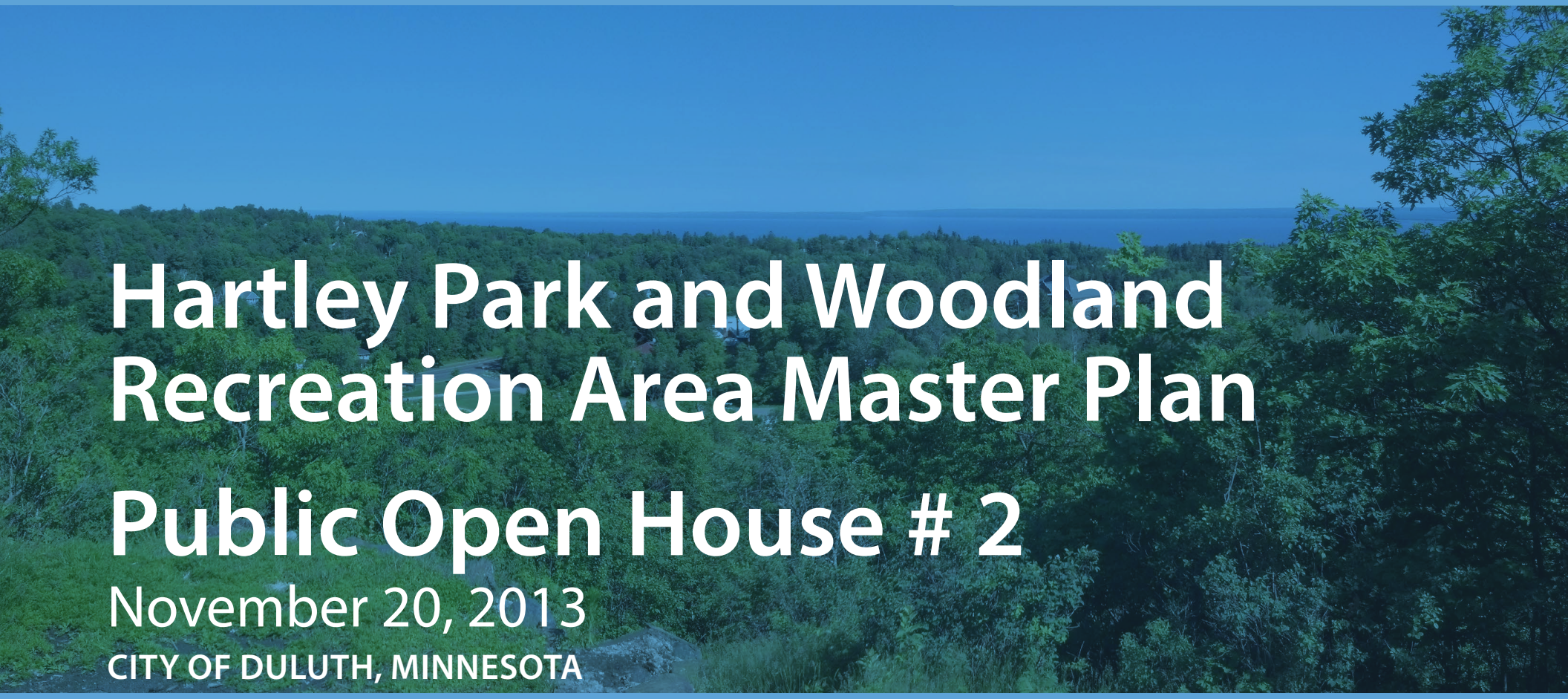


Hartley Park and Woodland Recreation Area Master Plan

Public Open House # 2

November 20, 2013

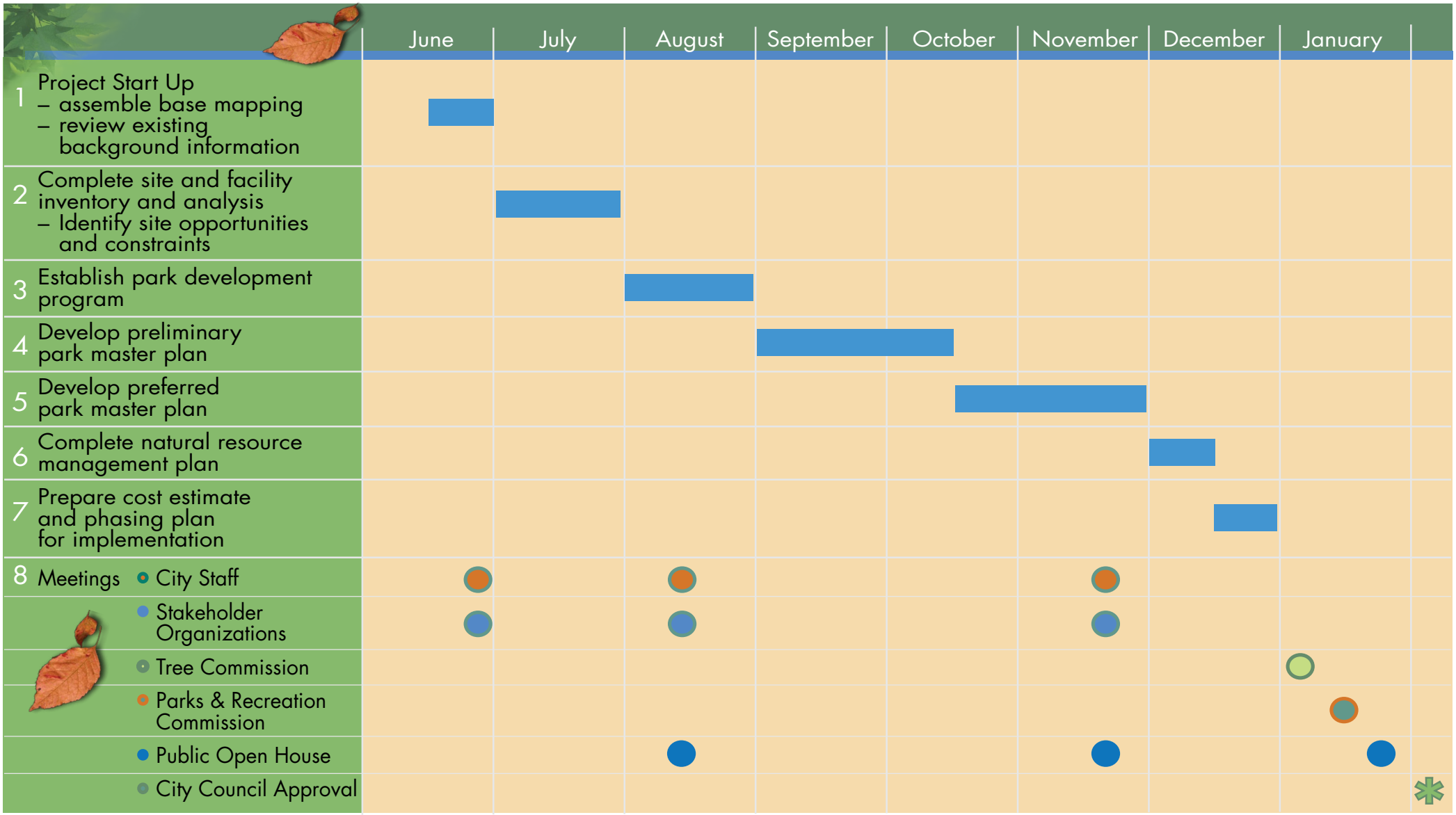
CITY OF DULUTH, MINNESOTA

SRF Consulting Group, Inc. | Engineers Planners Designers | Two By Forestry

MEETING AGENDA

- Welcome and Introductions
- Master Plan Preliminary Recommendations
  - » Natural Resources
  - » Trail Systems
  - » Park Amenities
- Next Steps

PROJECT SCHEDULE



WHY A MASTER PLAN?

Why complete a Master Plan for Hartley Park?

- Validates Regional Park designation and eligibility for legacy funding dollars
- Ensures proposed recreational activities and amenities are compatible within the park's natural resource environment
- Integrates public comment and feedback into the master planning process
- Establishes a framework plan for implementing park improvements and managing natural resources over the next 5 - 10 years
- Identifies cost estimates for determining funding needs

FUNDING CRITERIA

Greater Minnesota Regional Parks and Trails Strategic Plan

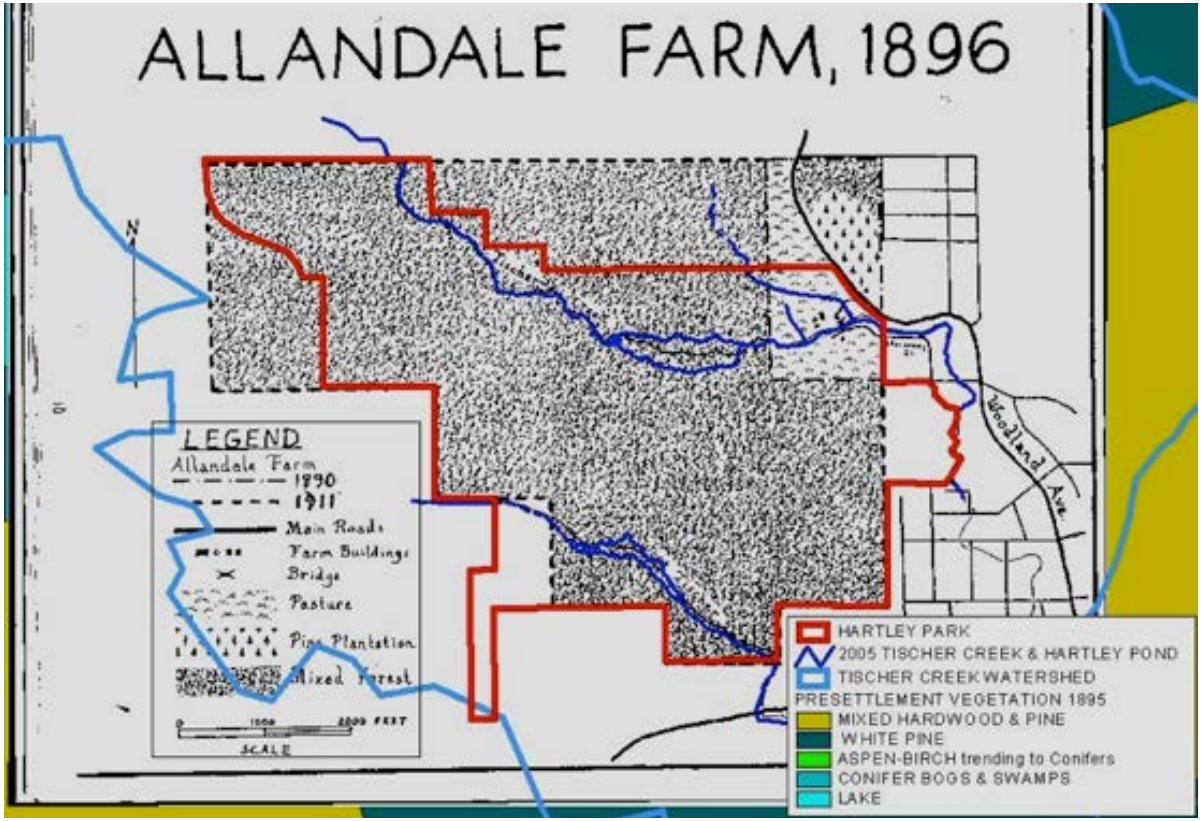
Legacy Funding Evaluation Criteria Rating System

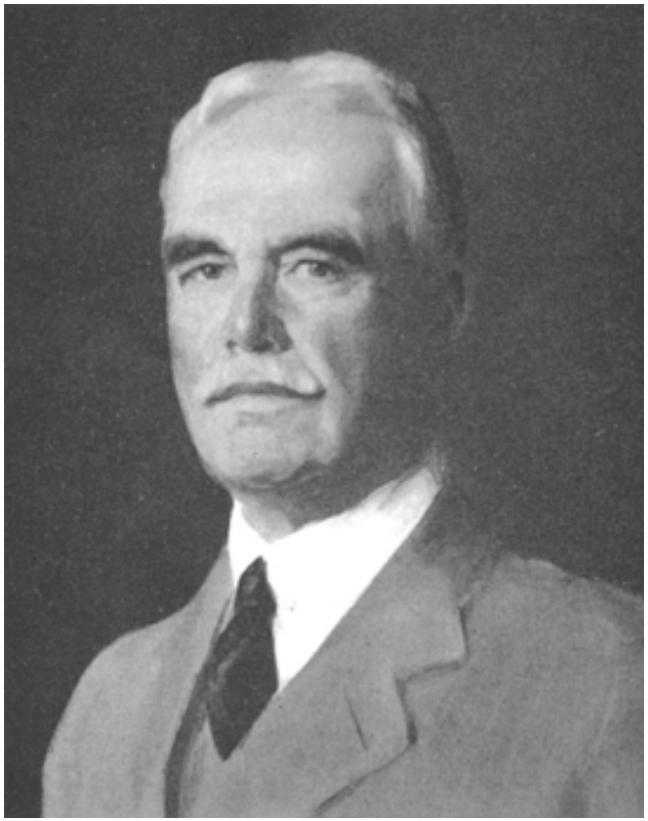
- **Criteria #1** - Provides a High-Quality Outdoor Recreation Experience
- **Criteria #2** - Preserves a Regionally-Significant and Diverse Natural or Historic Landscape
- **Criteria #3** - Well-located and Connected to Serve a Regional Population and/or Tourist Destination
- **Criteria #4** - Fill a Gap in Recreational Opportunity within the Region

Hartley Park History

PARK HISTORY

1800's

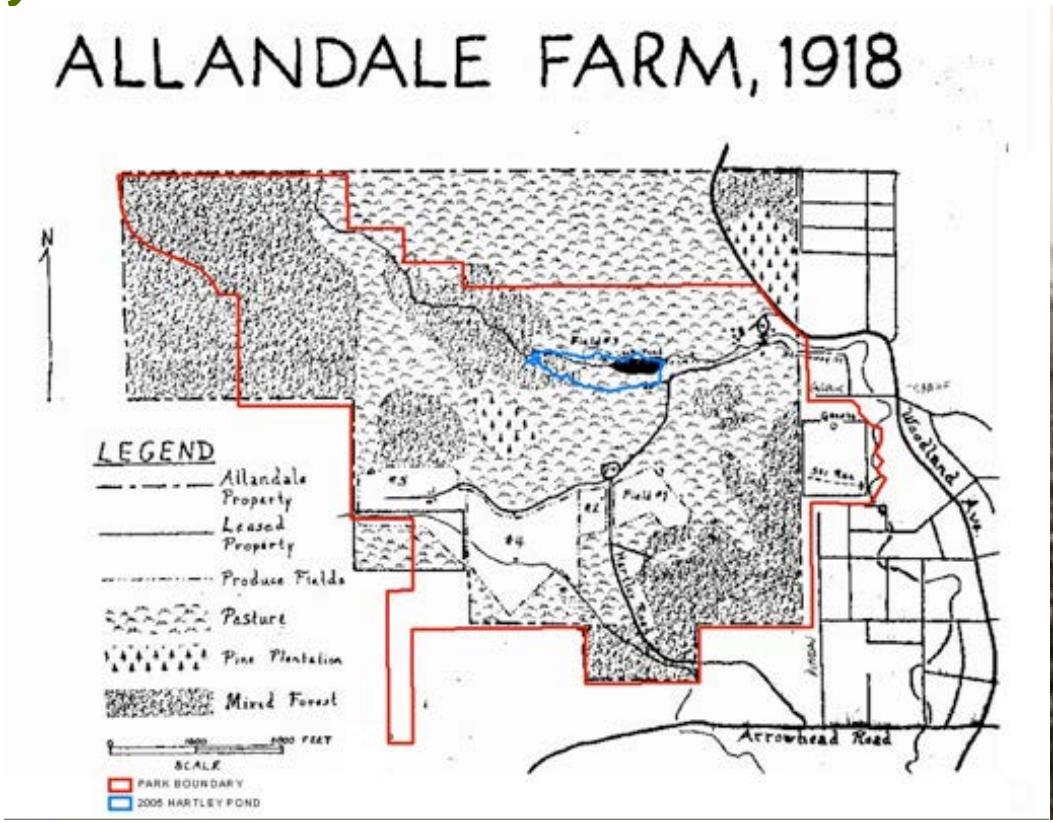




- **1853** - Guilford Graham Hartley is born in New Brunswick.
- **1883** - Guilford marries Caroline Woodward in Minneapolis.
- **1890** - Guilford Hartley purchases 80 acres of land straddling Woodland Ave. in Duluth, Minnesota. The land is cleared for commercial produce and dairy, and becomes the Smaller Allandale Farm.

PARK HISTORY

Early 1900's



» **1900-1911** - Hartley purchases another 700 acres, expanding both produce and dairy capacity, thereby becoming the largest private farm in Duluth (known now as the Greater Allandale Farm).

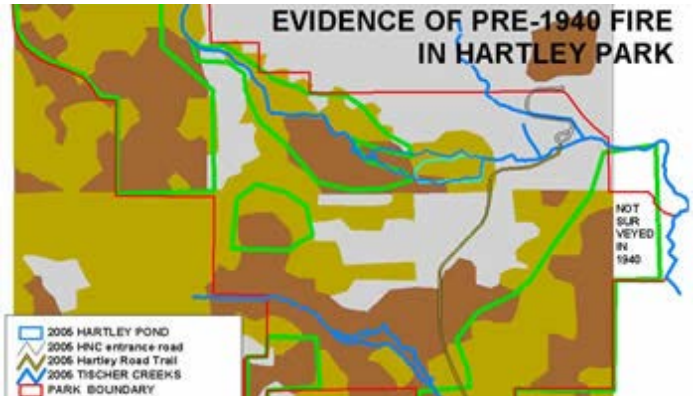
» **1913** - Hartley Road and Hartley Pond are constructed, the latter by a man-made dam on Tischer Creek.

» **1919** - A Farm House and Root Cellar are built at the base of Rock Knob, the remnants of which are some of the only traces of the farm left today.

PARK HISTORY

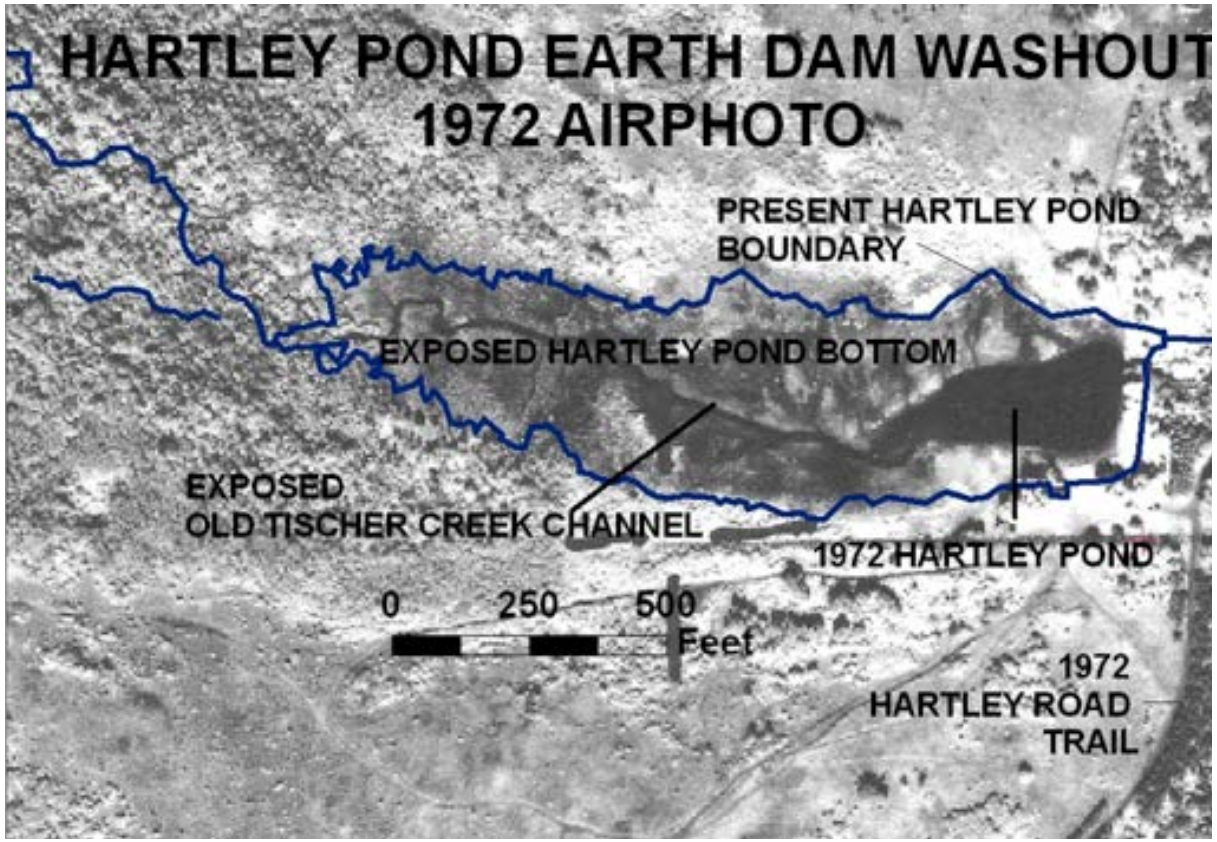
1920-1950

- **1922 - Guilford Graham Hartley passes away.**
- **1923 - A change in zoning increases the farm tax load by 20%,** resulting in a rapid decline in both profit and interest that will mark the end of the farm.
- **1931 - Hartley Estate fails to pay taxes and the fields are abandoned.**
- **1920s-1930s- Fires burn across Hartley Park.** 1000 holes were dug throughout the park to determine soil types and samples showed evidence of fires.
- **1941- The Hartley Land is cleared of buildings.** However, there is an era of using the land till for farming with "Victory Gardens" and pasturing of cattle. **During the 40's many local schools planted pines throughout the park.**



PARK HISTORY

1960-1975

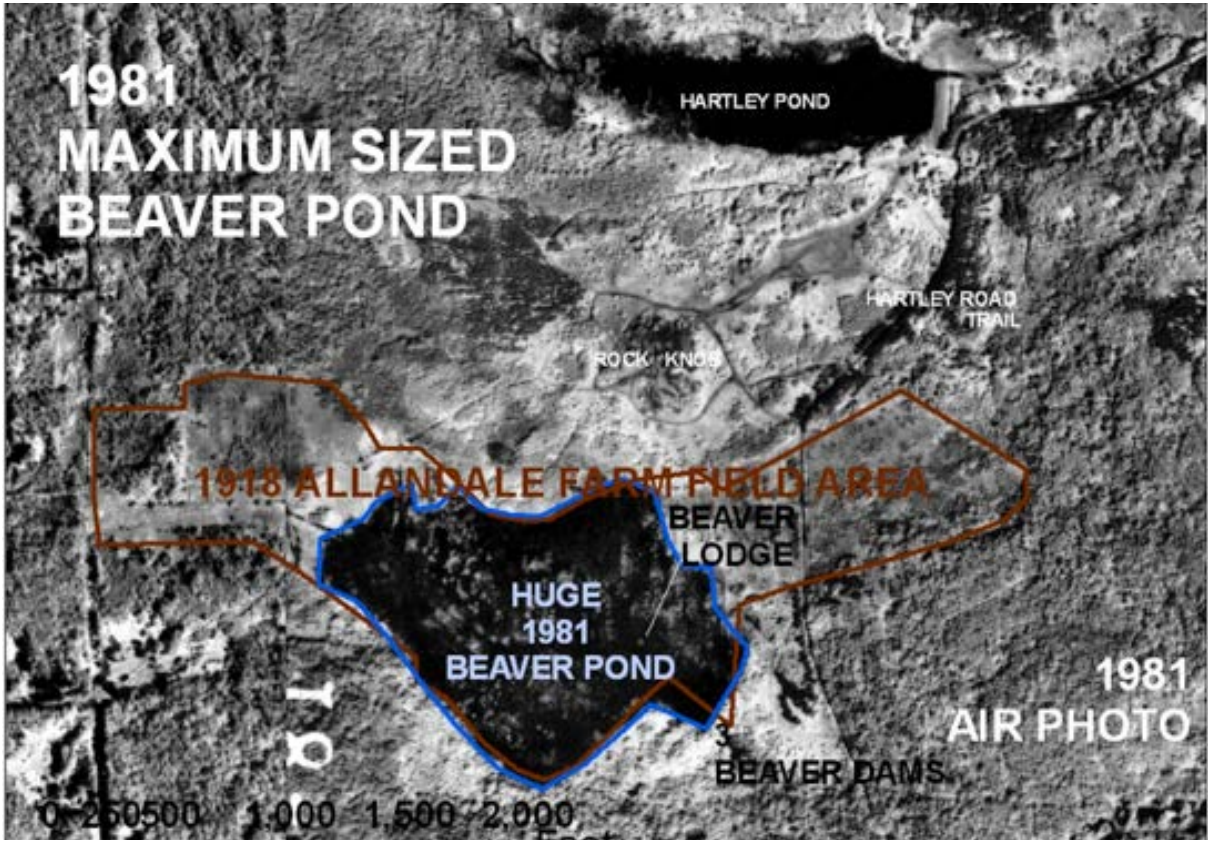


» **1961-1968** - An asphalt Soap Box Derby track is constructed and used until interest declines.

» **1971** - Hartley Dam washes out and replaced with what is in place today.

PARK HISTORY

1975-2001



» **1980-1982** - Beavers build a dam and flood the wet meadow where former farm fields were located and the new pond is the largest ever.

» **1975-2001** - Hartley Nature Center Inc. forms in **1987** and begins educational programs soon after. Various improvements for public enjoyment are made including cross-country ski trails, vehicle prohibition. Fundraising begins for a new nature center facility.

PARK HISTORY

2002-2013

- **August 2003** - The new Hartley Nature Center Building officially opens, marking a new era of stewardship and sustainability for the Park and for Duluth.
- **2010** - City of Duluth completes a Parks Master Plan.
- **2011** - City of Duluth completes a Trail and Bikeway Master Plan AND passes the Parks Referendum. This voter-approved increase in sales tax will make it possible for the Parks and Recreation Division and the Parks Maintenance Division to better ensure ongoing services and amenities in Duluth's Parks.
- **2013**- City of Duluth hires SRF Consulting to create a Master Plan for Hartley Park. The City of Duluth partners with the Nature Center and conduct numerous Buckthorn Pulls.

Questionnaire Comments From Open House #1

PUBLIC COMMENTS

What do you typically do when you visit Hartley Park?

- Hike, run, mountain bike, and ski the trails – use the trails year round
- Use the building for occasional meetings
- Enjoy nature
- Bird watching
- Go fishing at pond and dam
- Snowshoe in the woods
- Go take in views at overlooks
- Walk my dog
- Hike the trails with kids, family, and friends

PUBLIC COMMENTS

What are some of the things you really like about Hartley Park?

- The pine plantation
- Being away from it all in a natural setting
- The seclusion and sense of privacy while hiking the trails – never crowded
- Close proximity to city neighborhoods and easy access
- Hartley Pond and the wetland areas
- Great views from overlooks
- Having a building facility and restrooms to use during the day
- Serves a wide range of user groups from children to adults
- The wildlife
- Nature Center program offerings

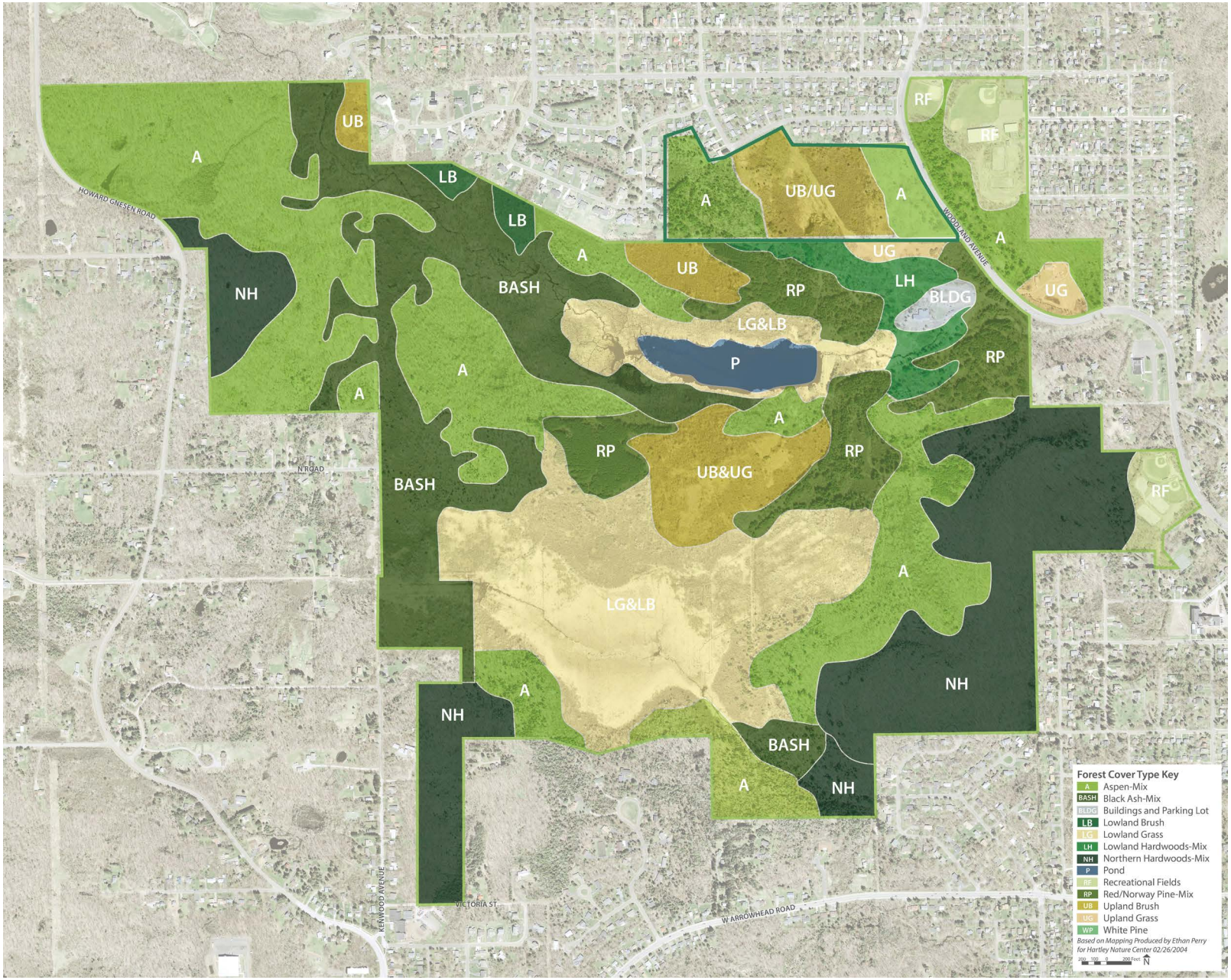
PUBLIC COMMENTS

What amenities would you like see improved or added to Hartley Park?

- Acquire School District property
- Add wayfinding signage with trail distances identified
- Consider a paved path or disabled in wheel chairs, elderly and families with strollers
- Repair eroded trails and embankments
- Add a beginner ski trail loop
- Take out steep curves on ski trail
- Reduce fees for classes
- Provide longer hours at Nature Center
- Redesign Fairmont Street Entrance
- Remove invasives and improve forest quality
- Eliminate proposed disc golf at Hartley Field
- Dedicated biking and hiking trails (in addition to the SHT)
- Establish better pedestrian connection from Nature Center to Hartley Field
- Better manage off leash dogs and picking up dog feces
- Maintain trails better but avoid paving

Natural Resources Management Recommendations

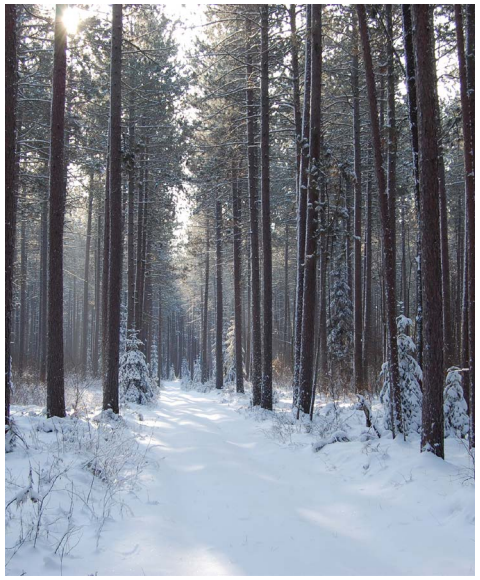
EXISTING VEGETATION

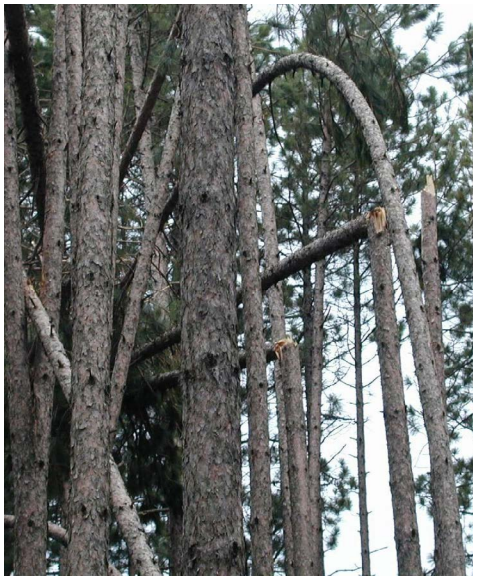


RECOMMENDATIONS

Red/Norway Pine

- **Thin the pine stands** that have not been thinned to date by removing approximately 1/4 to no more than 1/3 of the stand. **If possible, "snake" rows to create a more natural appearance** and also randomly select trees from each side of these rows to create gaps for planting.
- **After harvesting, plant a variety of seedlings in openings** (not on harvesting access trails) in order **to increase forest diversity and sustainability and to protect forest health.** Suggested species for planting include white pine, white spruce, paper birch, balsam fir, northern white cedar (in moister areas), and native berry or nut-producing shrubs.
- **Selectively thin** all of these stands two more times and **approximately 5-7 years apart, again removing approximately 1/3 of each stand** in each of the thinning sequences.

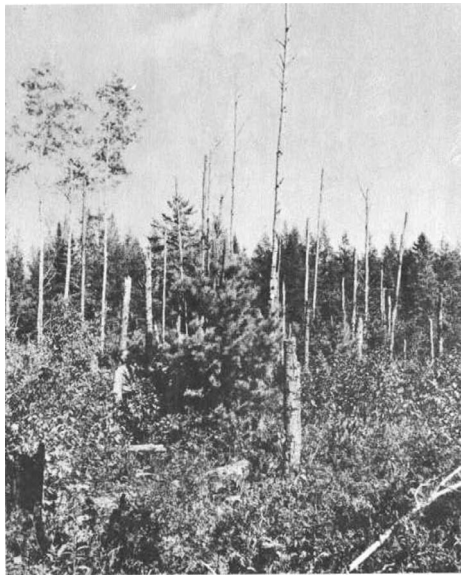




RECOMMENDATIONS

Aspen Mix

- This type is an **early successional forest type, which relies on disturbances** such as pasturing, land clearing, harvesting or fire. The species growing within this type **require full sunlight to reproduce and grow well**.
- **Conduct group selection cuts** in order to enhance tree growth and health as well as to create tree age-class and species diversity. Harvest these areas in conjunction with other types or stands in the Park.
- **Allow openings to naturally regenerate or plant these areas with suitable and desirable species.** As indicated in the Native Plants report, avoid excessive disturbance in areas of high plant community rankings.



RECOMMENDATIONS

Northern Hardwoods

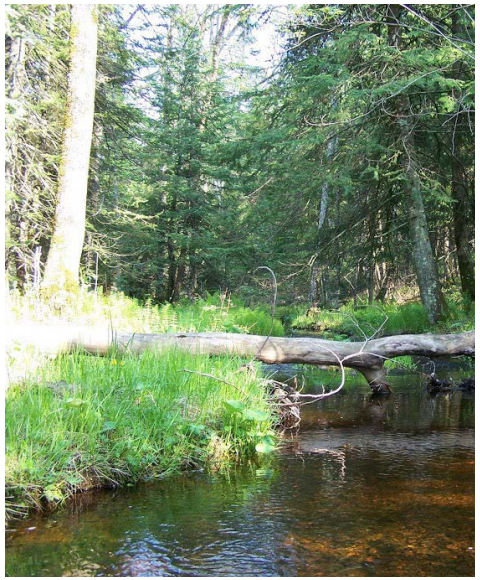
- A Northern Hardwoods type is a **late successional forest type, which means that there has been a lack of recent or very minimal disturbances** in these areas. The plant species growing in this type are **generally shade-tolerant species**, which will naturally reproduce and grow well in shadier condition.
- **Conduct thinning or group selection cuts** in order to enhance tree growth and health as well as to create tree age-class and species diversity. Harvest these areas in conjunction with other types or stands in the Park.
- **Allow openings to naturally regenerate** or plant these areas with suitable and desirable species.

RECOMMENDATIONS

Lowland Hardwoods

» **Located near the drainages** in the wetter areas within the Park.

» **Conduct thinning or group selection cuts** in order to enhance tree growth and health as well as to create tree age-class and species diversity. Harvest these areas in conjunction with other types or stands in the Park.



RECOMMENDATIONS

Lowland Brush & Grasses

» Reintroduce native shrubs and grasses in these areas.

Upland Brush & Grasses

» Reintroduce native shrubs and grasses in these areas.

RECOMMENDATIONS

Tree Risk Management for Building, Parking Lot, and Trail System Corridors

- Assess all trees for hazardous risk removal.
- Mitigate risks by pruning or removing trees.
- Conduct assessments within high risk zones after large storm events.

SUMMARY OF BENEFITS

"Free to grow" or do nothing option.

- This option may be suitable for areas of high quality plant communities; however, doing nothing in other areas may have the following ramifications:
- risk the long term health of the entire forest, especially the pine stands;
- will not necessarily improve and may hinder the biodiversity of plant and wildlife species within the Park.

SUMMARY OF BENEFITS

Benefits of selective thinning and small group selection cuts

- create openings, which will **enhance wildlife habitat and woodland diversity**
- **create better tree spacing and reduce competition,** which will enhance tree and overall forest health;
- **encourage diverse natural plant regeneration, optimum tree growth and health, and canopy layering**, which enhances both woodland and wildlife habitat diversity;
- **reduce tree stress due to competition and, in the red pine stands,** it reduces the potential infestations of and mortality due to pine bark beetles;
- reach the desired future forest conditions faster and **the forest will be healthier overall.**

MANAGING INVASIVES

Invasive Management Controls

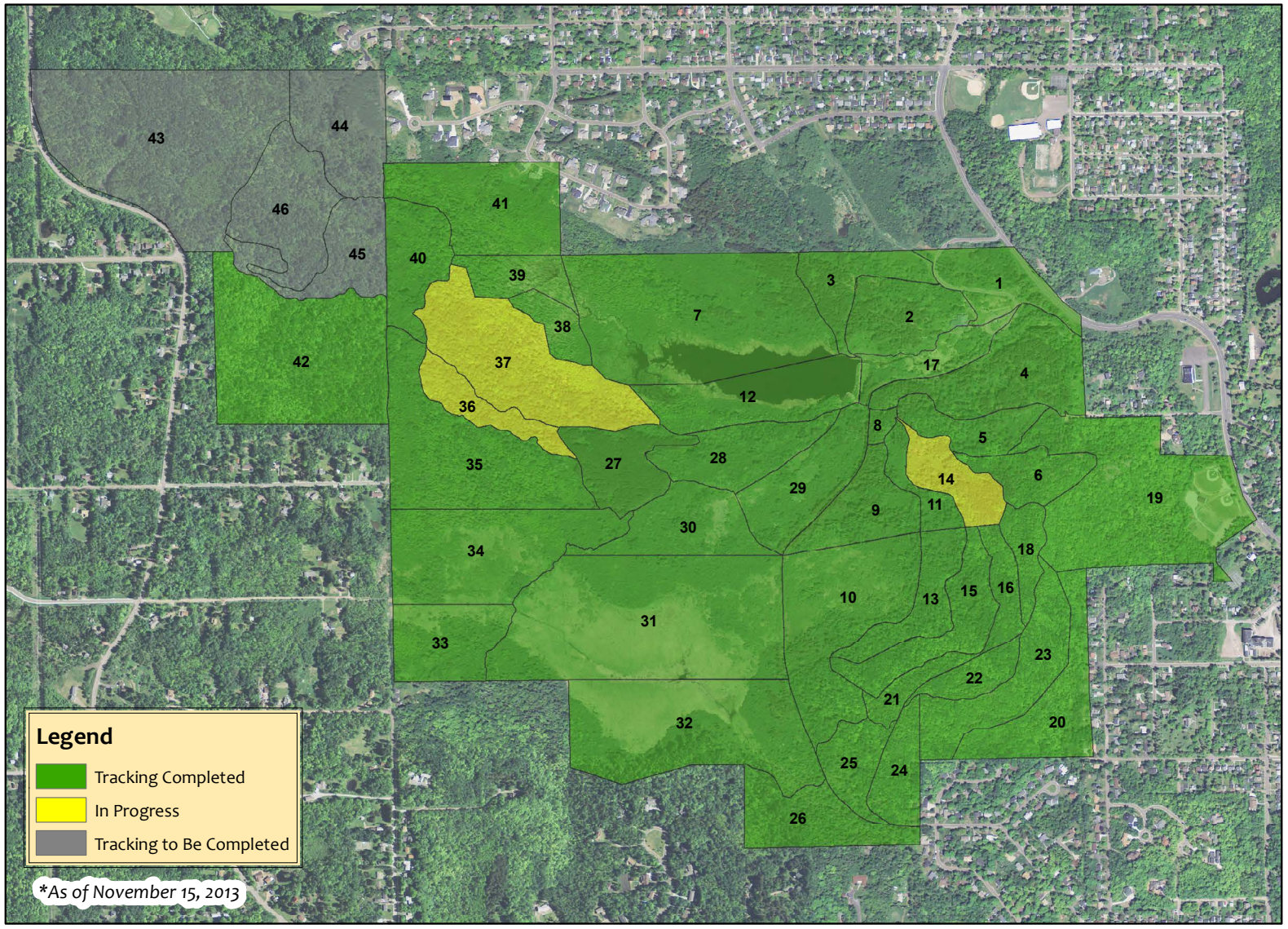
- Mechanical Control
- Chemical Control
- Biological Control

Invasive Management Methods

- **Begin in areas with light invasive infestation** and continue toward heavily infested areas
- **Prioritize removing plants that are producing the seed source**
- **Develop and maintain mapping data identifying existing invasive locations** and areas completed to monitor progress over time
- **Utilize volunteers** where possible to assist with the removal effort

MAPPING PROGRESS

Buckthorn Tracking Progress in Hartley Park*



Author: Stephanie Gibeau
Source: Ethan Perry, Dave Schimpf, COGGS, UMD GAC

EDUCATION & PROGRAMMING

Natural Resource Education and Programming Opportunities

- Maple syrup harvesting
- Create brush piles for observing wildlife habitat
- Demonstrate old growth and new growth forest types
- Establish a bird/wildlife blind for viewing wildlife
- Install trail markers to identify interpretive features
- Identify non-timber products in the forest for making "goods from the woods" products
- Identify edible plants and their uses
- Identify medicinal plants and their uses
- Install interpretive signage within invasive removal areas to educate the general public
- Create a soil pit to observe plant root growth and soil layers

Water Resources

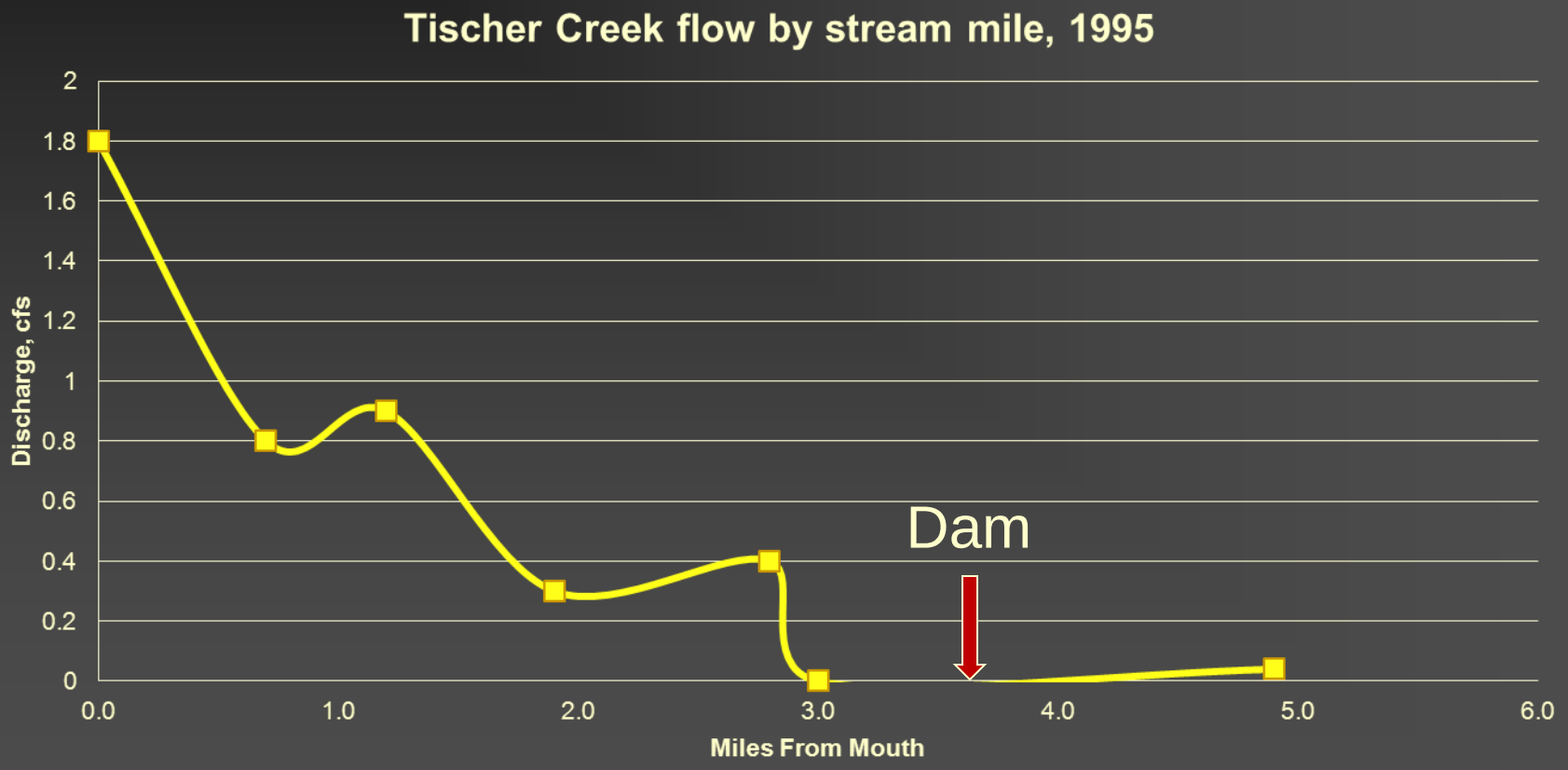
Hartley Pond Impacts to Tischer Creek

Deserae Hendrickson
MN DNR Fisheries
French River office

Riverine Components

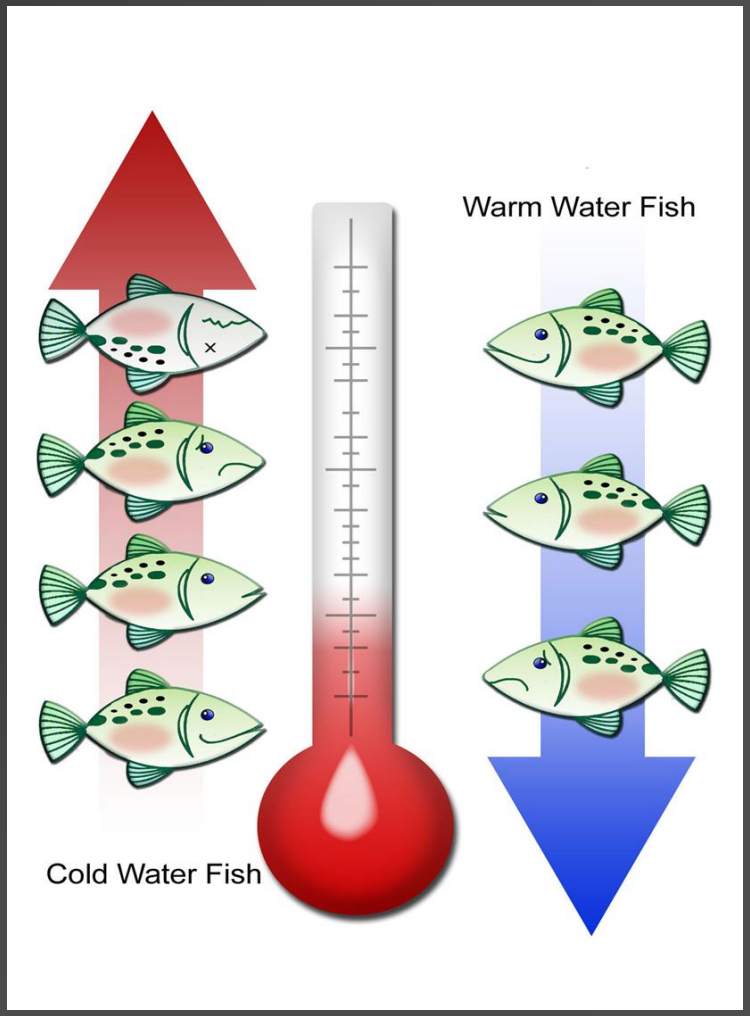
Hydrology

Loss of baseflow every year measured during low flow/drought

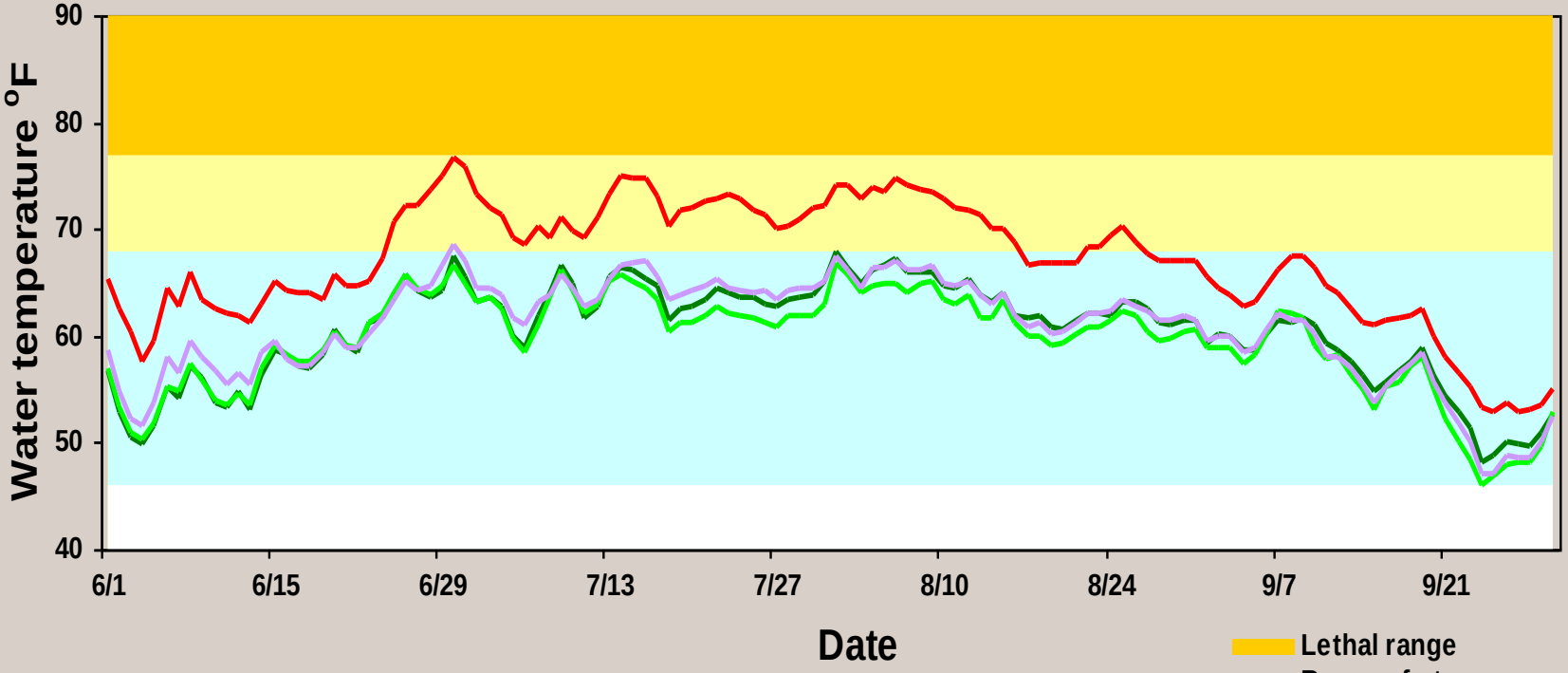


Water Quality

- Low dissolved oxygen
  Winter 2005-2007,
  lose oxygen below 2 feet in pond
- Temperature increases
  Trout stream



Location Variability



Daily mean water temperatures for all years sampled (2000-2002) at four Tischer Creek stations. Temperature ranges are for brook trout.

Connectivity

- Dams are barriers to fish movement
- Block access to:
  - Thermal refuge -summer
  - Spawning sites
  - Overwintering pool habitat

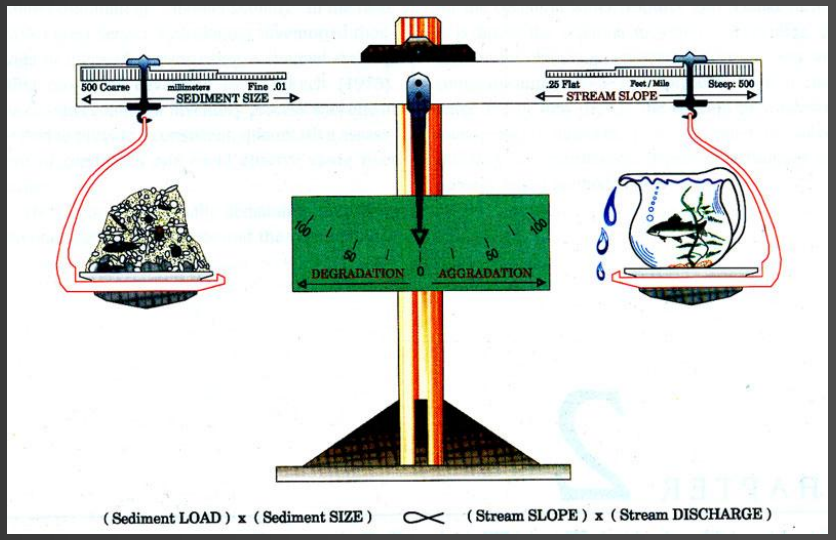
Fragmentation

Perched culvert

Beaver dam

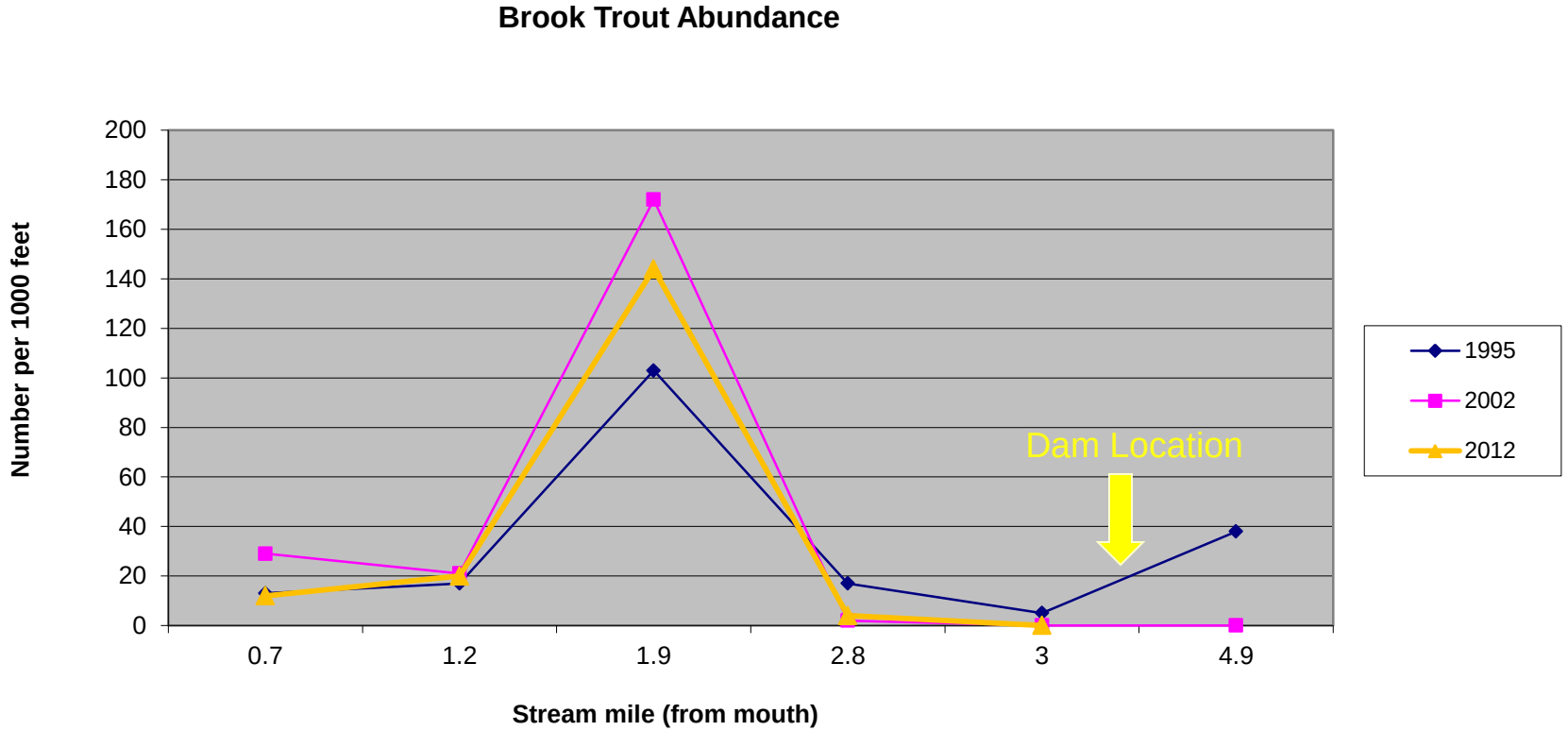
Channel blocks lead to diminished spawning access and diminished access to winter and summer refuges

Geomorphology



- Streams transport sediment
- Disruption causes:
  - Increased erosion downstream
  - Channel downcutting
  - Unstable channel with poor habitat
  - Filling of pond

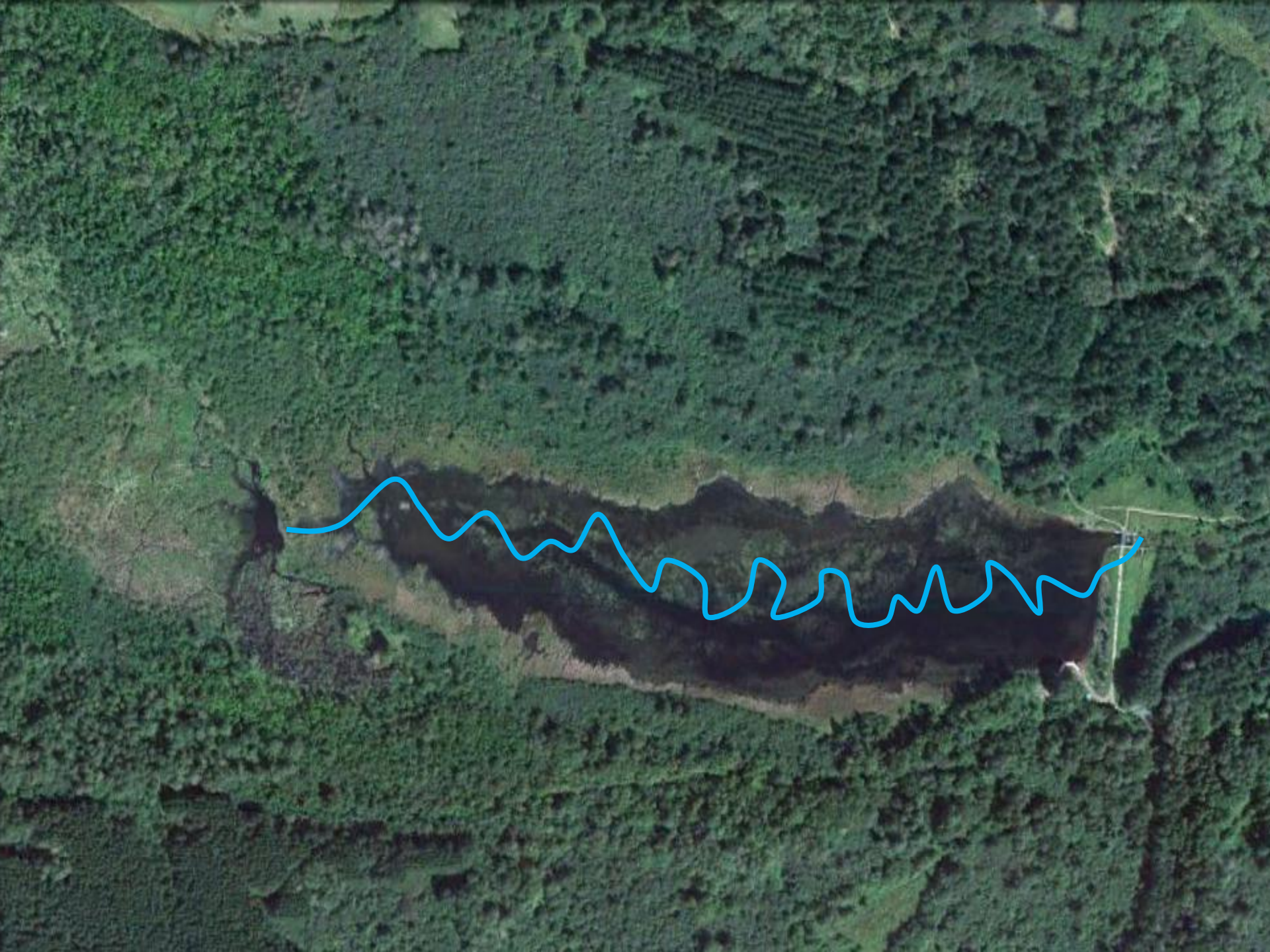
Biology


Brook Trout Abundance
Number per 1000 feet
200
180
160
140
120
100
80
60
40
20
0
0.7
1.2
1.9
2.8
3
4.9
Stream mile (from mouth)
Dam Location
1995
2002
2012

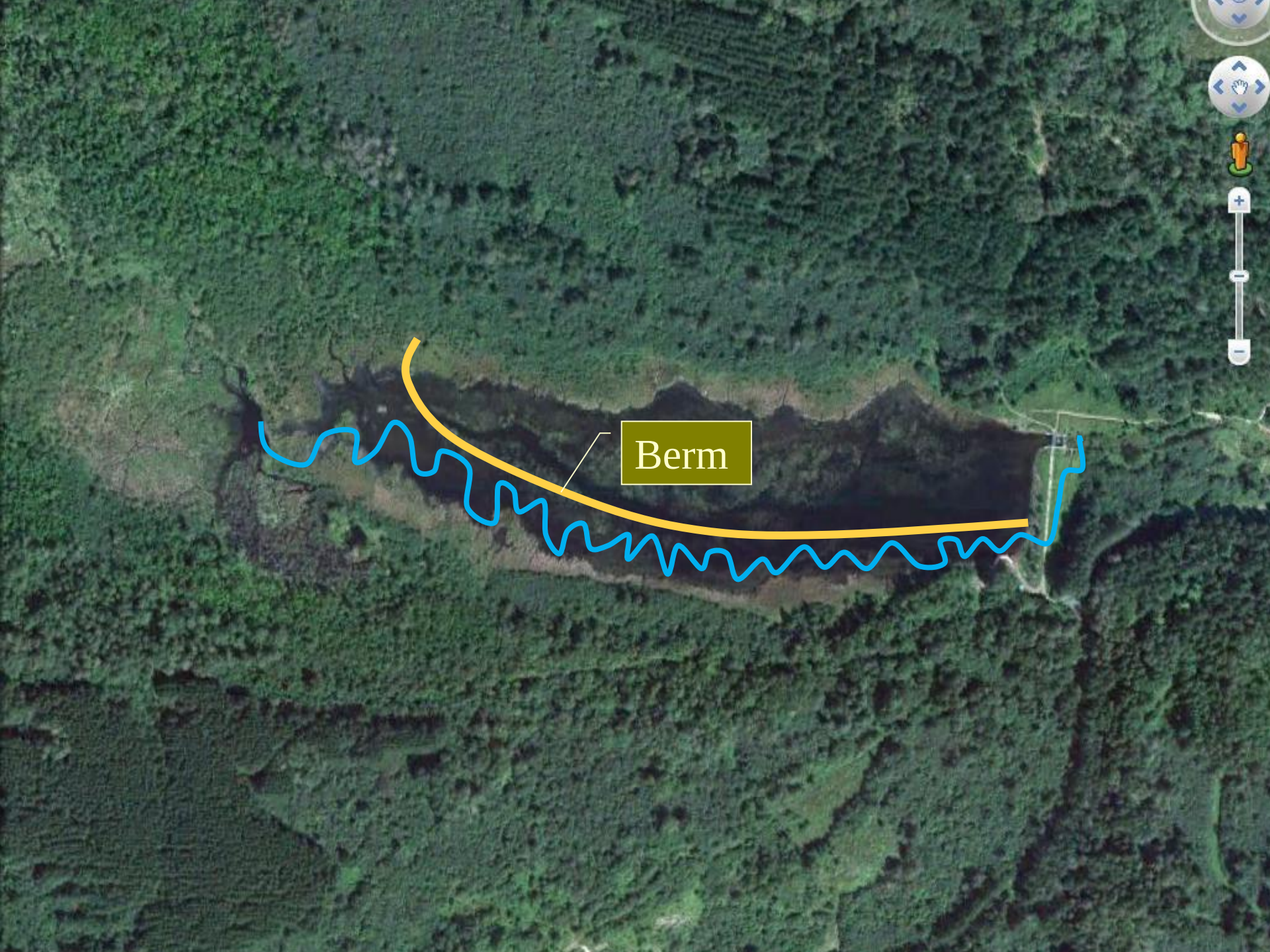
Eliminating impacts

- Goals
  - Transport of fish, sediment, water
  - Avoid water quality impacts

- Potential options
  - restore natural stream channel
  - natural stream channel with dug pond
  - natural stream channel with berm pond




Dug pond


Berm

Is there interest in restoring the health and ecological integrity of Tischer Creek?

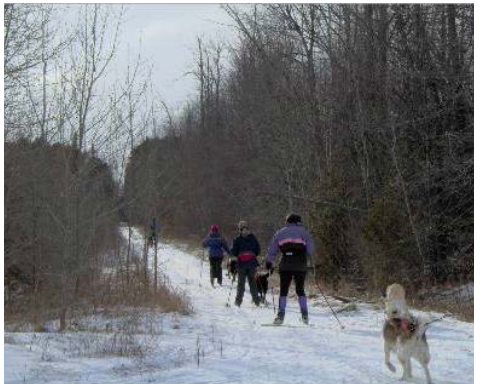
- DNR is willing to assist or lead
- Numerous grant sources available

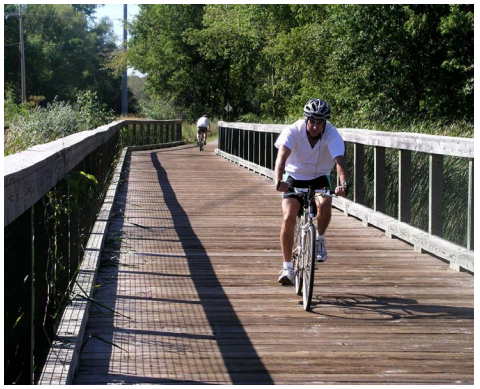

Trail Systems

TRAIL SYSTEMS

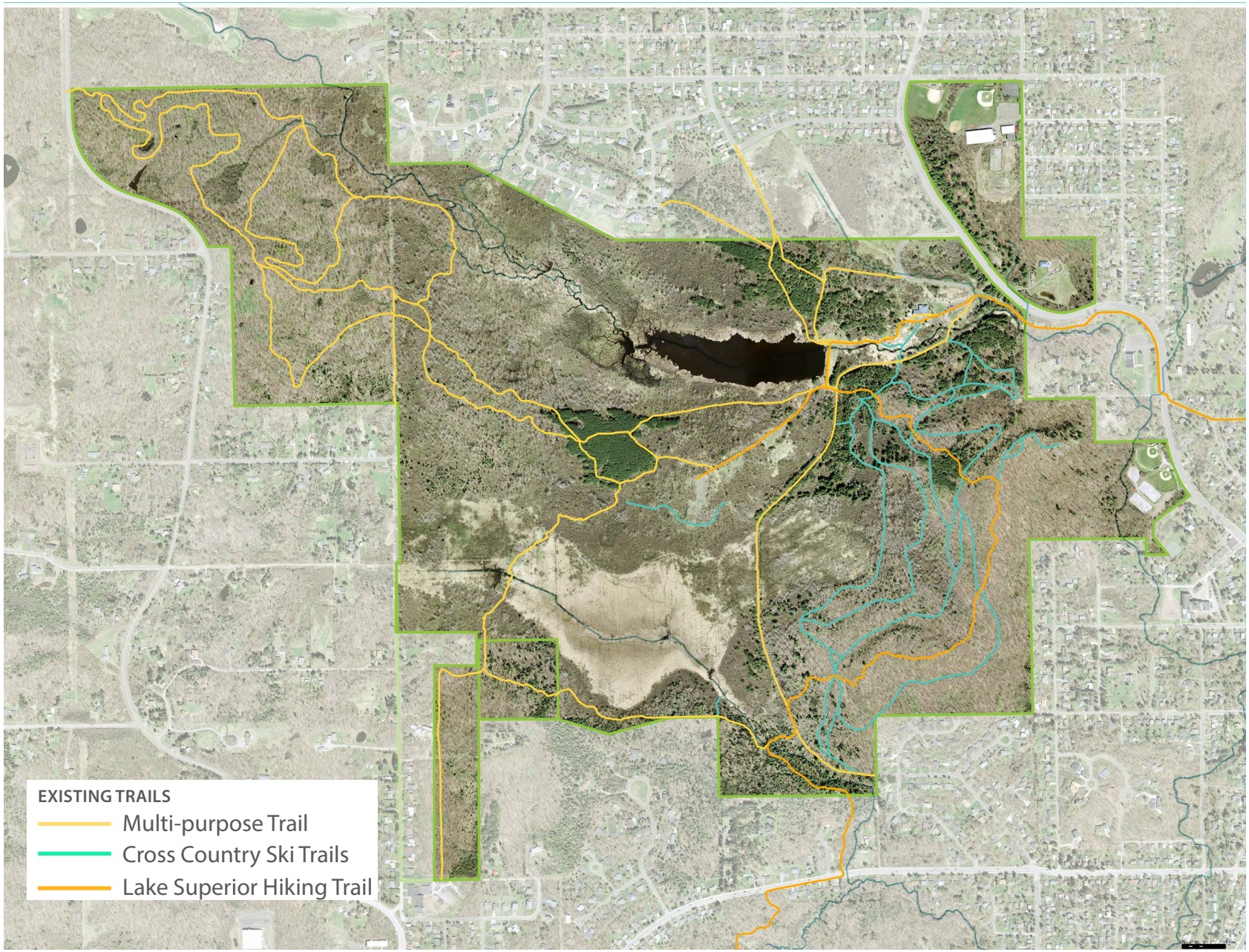
General Overview

- Public Input has helped define some trail use issues
- Find balance between using existing trails and proposing new trail systems to better serve user groups
- Identify issues associated with each trail type
- Challenges associated with multi-use trail systems
- Accessible trails needed to serve broader user group



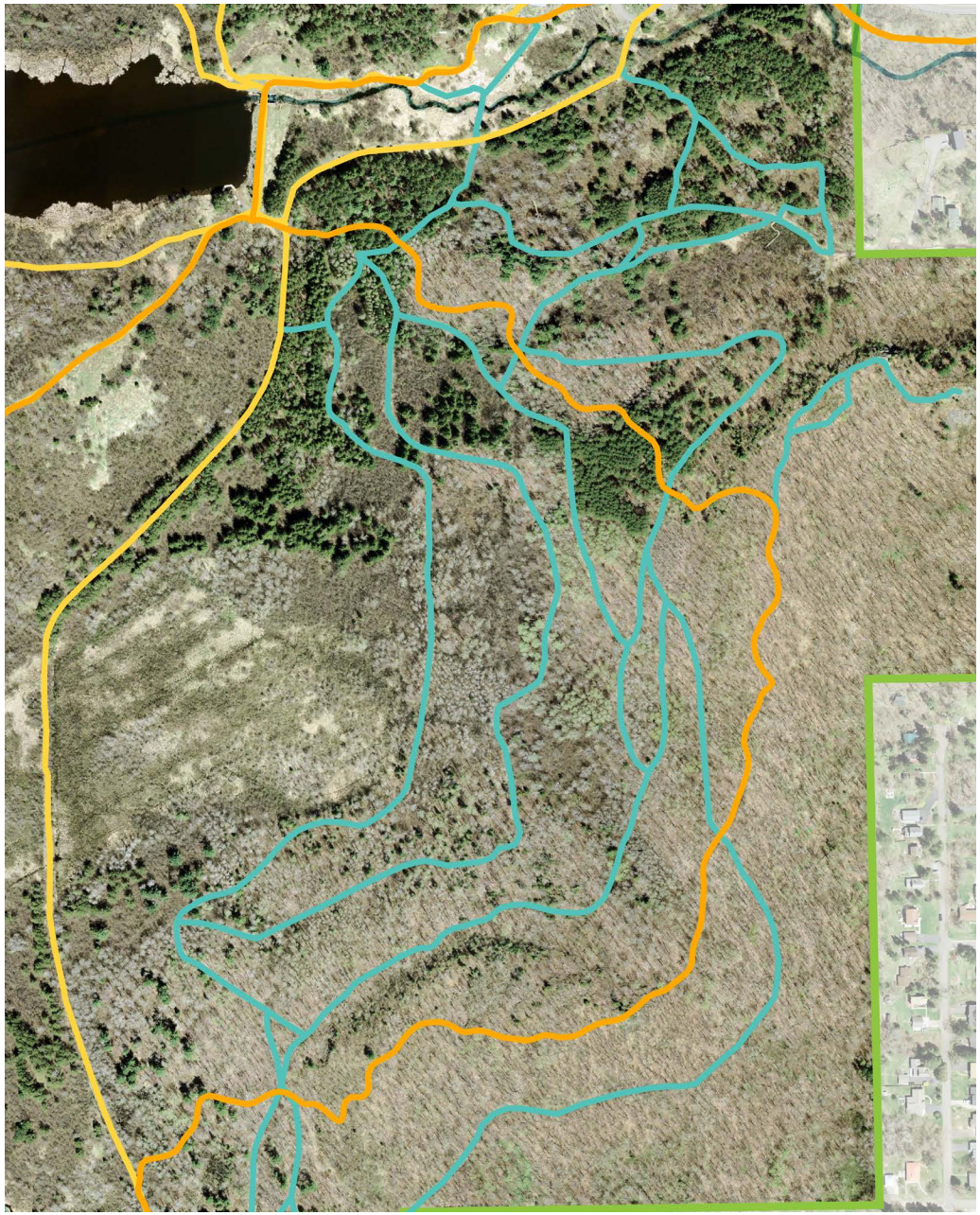
EXISTING TRAILS



SKI TRAILS

Existing Ski Trail Issues

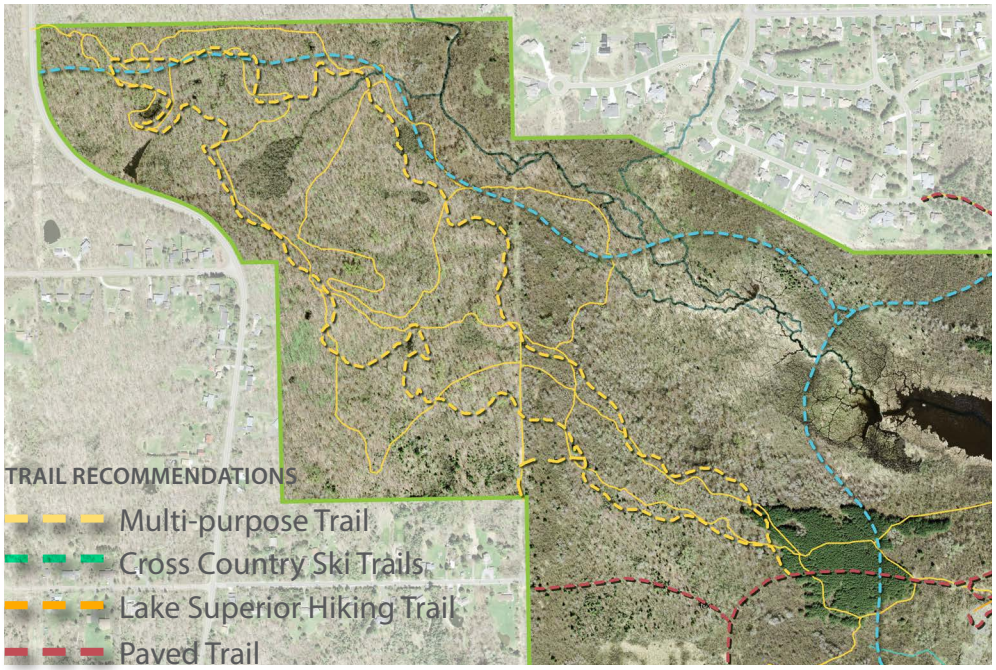
- Too many intersections
- Unsustainable trails
- Tight space/visual overlap
- Appropriate summer use
- Limited length
- No beginner loop

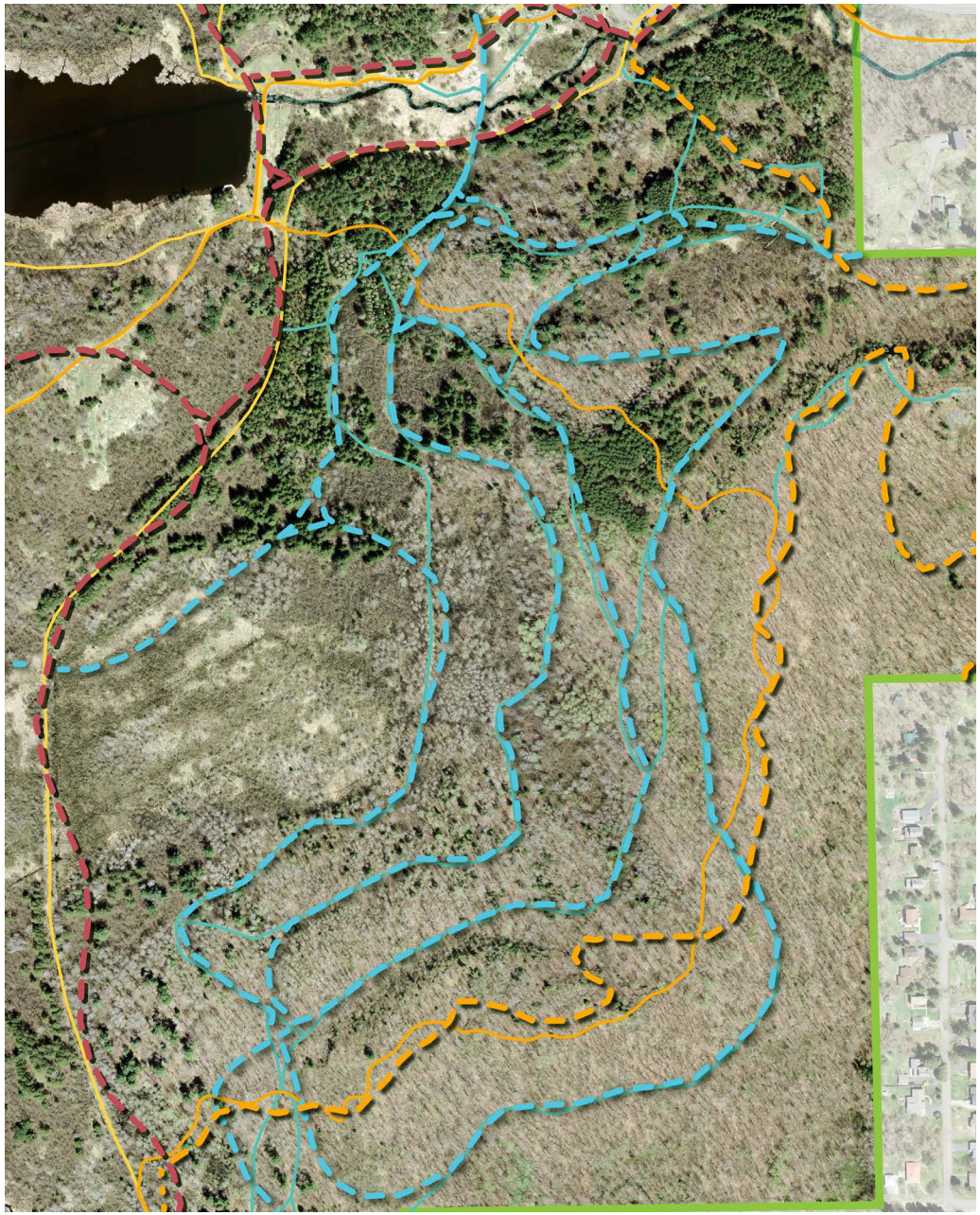


SKI TRAILS

Ski Trail Recommendations

- Make modest alignment changes to improve flow and sustainability
- Add a beginner ski trail loop
- Reduce visual overlap
- Show potential ski trail alignment connection to Snow Flake trail system

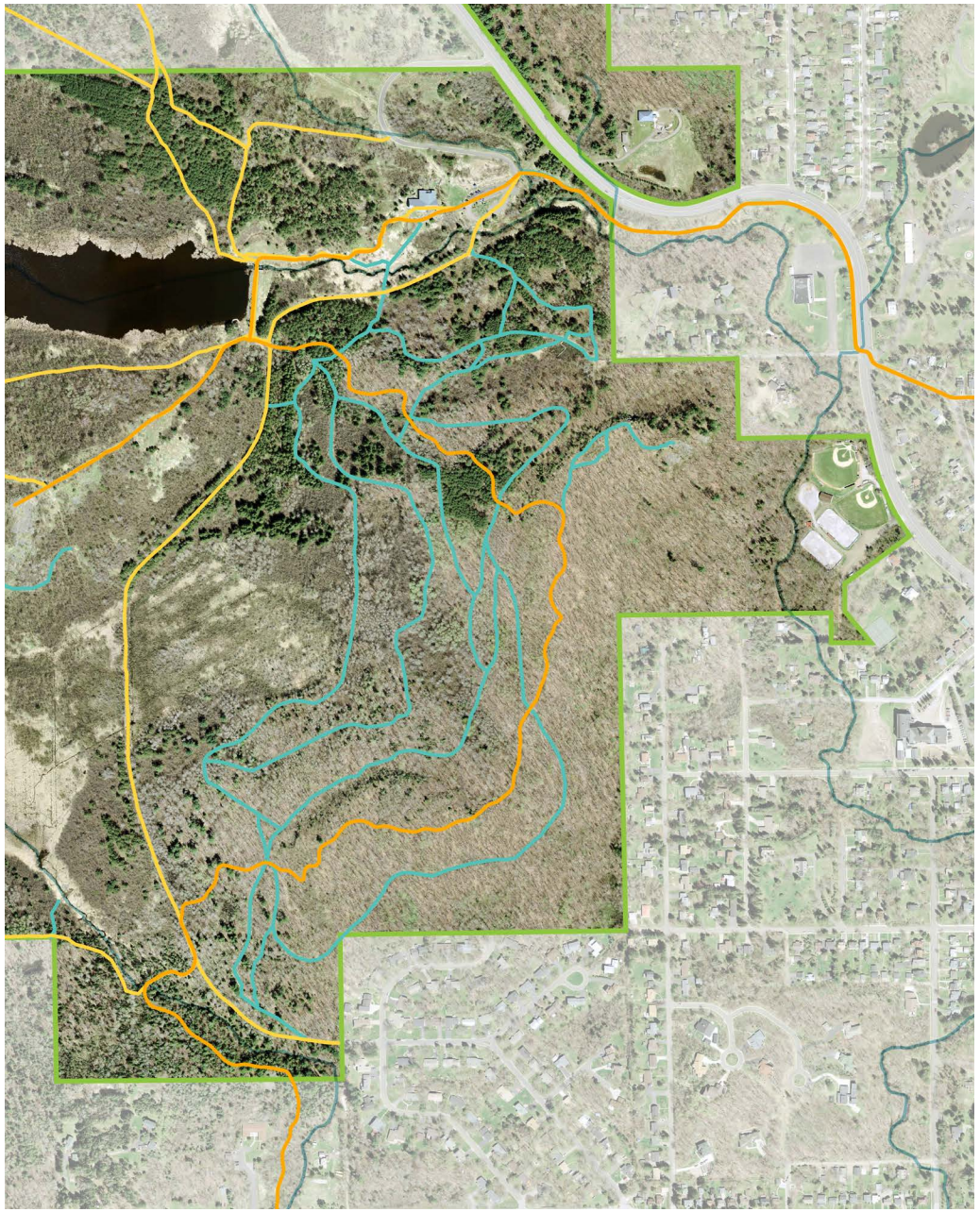




SUPERIOR HIKING TRAIL

Existing Conditions

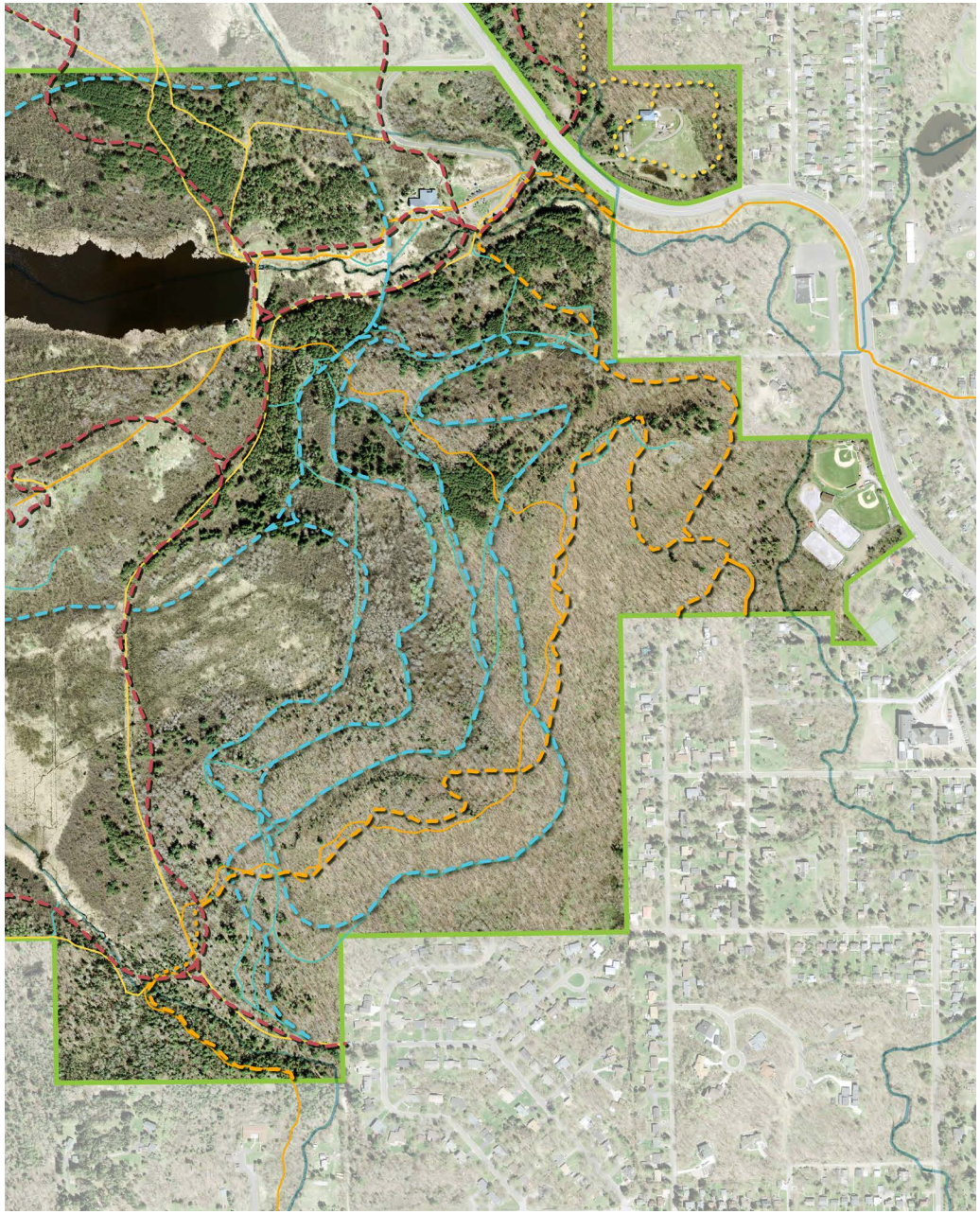
- Well liked trail
- Needs only minor enhancements
- Limited accessibility
- Does not offer access to overlooks
- Needs better connections to surrounding neighborhood



SUPERIOR HIKING TRAIL

Recommendations

- Make modest improvements to improve flow, access, and sustainability
- Provide access to overlooks
- Study potential realignment through Hartley Field



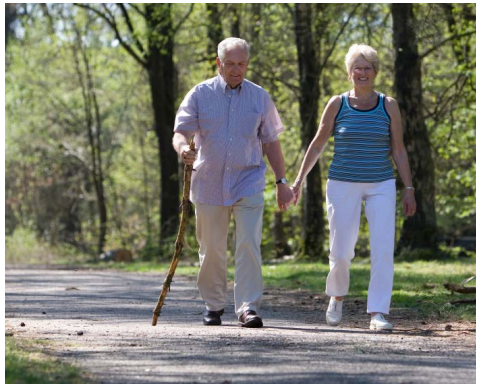
ACCESSIBLE TRAILS

Accessible Trail Benefits

- Provide accessible trails to serve the needs of seniors, wheel chair or walker users, and families with strollers
- Encourage a higher level of use in park by improving trail access and surfacing





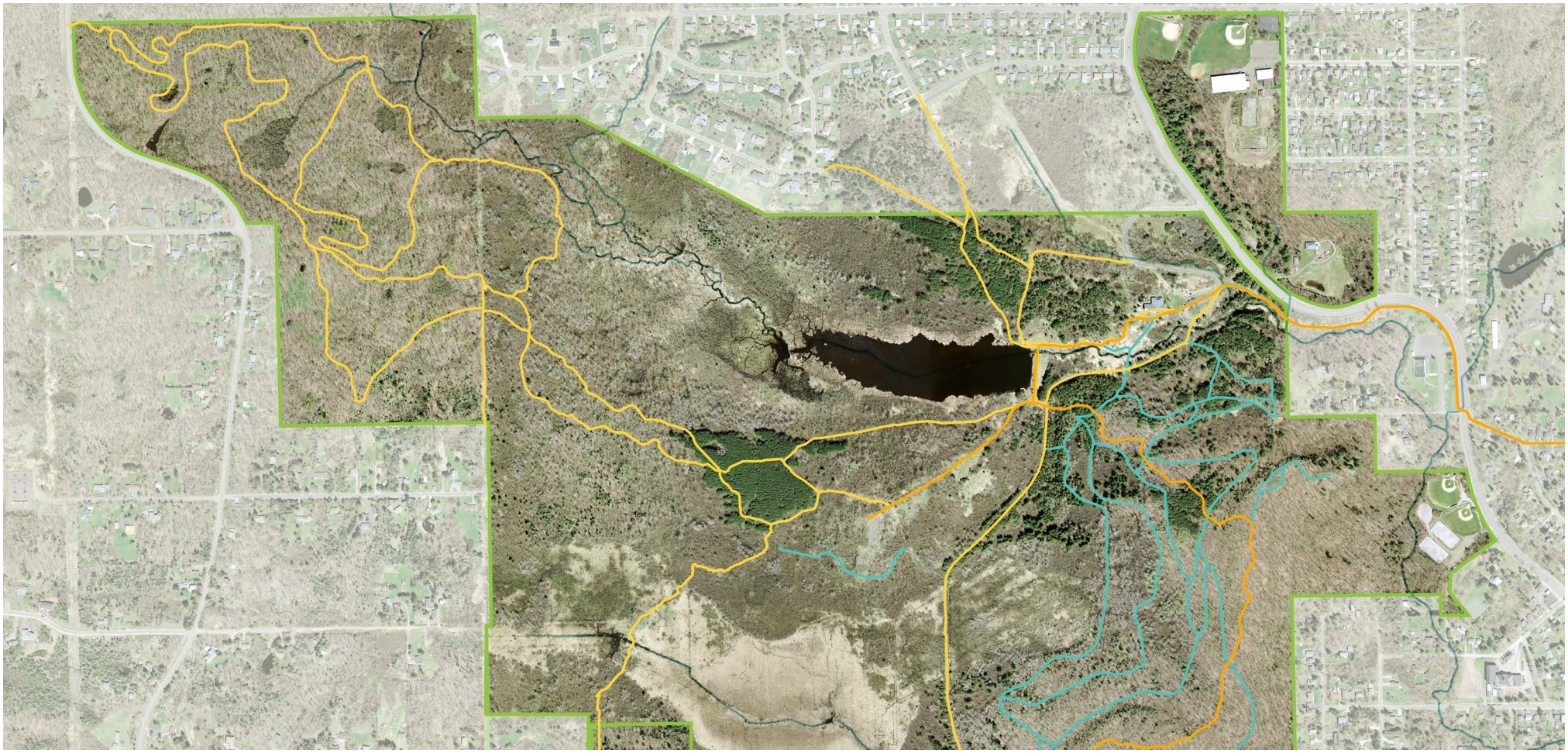



ACCESSIBLE TRAILS

Accessible Trail Recommendations

- Create a couple of paved trail loops that link to parking area, Nature Center and adjoining neighborhoods
- Improve Old Hartley Road trail to be accessible and sustainable
- Design paved trail to accommodate walkers, bikers, joggers, wheelchairs and strollers

MULTI-USE TRAILS

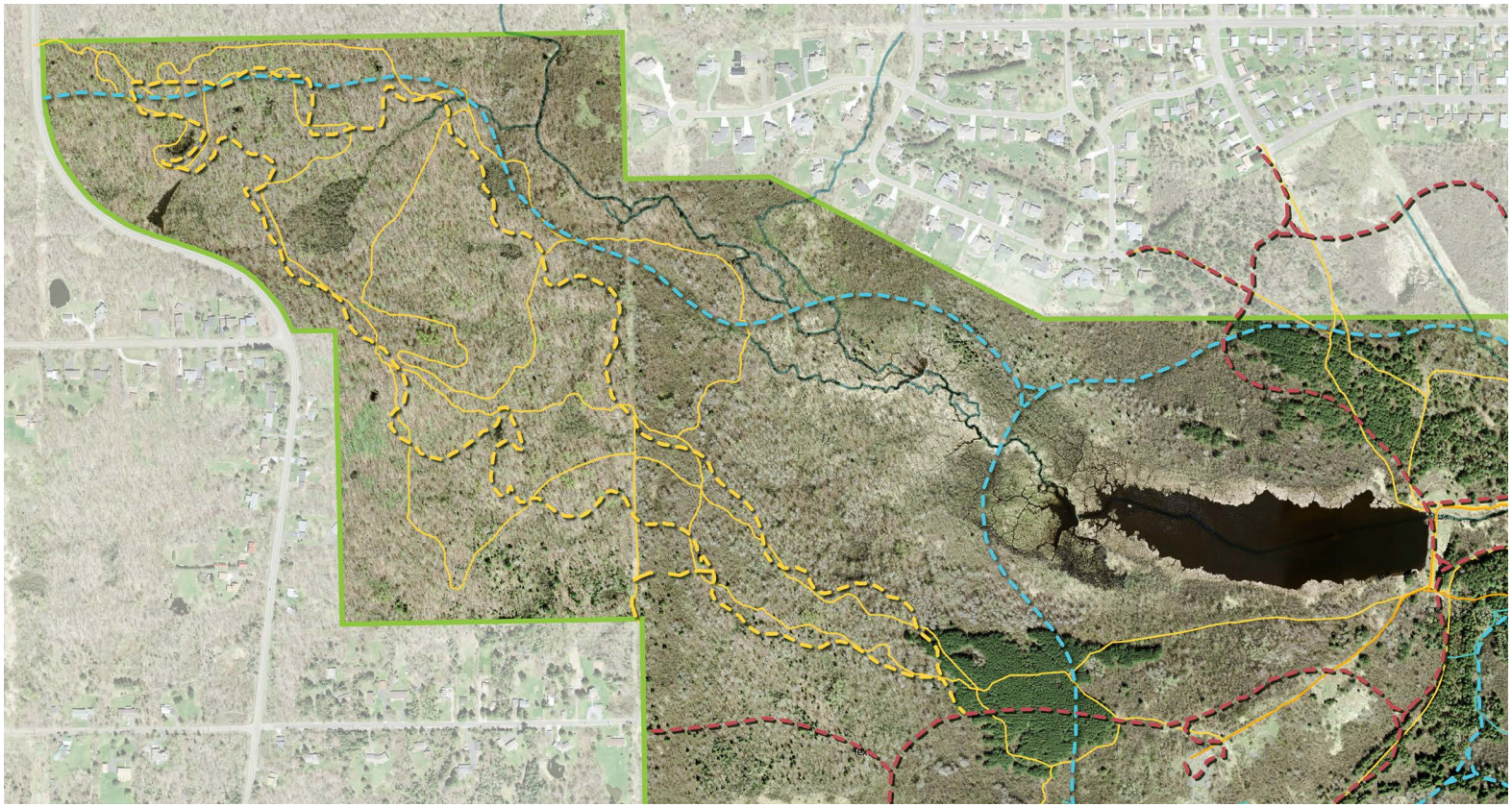


Existing Multi-Use Natural Surface Trails Issues

» Multi-use diminishes trail experience for each user group

» Conflicts between hiking/running and mountain bike trail user groups

MULTI-USE TRAILS



Multi-Use Natural Surface Trail Recommendations

- Develop comprehensive trail plan for the entire park collaborating with all trail user groups
- Create one way trail system to minimize conflicts
- Limit mountain bike trails to west end of park

WAYFINDING

Existing Wayfinding Issues

» Trail users often get lost in park

» Too many trail intersections makes trail system confusing

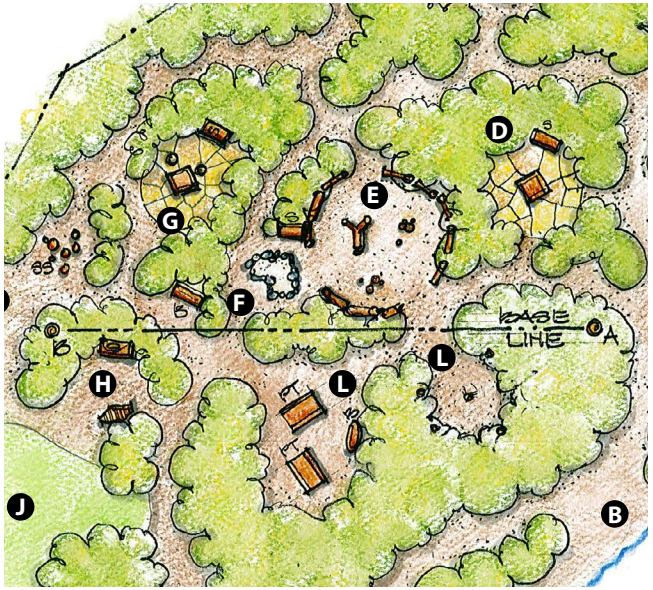
Wayfinding Recommendations

» Implement wayfinding signage at all trail intersections

» Identify trail distances on wayfinding signage

Park Amenities & Proposed Site Improvements

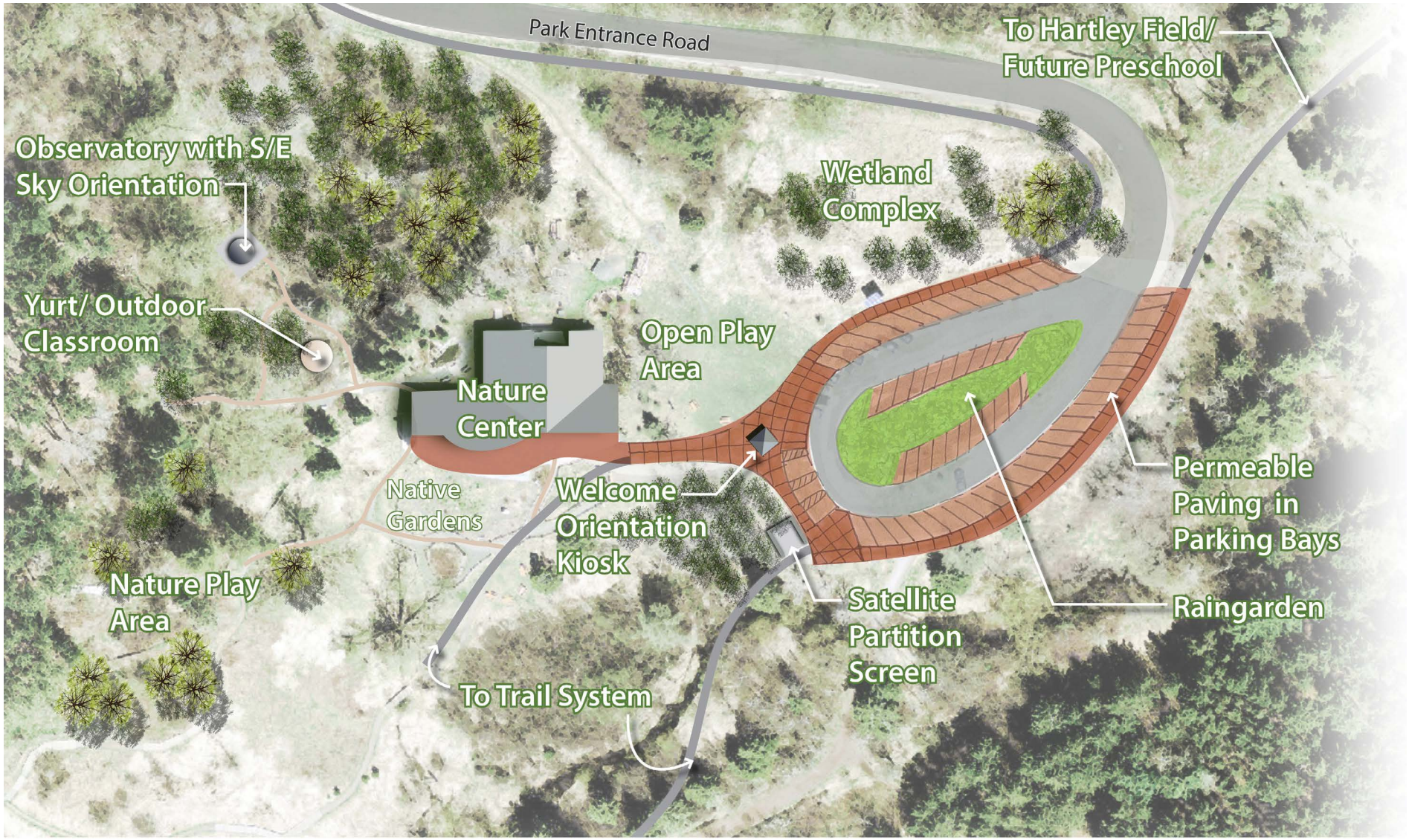
PARK AMENITIES



NATURE CENTER AREA

Existing Parking Lot Configuration Approx. 45 spaces
HARTLEY NATURE CENTER

NATURE CENTER AREA



Reconfigured Parking Lot Approx. 60 spaces
HARTLEY NATURE CENTER

PROGRAMMING

Nature Hikes

Native Plant Education

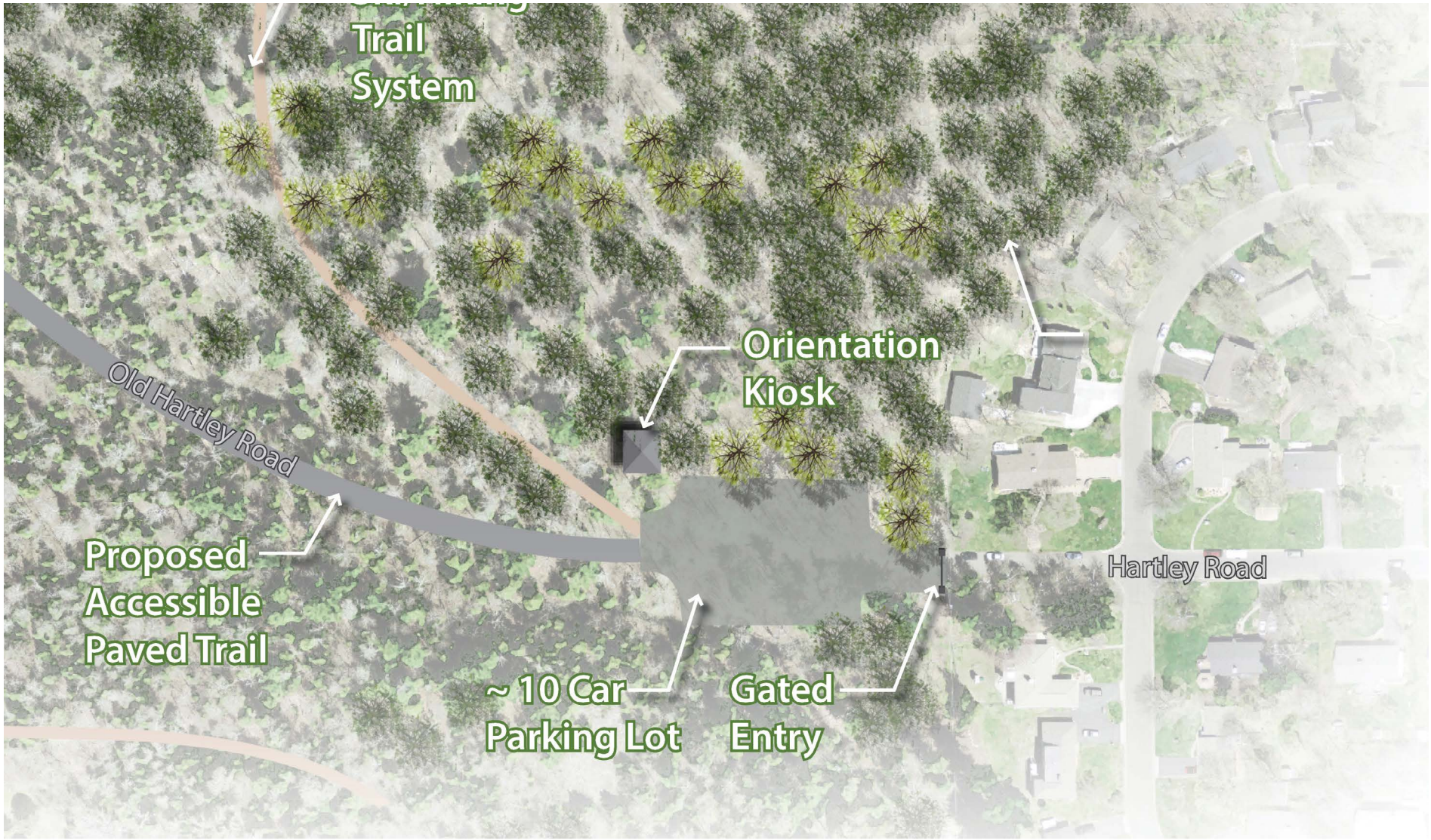
Outdoor Classrooms (Yurts)

Natural Science Education

Nature Play

Observatory/Star Gazing

OLD HARTLEY ROAD



Old Hartley Road Trailhead

HARTLEY FIELD

Proposed Programming & Connections

Plan Enlargement- Nature-based Preschool

NEXT STEPS

- Master Plan Draft Document
- Public Open House in January?
- Review and Approvals
  - » Parks Commission
  - » Tree Commission
  - » City Council