

Taconite State Trail Master Plan

Including the David Dill / Taconite State Trail



Parks and Trails Division

July, 2017

The Minnesota Department of Natural Resources (DNR), Parks and Trails Division would like to thank everyone who participated in this master planning process for the Taconite State Trail. Numerous individuals, local community groups, and trail organizations have worked for years to support this trail. DNR staff, U.S. Forest Service staff, city, county and state officials, trail organizations, and local citizens contributed their time and energy to the planning process.

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Cover photos: Snowmobilers on Taconite State Trail (left); Taconite State Trail in Grand Rapids (top right); Taconite State Trail near McCarthy Beach State Park (bottom right), (MN DNR).

**Minnesota Department of Natural Resources Approval of the
Taconite State Trail Master Plan, Including David Dill/Taconite State Trail**

Minnesota Statutes, Section 86A.09, requires that a master plan be prepared for units of Minnesota's outdoor recreation system, including state trails. This master plan addresses the Taconite and David Dill/Taconite State Trail, which is authorized to extend from Ely to Grand Rapids. This trail was authorized in 1974, in Minnesota Statutes, Section 85.015, Subdivision 13, (a)(1). In 2016, the Minnesota Legislature established the David Dill Memorial Trail, which includes the David Dill/Taconite State Trail in Minnesota Statutes, Section 85.015, Subdivision 13, (a)(3).

A Minnesota Department of Natural Resources (DNR) interdisciplinary team developed the master plan with assistance from local and federal government agencies, trail advocates, and other stakeholders located throughout the trail corridor. The plan received input and comments from the public during a 30-day public review period and open house meetings held in Ely, Side Lake, and Grand Rapids.

The Taconite State Trail Master Plan, including David Dill/Taconite State Trail, has been reviewed by the DNR Parks and Trails Division and the Northeast Regional Management Team.

I have reviewed this master plan and determined that it complies with the Minnesota Statutes 86A.09 and find that it provides for the administration of the Taconite State Trail and David Dill/Taconite State Trail in a manner consistent with the purposes for which the trail was authorized.



Erika Rivers, Director
MNDNR, Parks and Trails Division



Date

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Executive Summary

Background

This document is an updated Taconite State Trail master plan, which was last approved in 1981. The new plan describes segments that have been developed in the last 35-plus years, shows how the trail is used now, and explains how the trail can be used in the future. Once approved, the new master plan will be used to guide the future use, maintenance, and development of the trail.

The Taconite State Trail is a legislatively authorized state trail in northeastern Minnesota that spans approximately 145 miles from Ely to Grand Rapids. The trail has been developed and open since 1986, and is mostly used as a winter snowmobile trail. Parts of the trail are also suitable for biking, horseback riding, and hiking in the spring, summer and fall. Most of the treadway is naturally surfaced, with 6 miles of paved trail in Grand Rapids. The developed trail travels through Bear Head Lake and McCarthy Beach state parks; Bear Island, Sturgeon River and George Washington state forests; and Superior and Chippewa national forests. It connects the communities of Ely, Soudan, Tower and Grand Rapids.

In 2015 the Minnesota Department of Natural Resources (DNR) Parks and Trails Division created a System Plan to guide the management of its state parks, recreation areas, trails, forest recreation areas, and water recreation system. The plan designated the Taconite State Trail as a “core: division-led” state trail. Trails in this group will be well-maintained, offer basic services, and provide a safe and enjoyable experience to all who use the trail. Anything beyond basic services, like nature programs, interpretation and special events, may be offered with help from partners, or with outside funding.

Recommended Trail Uses

The Taconite State Trail is a multi-use, multi-season trail. However, not all allowable uses can be accommodated on all sections of the trail. It is also important to recognize that even with multi-use trails, not all uses are compatible on the same alignment at the same time, or during the same season.

The following activities are recommended on the Taconite State Trail: snowmobiling, bicycling, hiking, walking, and horseback riding; the use of off-highway vehicles including all-terrain vehicles (ATVs, Class I and II), off-highway motorcycles (OHMs), off-road vehicles (ORVs); and environmental education/interpretation. Hunting in the trail corridor will generally be allowed except where regulated or prohibited by community ordinance or state park rules and regulations.

Other uses may include cross-country skiing, skijoring, fishing, and dog-sledding.

Landownership and Administration

Land along the Taconite State Trail is both publicly and privately owned. It’s held by federal, state, county and local government units, private corporations, and private citizens. The trail alignment may be subject to change, temporarily or permanently, due to various resource management practices such as forestry

Landowner	Miles	Percentage of Trail
County (St. Louis and Itasca)	54.4	37%
State of Minnesota	36.9	25%
DNR - Easements*	16.0	11%
Federal (USFS)	27.8	19%
Local Governments (City, Township, School District)	6.5	5%
Private (Corporate/Citizen)	4.7	3%
TOTAL	146.3	100%

**The DNR has acquired easements from private landowners for purposes of this state trail. The cumulative lengths are included in this figure.*

and mining, or changes in landownership. It could also change because of various other external factors.

Trail Alignment and Management

For this plan, the Taconite State Trail corridor has been divided into eight planning segments. This is to make it as easy as possible to describe and discuss the unique resources and features along each section of trail.

- 1: Ely to Bear Head Lake State Park (19.2 miles)
- 2: Bear Head Lake State Park to David Dill/Arrowhead State Trail (19.3 miles)
- 3: David Dill/Arrowhead State Trail to U.S. 53 (20.8 miles)
- 4: U.S. 53 to MN Hwy 73 (13.5 miles)
- 5: MN Hwy 73 to MN Hwy 65 (23.5 miles)
- 6: MN Hwy 65 to Parking Lot at County State Aid Highway (CSAH) 7 (21.7 miles)
- 7: CSAH 7 Parking Lot to CSAH 60 (13.6 miles)
- 8: CSAH 60 to Grand Rapids (14.3 miles)

Each planning segment also includes a brief description of existing and potential trail uses and the feasibility of those uses on the existing trail corridor. The levels of feasibility are defined in the management plan and categorized as high, moderate or low. Feasibility for potential uses may change over time due to changing conditions. Should the existing conditions change, specific project proposals or trail uses may be re-assessed and the feasibility of the proposed actions adjusted. The feasibility summary for each segment is provided in **Appendix G**.

This plan contains recommendations for trail and resource management. Trail maintenance, enforcement and orientation are critical to providing and sustaining the high-quality of experience that trail users expect and appreciate. The plan recommends an adequate level of enforcement to maintain a safe and secure trail environment. It is also a goal to encourage trail users to understand and obey trail rules, respect other trail users, and respect adjoining properties.

Natural and Cultural Resources

The ecological value of the trail corridor will be improved wherever possible through resource management activities. Some native plant community management may include cooperative efforts with adjacent landowners and managers, including national, state and county forests, and state parks.

Water resources are also of interest along the trail. The trail runs through wetlands and aquatic management areas, and it crosses 52 streams. Thirteen of these are designated trout streams and protected tributaries to designated trout streams. Any new trail uses or additional summer uses will need further evaluation and assessments, including wetland sequencing, to determine appropriate crossings.

Efforts will be made to preserve cultural resources and to incorporate them into an interpretive plan for the trail corridor. Trail users will have opportunities to learn about the history of the region through existing and proposed interpretive sites located along the trail.

1. Planning Process, Purpose and Scope

Planning History

In 1974, snowmobilers presented the idea for a long-distance recreational trail to the Minnesota Legislature. This action resulted in the legislative authorization of the Taconite State Trail, extending from Ely to Grand Rapids, along with funding for its development ([Minnesota Statutes Section 85.015, Subd. 14](#)).

In 1975, the Minnesota Legislature enacted the Outdoor Recreation Act (ORA) ([Minnesota Statutes Section 86A](#)). This act established an outdoor recreation system comprised of 11 components or units to classify all state-managed recreation lands. State trails are one type of unit in this outdoor recreation system. The ORA requires that the managing agency prepare a master plan for the establishment and development of each unit. See **Appendix A** for additional details about the legislative authorization of the trail and the Outdoor Recreation Act (ORA).

The Taconite State Trail has an existing master plan, approved in 1981, which fulfills the ORA requirements. At the time it was approved, parts of the trail had already been built and were being used for snowmobiling. However, much of the trail was still undeveloped and the master plan identified interim or temporary alignments that were to be phased out as development of the planned trail was completed. While much of the plan identified general locations for the trail alignment, the developed route was ultimately determined by multiple factors, including trail uses (i.e., snowmobiling, horseback riding, hiking), resource considerations, terrain, and landowner agreements. By 1986, the trail was developed for snowmobiling from Ely to Grand Rapids along a patchwork of public and private properties, a large portion of which is not state-owned. (See **Figure 1.2**: Minnesota’s State Trail System and **Figure 1.3**: Taconite State Trail Regional Context.)

Over the last 35 years, trails have been developed all over the state, and trail uses and users continue to change and expand. Snowmobile trails continue to be developed and a connected, statewide snowmobile trail system has been established. Currently, 25 different snowmobile trails intersect with the Taconite State Trail and many other year-round recreational opportunities are located nearby. Growth in off-highway vehicle registrations, particularly for all-terrain vehicles (ATVs), has also prompted interest in using the existing Taconite Trail corridor for motorized vehicles, especially where the trail is located on high ground and may provide connections to other existing trails or routes. Local trail users and community interests in expanding year-round use of this trail—as well as an outdated master plan—prompted the development a new master plan.

The Taconite State Trail Master Plan from 1981 was in need of an update to reflect the alignment that was developed and how the trail is currently being used. Through the planning process, this master plan also considers additional trail uses while also responding to the needs and demands of existing and

25 different snowmobile trails intersect with the Taconite State Trail and many other year-round recreational opportunities are located nearby.

Taconite State Trail Master Plan – Planning Process, Purpose and Scope

potential trail users. Upon approval, this master plan will replace the previous plan (from 1981) and serve as the trail’s guiding master plan.

This Taconite State Trail Master Plan (2016) was prepared by the Minnesota Department of Natural Resources (DNR), with cooperation from the U.S. Forest Service (USFS) forest and recreation staff, St. Louis and Itasca county land department and forestry staff, and multiple trail user groups representing motorized and non-motorized recreational uses. The purpose of this master plan is to guide the management and operation of the Taconite State Trail.

Planning Process and Scope

The planning process places an emphasis on public input and makes every effort to incorporate the most reliable, up-to-date resource information. The planning process flow chart on page 6 illustrates a typical trail planning process. However, each process has its own combination of partners, advocates, stakeholders and interested parties, as well as its public and/or private land base.

The missions of the Minnesota Department of Natural Resources and the Parks and Trails Division vision provide important context to the planning effort.

Why Plan?

Master planning for state trails is done to:

- Provide a unifying vision for trail advocates who are working to secure a trail alignment and funds for development and maintenance of a trail.
- Guide the development, management and maintenance of a trail so that quality recreation and transportation opportunities are provided.
- Create a forum for discussion of trail use and development options, management issues, enforcement needs, and related topics.
- Support partnerships and processes that will help execute the plan and contribute to providing quality trail opportunities.
- Assess the projected impacts of trail development on natural, cultural and historic resources, as well as impacts on local communities.
- Satisfy the requirement of Minnesota Statutes, Section 86A.09, which requires that a master plan be prepared for state trails.

Public Involvement and Partnerships

To initiate public participation for the development of the new master plan for the Taconite State Trail, public open house meetings were held in February and March of 2015 in the communities of Grand Rapids, Side Lake and Tower. Each meeting was well attended with approximately 40 people in Grand Rapids, 30 people in Side Lake and 25 people in Tower. Attendees represented various trail-use interests, including snowmobiling, all-terrain vehicle (ATV) riding, off-

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Minnesota Department of Natural Resources Mission

Our mission is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.

Parks and Trails Division Vision

Our vision is to create unforgettable park, trail, and water recreation experiences that inspire people to pass along the love for the outdoors to current and future generations.

Taconite State Trail Master Plan – Planning Process, Purpose and Scope

highway motorcycle (OHM) riding, off-road vehicle (ORV/UTV) riding, horseback riding, mountain biking, and hiking/walking. Additional stakeholders, such as nearby or adjacent landowners, local business owners, and tourism representatives, were also present.

The trail was divided into eight planning segments to discuss and evaluate detailed sections of the trail. Posters were displayed for discussion and to collect comments and suggestions for potential repair, maintenance and reroute ideas. Handouts of the segment maps, planning process, and a questionnaire were available. The questionnaire was used early in the planning process to collect comments and suggestions and to gather information about current and future trail users. The questionnaire helped identify key issues to address in the new master plan. Altogether, 137 questionnaires and comment letters were gathered as a result of these open house meetings.

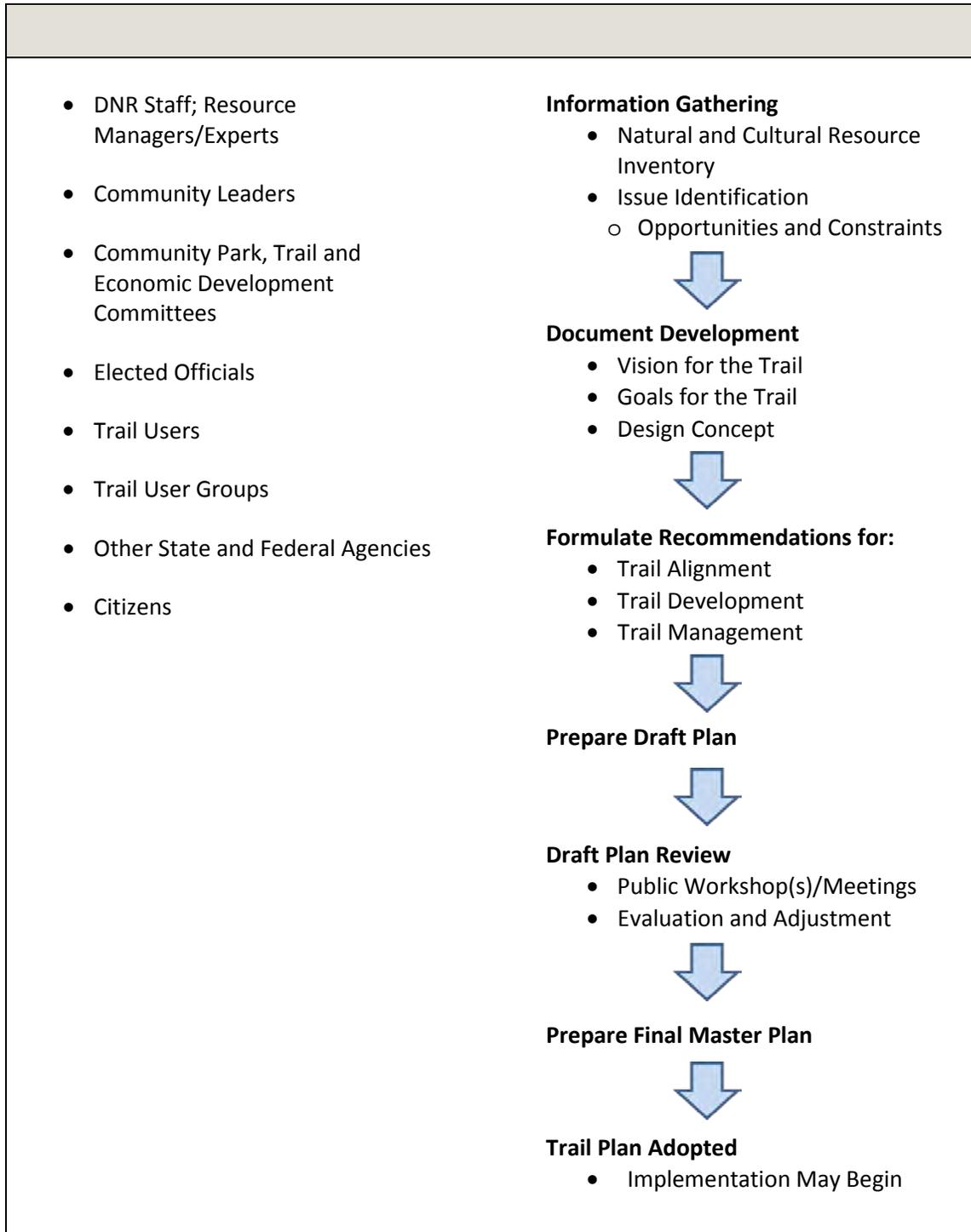
Public review of the Taconite State Trail Master Plan Draft was held from December 1, 2016 to January 6, 2017. During this public review period, three open house meetings were held in the communities of Grand Rapids (December 15), Ely (December 19), and Side Lake (December 20). A total of about 50 people attended the open house meetings.

Interested citizens were able to provide comments on the master plan draft at the open house meetings, through an online comment form, or by U.S. Mail, email, phone and facsimile (Fax). A total of 180 comment letters were received, with the majority submitted by email. Comments were reviewed and considered individually and adjustments to the master plan were made where deemed appropriate. A summary of comments from the public meetings and draft review are provided in **Appendix B**.

Landowner and stakeholder coordination – Representatives from the DNR, USFS and Itasca and St. Louis counties met to coordinate planning efforts and provide updates during the planning process. Routine communications and coordination at the local level continue through regular day-to-day business and operation of the trail and surrounding land.

The DNR also works with private landowners, including individuals and corporations, as trail operation, maintenance, and proposed development agreements need to be updated, renewed or discussed.

Figure 1.1. State Trail Planning Process



Guiding Principles for Sustainable Trails

Guiding principles for ecologically sustainable trails provide the underlying rationale for actions related to protecting, restoring, and managing natural environments associated with trail development. There are seven core principles:

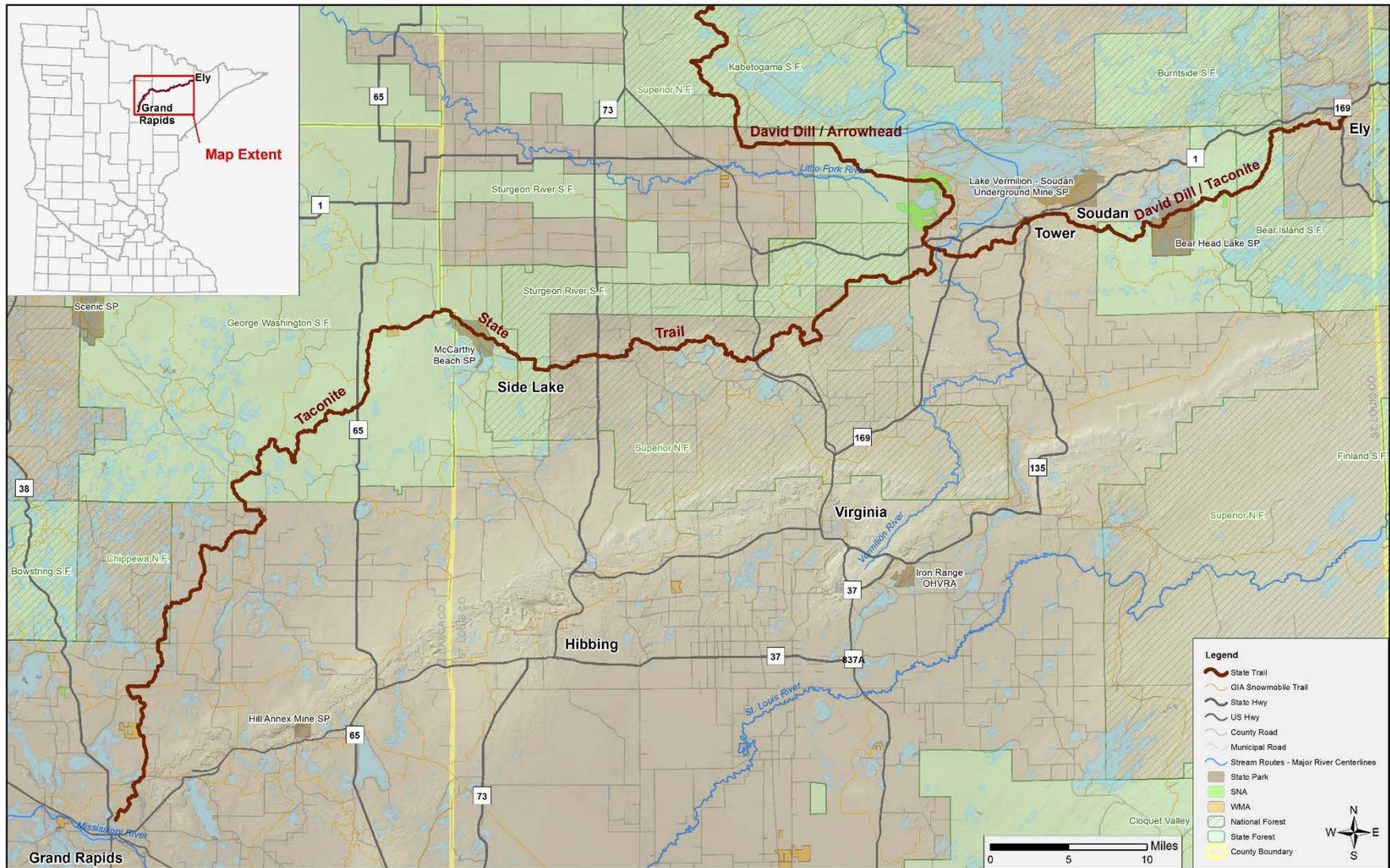
1. Avoid sensitive ecological areas and critical habitats.
2. Develop trails in areas already influenced by human activity.
3. Provide buffers to protect sensitive ecological and hydrologic systems.
4. Use natural infiltration and best practices for stormwater management.
5. Provide ongoing stewardship of the trails and adjoining natural systems.
6. Ensure that trails remain sustainable.
7. Formally decommission and restore unsustainable trail corridors.

Applications of these principles will minimize the impact of trails on natural resources and sensitive ecological systems. However, not all of these principles will apply uniformly to each trail. The application of these guiding principles has to be balanced with the need to locate trails where they will be of high recreational value to targeted users who often want to be close to nature, enjoy beautiful scenery, and see wildlife. This is an important consideration and underscores the need for resource managers, trail designers, and other interested individuals to work together to determine which values are the most important for any given trail alignment.

Figure 1.2. Authorized and Developed State Trails



Figure 1.3. Taconite State Trail Regional Context



Vision and Goals for the Taconite State Trail

Vision

Provide recreational opportunities for people to safely enjoy and experience the natural beauty of this area in all seasons.

Goals

The Taconite State Trail will provide trail users with a regionally integrated multi-use recreation facility that connects Ely to Grand Rapids and capitalizes on the inherent user benefits of the area's natural and cultural resources.

- *Provide a fun, safe, multi-use recreational trail that invites family participation and supports a range of recreational activities by people with a broad range of abilities and interests.*
- *Promote healthy lifestyles through year-round outdoor activities and interaction with the natural environment while also improving personal health and well-being.*
- *Coordinate and work cooperatively with local trail user groups, landowners, and communities to maintain, secure and develop trail connections throughout the trail corridor.*
- *Promote economic stability and opportunity by attracting visitors year-round, attracting and retaining businesses, increasing tourism, and linking tourist attractions.*

Trail Development History

The Taconite State Trail was developed and constructed over the course of 12 years, starting in 1974. The trail was developed by the Minnesota Department of Natural Resources with help from St. Louis and Itasca counties, Iron Range Resources and Rehabilitation Board (IRRRB), other local governments, U.S. Forest Service, private businesses, International Snowmobile Association and local trail groups. Trail development began during a time when recreational trails were relatively new concepts and long distance trails were not common. Even less common were networks of trails connecting to each other. Trail development policies, rules and regulations were not yet in place. Public land administrators had more flexibility in decision-making about how and where to locate the trail.

The proposed trail route was carefully designed to be on high ground and to travel through scenic areas while avoiding rocks, ditches, steep slopes, and wetlands. Obtaining landowner agreements was key to connecting all the pieces together to form a continuous route. The developed route would not have been possible without the cooperation of and permission from various public and private landowners and administrators.

By 1986, the Taconite State Trail—which traveled a reported 168* miles from Grand Rapids to Ely—was officially completed. To celebrate, ribbons were cut at both ends of the trail and snowmobilers met in the middle.

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(*This distance likely included trail spurs into communities, access routes and other segments that have since been rerouted or modified.)

Over the years, snowmobile trails have expanded and connected to other trails and now form a large network of snowmobile routes throughout the state. Today, Minnesota’s statewide snowmobile trail system has nearly 22,000 miles of trails (includes grants-in-aid and state trails). The Taconite State Trail is recognized as a key route within the statewide snowmobile trail system.

In 2016, the Minnesota Legislature established the **David Dill Memorial Trail** in northeastern Minnesota. David Dill was an elected member of the Minnesota House of Representatives from 2002 until his death in 2015. He represented District 3A, which includes Cook, Lake, Koochiching, and St. Louis counties. Dill was a champion of the outdoors. His legislative efforts focused on mining, outdoor recreation, agriculture finance, the environment, natural resources, and economic development. The David Dill Memorial Trail follows state and unit trails through his former district, including a portion of the Taconite State Trail from the intersection with the David Dill/Arrowhead State Trail to Ely.

The David Dill Memorial Trail honors the late State Representative David Dill, who was a champion of the outdoors. It travels through his former district and includes part of the Taconite state trail.

Related Planning and Studies

Parks and Trails System Plan

The Parks and Trails Division completed a Parks and Trails System Plan in 2015 to guide the management of the DNR’s state parks, recreation areas, trails, forest recreation areas, and water recreation system. The System Plan recommends a differentiated approach to managing the system, rather than trying to be all things to all people.

Each of the state trail system’s 25 legislatively authorized trails were assessed by eight criteria and placed in one of the following investment groups: “**destination**,” “**core: division-led**,” and “**core: partner-led**.” The investment groups differ by the amount and type of investment the division makes, how the division works with partners, and how the division communicates about trail experiences. The Parks and Trails Division will continue to assess and refine the investment groups as the system plan is implemented. Some trails may be re-categorized as local conditions change and as development occurs.

The Taconite State Trail was assessed and placed in the “core: division-led” investment group. “Core: division-led” trails will be well-maintained, provide basic services, and offer a safe and enjoyable experience to people who use the trail. Activities and amenities that are beyond basic services, such as nature programs or special events, may be provided with help from partners, or with outside funding.

The Parks and Trails Division System Plan identifies the Taconite State Trail as a “core: division-led trail.”

This trail will be well-maintained with basic services that provide a quality experience for trail users.

Forest Classification, Road and Trail Designations and Revisions

In 2008, the DNR completed a forest-by-forest review of Minnesota State Forests to determine their appropriate classification with regard to off-highway vehicle (OHV) use. Road and trail access was also evaluated for a variety of both motorized and non-motorized recreational activities. Approved plans for the Sturgeon River State Forest and Northern St. Louis County include

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recommendations specific to the Taconite State Trail. George Washington State Forest is included in the Koochiching and Eastern Itasca counties plan, but does not contain any specific recommendations pertaining to the Taconite State Trail.

Recommendations in the Sturgeon River State Forest include allowing OHVs on 4.7 miles of the Taconite State Trail in two separate locations, with one segment near McCarthy Beach State Park, and a second segment south and east of the park, from approximately Dean Road to French Road. Adding OHV use in these locations along the Taconite State Trail would complete the proposed 12.7-mile designated OHV trail system within the forest.

The Northern St. Louis County plan includes a recommendation for a dual designation on the Taconite State Trail as both a minimum maintenance road (MMR) as well as OHV trail for a section of trail that runs from the Big Aspen Trail System westward to the Sturgeon River State Forest boundary. This designation includes a 13-mile section of the Taconite State Trail, mostly west of U.S. Highway 53, where approximately 6.5 miles of the trail is located on a forest road that is currently open to highway licensed vehicles (HLV) and OHV use per Superior National Forest policies (see Planning Segment 4). This would provide additional access to the Big Aspen Trail System, which consists of approximately 21 miles of multi-use trails managed by the USFS on Superior National Forest lands. Also recommended in this plan is a 1.3-mile stretch of the Taconite State Trail located along an abandoned railroad grade near Tower and Soudan.

These approved plans and recommendations pertaining to the Taconite State Trail have been taken into consideration during this planning process. Existing summer uses along these segments of the Taconite State Trail must also be taken into consideration before proposing changes in use.

In 2016, the DNR initiated a project to revise the planning and management of Minnesota state forest trails. Referred to as “Phase II Forest Planning,” this project includes a review of the forest trail systems (motorized and non-motorized) to identify new trail routes and connections and areas for special management. Recommendations may include closing trails that are not sustainable. The trail system changes will not include changing forest-wide “limited,” “managed,” and “closed” classifications for motorized recreation.

State Park Visitor Studies

In 2012, a state park visitor study was conducted as part of a series dating back to 1987, with surveys also conducted in 2001 and 2007. Visitor surveys help further an understanding of park visitors, including who they are (demographics) and what they desire from parks (preferences, experiences, and potential changes). Survey methodology has been consistent across the previous surveys to facilitate year to year comparisons and identification of trends in visitor responses. When corroborated with previous studies, trends and patterns become more substantial.

The visitor surveys were conducted during the high use season, from June to August, with most parks in the system participating. Park visitors were

State Forest Motor Vehicle Classification

State forest lands are classified by the commissioner for purposes of motor vehicle use and are regulated as follows:

Managed: *Forest roads, trails, and non-designated routes are open to recreational motor vehicle use unless posted closed. No vehicle use off road, trail, or route is permitted. Hunting/trapping exceptions apply.*

Limited: *Forest roads are open to motor vehicle use unless posted closed. Trails and non-designated routes are closed to motor vehicle use, except where designated and signed to permit specific motor vehicle use. No vehicle use off road or trail is permitted. Hunting/trapping exceptions apply.*

Closed: *Forest roads are open to motor vehicles licensed for highway use. No OHVs are permitted, except that OHVs may operate on frozen public waters. Areas closed to motor vehicle use by statute or regulations are automatically classified as ‘closed.’ The hunting/trapping exceptions do not apply in ‘closed’ forests.*

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presented with a self-administered survey to fill out and return as they exited the park. Findings indicate that the importance of items for an enjoyable park visit has been stable since 2001. Of highest importance for all visitors are the natural landscapes (park beauty, natural settings, lakes/rivers), key staffing and maintenance (clean bathrooms, grounds), trail related facilities and information/interpretation.

Regarding potential changes to state parks, the most supported item by current visitors was to add more hiking opportunities, which speaks to the high importance they place on trail-related concerns in parks. Also receiving strong support were more accommodations for people with mobility impairments, improved cell phone coverage, protection of resources from expanding park development, and adding more rustic camper cabins. Potential changes receiving the strongest opposition include elimination of park entrance fees, adding more hunting, and adding OHV opportunities in parks, which were consistent with previous studies.

2. Trail Uses

The Taconite State Trail is a multi-use, multi-season trail. However, not all allowable uses can be accommodated on all sections of the trail. The Taconite State Trail treadway has many surface types. Although most of the trail is naturally surfaced, some sections of the trail have gravel, crushed aggregate, or paved (asphalt) surfaces.

The following activities are recommended on the Taconite State Trail: snowmobiling, bicycling, hiking and walking (includes dog walking, running/jogging); horseback riding; the use of off-highway vehicles including all-terrain vehicles (ATVs) (Class I and II), off-highway motorcycles (OHM), off-road vehicles (ORV); and environmental education/interpretation. Hunting in the trail corridor will generally be allowed except where regulated or prohibited by community ordinance or state park rules and regulations. Other uses may include cross-country skiing, skijoring, fishing and dog-sledding.

The primary use of this trail has been for winter use, particularly snowmobiling, which is available along the entire trail corridor from Ely to Grand Rapids. The trail can be used in other ways at various locations, but not necessarily continuously along the entire trail. Trail signs and maps are critically important to inform trail users of what trail uses are allowed on each part of the trail.

Trail development and improvements will take accessibility into consideration wherever practical.

Snowmobiling - Snowmobiling is a recommended use along the entire trail, and is the most popular use of this trail. Snowmobilers are most interested in securing a permanent alignment, whether seasonal or year-round, that provides a safe, high-quality riding experience. The Taconite State Trail is recognized as a Minnesota United Snowmobilers Association (MnUSA) Corridor Trail.

Bicycling/Biking - Bicycling is the number one activity (measured by numbers of summer users) on Minnesota state trails. However, most of the state trails that are managed for bicycling are paved (asphalt). The Taconite State Trail has just 6 miles of paved surface in Grand Rapids. Not surprisingly, this is the most popular location for bicycling on this trail. Some portions of the trail are more suitable for bicycling than others, particularly where it is located on dry upland, or shares a road corridor or former rail grade. Naturally surfaced treadway and wetlands limit bicycling on much of the trail.

Mountain biking - This may be of interest in certain areas, but it's not likely to be of interest along the entire corridor. Mountain bikers may share the trail with hikers, equestrians and OHVs where the trail surface is dry and wide enough to accommodate multiple uses. Mountain biking will be limited to dry segments.

Fat biking - Fat biking is an emerging winter sport in the Midwest and is expected to continue to grow in popularity, including summer season use. A

The Taconite State Trail is a multi-use, multi-season trail. However, not all allowable uses can be accommodated on all sections of the trail.

The primary use of this trail has been for winter use, particularly snowmobiling, which is available along the entire trail corridor from Ely to Grand Rapids.

Trail signs and maps are critically important to inform trail users of what trail uses are allowed on each part of the trail.



Winter Fat-biking.

“fat bike” is a bicycle with large, low-pressure tires designed for travel over snow or sandy soil. Winter fat biking is not recommended on the Taconite State Trail when it is groomed for snowmobiling. (Fat biking is not allowed on most groomed snowmobile and cross-country ski trails, including grant-in-aid trails.) However, it may be accommodated on sections of the trail that allow year-round use and biking. Prohibiting fat biking is not recommended.

Equestrian Uses (Horseback riding) - Equestrian uses are accommodated in multiple locations. Additional sections may be added in the future where practical and desired. Equestrian use is most popular during the shoulder seasons (spring and fall), but is also a popular summer activity near McCarthy Beach State Park and the surrounding state forest area. The Minnesota Horse Trail Pass is required on all horse trails located on DNR-administered lands, including the Taconite State Trail, state forest, and state park trails.

Hiking/Walking; Jogging/Running - Hiking or walking is second-most popular activity on state trails, as measured in numbers of summer users. Hiking and walking are recommended uses along the entire length of the trail. Jogging and running, most popular with local trail users, are also recommended along the entire length of the trail. Hiking and jogging may be limited by the natural surface and wetlands. Winter hiking is not recommended during snowmobile season, however, it is not prohibited.

Dog Walking - Dog walking is a recommended use of the trail, as long as dogs are leashed and owners properly clean up and dispose of pet waste. Minnesota state trail rules require all pets to be restrained by leashes not more than 6 feet in length ([MN Rules 6100.3900, Subp. 4](#)). Exceptions may be made through special use permits for skijoring and dog-sledding.

Off-Highway Vehicles (OHV) – The term OHV includes several vehicle types, including all-terrain vehicles (ATV), off-highway motorcycles (OHM), and off-road vehicles (ORV). These vehicles are often grouped together, but may also be considered individually for specific types of recreation.

OHV use is considered a seasonal use (spring to fall) rather than a year-round use or a use that shares the snow-groomed winter season with snowmobiles. It may be feasible in some places to allow for frozen-condition OHV use. However, these potential locations must be carefully considered and evaluated for resource issues, as well as ensuring landowner and administration agreement prior to implementation.

OHV use within state parks is prohibited ([MN Rules, 6100.1900](#)). One exception is Tettegouche State Park, where 6.5 miles of an ATV trail is located within the park boundary (with connections to trails outside of the park) due to special legislation. The ATV trail was developed before the land was added to the state park boundary.

Motorized users must yield the right of way to horseback riders, hikers and bikers.

Class I – ATV – all-terrain vehicle that has a total width from outside of tire rim to outside of tire rim that is 50 inches or less.

Class II - ATV – all-terrain vehicle that has a total width from outside of tire rim to outside of tire rim that is greater than 50 inches, but not more than 65 inches. [This includes side-by-side recreational vehicles.]

(MN Statutes 2016, Chpt. 84.92, Subd. 9-10)

All-Terrain Vehicles (ATV) - (Defined in [MN Statutes, 84.29, Subd. 8-10.](#)) An ATV is a motorized vehicle with: (1) not less than three, but not more than six low pressure or non-pneumatic tires; (2) a total dry weight of 2,000 pounds or less; and (3) a total width from outside of tire rim that is 65 inches or less. The term “ATV” includes a Class I and Class II all-terrain vehicle. ATV use may be accommodated on some sections of the trail where it meets sustainability criteria.

Off-Highway Motorcycle (OHM) - (Defined in [MN Statutes, 84.787, Subd. 7.](#)) An OHM is a motorized off-highway vehicle traveling on two wheels. OHMs have a seat or saddle designed to be straddled by the operator and have handlebars for steering control. Motorcycles may be legal for highway use and still considered to be OHMs if used for off-highway operation on trails or natural terrain.

Off-Road Vehicle (ORV) - (Defined in [MN Statutes 84.797, Subd. 7](#)) An ORV is a motorized recreational vehicle capable of cross-country travel on natural terrain, such as a 4x4, and is larger in size than a Class II ATV. Vehicles not considered ORVs include snowmobiles, ATV and OHMs, motorcycles, watercraft, or aircraft. Farm, logging, military, emergency, law enforcement, utility, trail grooming, and construction vehicles are not considered to be ORVs when used for their intended purpose.

Hunting (*During legal hunting seasons only*) - Hunting is allowed on state-owned lands in accordance with Minnesota Rules, except where discharge of firearms is regulated by community ordinance or state park rules and regulations. Communities may restrict firearms, bow and arrow discharge, or trapping by ordinance. Minnesota Rules for hunting related to state trails states:

“No firearm or bow and arrow shall be discharged within the trail at any time, except for the purpose of lawful hunting during the period from September 15 to March 30 only. No rifle, shotgun with slug or bow and arrow shall be discharged upon, over, or across the trail treadway at any time.” ([Minnesota Rules 6100.3600](#))

Environmental Education/Interpretation - Use of the trail for environmental education and nature study, whether for individual trail users or for groups, is encouraged. Nature photography is a popular activity. In particular, state parks and forests have special landscape features that should be included in interpretive sites and informational kiosks.

Cross-country Skiing - Cross-country skiing may be accommodated on some portions of the trail, where practical and desired. However, it is not likely to be a popular activity or the primary use of this trail. Other ski trails may cross or travel along short segments of the Taconite State Trail corridor. Prohibiting this use is not recommended.

Skijoring – A winter sport where a person on cross-country skis is pulled by a dog. Skijoring is not likely to be a popular activity on this trail, but may be accommodated where cross-country skiing also occurs. Prohibiting this use is not recommended.



Class II ATV, also known as a side-by-side ATV.

Taconite State Trail Master Plan – Trail Uses

Dogsledding/Mushing - A winter sport where a sled or sleigh is pulled by one or more dogs used to travel over ice or snow. A person who travels by dogsled is called a musher. When multiple dogs are used to pull a sled, they are attached to the sled and each other using a cable, chain or rope. Many of Minnesota's dogsledding outfitters are located near Ely and throughout the North Shore of Lake Superior. Dogsledding is not currently allowed on state trails, except by special use permit. Prohibiting this use is not recommended.

Fishing Access - The trail crosses many streams and designated trout streams, with four aquatic management areas designated for fishing. The trail offers access to these unique and remote areas. However, not all stream crossings have fishing opportunities.

Accessibility - State trails comply with the Americans with Disabilities Act (ADA) design standards. In 2011, rules issued by the U.S. Department of Justice allow “**other power-driven mobility devices**” (OPDMDs) to be used by people with mobility disabilities on all state or local government lands and facilities. The definitions of an OPDMD is broad and covers all devices used for locomotion by people with mobility disabilities, except wheelchairs, but including Segway personal transporters, electric-assisted bicycles, OHVs, snowmobiles and highway licensed vehicles (HLVs).

The following OPDMDs are allowed on paved and aggregate trails on DNR lands: electric personal assistive mobility devices and electric-assisted bicycles. Also allowed are the following electric-powered devices: foot scooters, tracked mobility chairs, and tricycles. Natural barriers and primitive development may limit some from accessing all areas, including much of the Taconite State Trail, particularly where it has a natural surfaced treadway.

A DNR Commissioner's Order posted on the DNR's website includes a table that explains where OPDMDs can be used and when a special permit is needed. http://www.dnr.state.mn.us/accessible_outdoors/opdmd/index.html.

The trail crosses many designated trout streams and offers access to unique and remote places to fish.

3. Trail Alignment

Corridor Overview

The Taconite State Trail corridor ranges from 15 to 30 feet wide. This width meets safety design standards for two-way snowmobile traffic, as well as being able to accommodate two-way traffic for multiple uses and seasons. Clearing height (e.g., sub-canopy clearing) is typically 10 to 12 feet above average snow depth. Trail grades in this segment range from relatively level to steep hills, with some slopes up to 20%.

When developing this trail it was a goal, whenever possible, to secure alignments and routes that are on high ground. However, many sections were developed across wetlands, lowland swamps, and marshes. This was done with the understanding that the trail was mostly going to be used in winter for snowmobiling on frozen and snow-covered treadway. Also, the trail's design and layout follows natural contours of the land where the trail typically follows the slope fall line (the most direct line down the hill). This design technique is important for snowmobilers to avoid rollovers, and snow cover on the trail prevents erosion.

Using a snowmobile corridor for summer recreation requires site-specific evaluations for each new use. When considering summer or year-round uses of the existing snowmobile trail, different design techniques may be required for safe and sustainable use, such as incorporating side-slopes or switchbacks to decrease the incline and limit soil erosion.

It is also important to acknowledge that some private land owner agreements currently include winter-only or snowmobile use-only limitations for the trail. When considering different seasonal uses or adding uses to existing segments, land owner agreements will need to be revisited to verify that the new or proposed uses are acceptable to each land owner and administrator. Updates or new agreements may also be necessary to implement new uses to the existing trail corridor. Alternative options may include securing permanent routes through acquisitions or easements.

Landownership and Administration

The successful development of the Taconite State Trail is largely due to the cooperation and generosity of the various public land administrators and private landowners, especially during a time when recreational trails were considered a new concept and not many were in operation.

Landownership along the Taconite State Trail includes both public and private parcels, represented by federal, state, county and local government units, private corporations and private citizens. In most cases where the trail is located on private lands, an easement has been purchased for the trail corridor. In other circumstances, the DNR has obtained some type of landowner agreement, such as a lease, permit or license, which allows for the public use of the state trail, a few of which include limitations by season or particular use.

Using a snowmobile corridor for summer recreation requires site-specific evaluations for each new use.

Taconite State Trail Master Plan – Trail Alignment

Landownership is not exclusive to the unit boundaries, as established unit boundaries may overlap, and ownership varies within those boundaries. For example, the Superior National Forest boundary overlaps with several different state forest and park boundaries, which also include various public and private landowners.

Figure 3.1. General landownership of the Taconite State Trail corridor

<i>Landowner</i>	<i>Miles</i>	<i>Percentage of Trail</i>
County (St. Louis and Itasca)	54.4	37%
State of Minnesota	36.9	25%
DNR - Easements*	16.0	11%
Federal (USFS)	27.8	19%
Local Governments (City, Township, School District)	6.5	5%
Private (Corporate/Citizen)	4.7	3%
<i>TOTAL</i>	<i>146.3</i>	<i>100%</i>

*The DNR has acquired easements from private landowners for purposes of this state trail, whereas the cumulative lengths are included in this figure.

The DNR is the primary owner of state-owned land along the trail corridor. There are different management goals for this land, and different DNR divisions are involved, such as: Forestry; Fish and Wildlife; and Parks and Trails. Cooperation and coordination between DNR divisions and unit managers is necessary for the successful management, maintenance, and operation of the land's resources and the recreational activities that can be enjoyed there.

The Taconite State Trail alignment may be subject to change, temporarily or permanently, due to various resource management practices (i.e. forestry or mining), changes in landownership, or other external factors.

Federal Interests

The United States Forest Service (USFS) is a multi-faceted agency that manages and protects 154 national forests and 20 grasslands in 44 states and Puerto Rico. The agency's mission is to sustain the health, diversity and productivity of the nation's forests and grasslands to meet the needs of present and future generations. Two national forests are located in Minnesota, **Superior National Forest** and **Chippewa National Forest**, and The Taconite State Trail corridor travels through both of them.

The Minnesota Department of Natural Resources (DNR) has a cooperative agreement with the USFS for the placement, development and operation of state trail that is located on forest service lands. This formal agreement provides mutually agreed upon terms for the coordination of management activity, trail design and construction, maintenance, and trail facilities. Cooperative agreements should be kept up to date in order to stay consistent with current USFS management plans, transportation plans, recreational uses, and updated policies and best practices.

The Taconite State Trail alignment may be subject to change, temporarily or permanently, due to various resource management practices, changes in land ownership, or other external factors.



Chippewa and Superior National Forests boundaries with the Taconite State Trail.

Taconite State Trail Master Plan – Trail Alignment

Approximately 25 miles of the Taconite State Trail are located on Superior National Forest lands within St. Louis County (Planning Segments 1, 3, 4, 5), and approximately 3 miles of the trail are located on Chippewa National Forest lands in Itasca County (Planning Segment 7). More specific details about the relationship of the trail on national forest service lands are discussed within pertinent trail planning segments.

State Interests

About 37 miles of the trail are located on state-owned lands that are administered by the DNR's Forestry and Parks and Trails divisions. Additionally, in cooperation with willing landowners (public and private), the DNR has secured long-term perpetual easements for approximately 16 miles of the trail. While authorized as a state trail, the trail corridor crosses state lands that are managed for other purposes such as forestry, parks, fisheries and wildlife.

Minnesota has 58 designated **state forests** on 4.1 million acres. The state forests were established to produce timber and other forest crops, provide outdoor recreation, protect watersheds, and perpetuate rare and distinctive species of native flora and fauna. The DNR applies multi-use management to meet the needs of Minnesota citizens. Management activities include timber harvesting, reforestation, wildlife habitat improvement, and recreational development. Wildlife management within forests includes creating permanent openings to produce forage for white-tailed deer and planting shrubs to produce seeds and berries to benefit birds. The DNR also protects the forest and surrounding areas from wildfires.

The Taconite State Trail is located within Bear Island, Sturgeon River, and George Washington state forests. However, the state does not own all of the land within the statutory boundaries of these units. While the trail may be within a boundary, it should not be assumed that it is exclusively on state owned lands. Approximately 25 miles of the trail is located on state forest owned and managed lands.

The **state park** system has 83 statutorily authorized units, including 66 state parks, nine state recreation areas, and eight state waysides. Statewide, these units cover almost 275,000 acres. The purpose of state parks, as described in state statute, is to preserve, perpetuate and interpret areas of the state that illustrate and exemplify Minnesota's unique natural resources, and to provide for the use, enjoyment and understanding of those resources without impairment for the future and they are not designed to accommodate all forms or unlimited volumes of recreational use ([Minnesota Statutes 86A.05, Subd. 2c](#)).

The Taconite State Trail is located within two state parks, **Bear Head Lake State Park** (Planning Segment 1) and **McCarthy Beach State Park** (Planning Segment 5) for a collective distance of about 7 miles. Additionally, a snowmobile trail provides a connection between the Taconite State Trail and **Lake Vermilion-Soudan Underground Mine State Park** (Planning Segment 2).

Wildlife management areas (WMAs) are part of Minnesota's outdoor recreation system and are established to protect those lands and waters that

About 28 miles, or 19%, of the Taconite State Trail is located on national forest land.

Approximately 53 miles, or 36%, of the Taconite State Trail is located on state owned or administered land.
(*Includes 16 miles of easements.)*



Taconite State Trail Master Plan – Trail Alignment

have a high potential for wildlife production, public hunting, trapping, fishing, and other compatible recreational uses. They are the backbone to DNR's wildlife management efforts in Minnesota and are key to protecting wildlife habitat for future generations; providing citizens with opportunities for hunting, fishing and wildlife watching; and promoting important wildlife-based tourism in the state. Today there are over 1.3 million acres of high-quality habitat in 1,440 WMAs throughout the state.

The Taconite State Trail crosses two WMAs within Itasca County: Pelouquin WMA is located just west of McCarthy Beach State Park, accessible off of Link Lake State Forest Road and consists of 322 acres (Planning Segment 5); and Prairie Lake Deer Yard WMA located north of Grand Rapids consists of 564 acres (Planning Segment 8).

Ruffed Grouse Management Areas (RGMAs) are located in areas that have good potential for producing grouse and woodcock and are managed to promote suitable habitat conditions for these species. RGMAs are maintained in partnership with government landowners, The Ruffed Grouse Society, volunteers, and by DNR wildlife managers. Because of the variety of ownerships and funding for maintenance, amenities and conditions can vary among locations. RGMAs may be managed by these various agencies through cooperative agreements or by a single agency. RGMAs are destinations for upland forest bird hunting, although they are also open other forms of hunting and recreation.

The Taconite State Trail crosses two RGMAs, both are located just west of McCarthy Beach State Park in Itasca County: **Peloquin RGMA** consists of 2,738 acres and includes about 11.4 miles of hunter walking trails; and **Stoney Ridge RGMA** covers 3,364 acres and includes hunter walking and cross country ski trails that are managed by Itasca County.

The **aquatic management area (AMA)** program administers hundreds of shore land miles on lakes and streams across Minnesota. Aquatic Management Areas ensure that critical fish and wildlife habitat will be conserved, non-boat public access to water resources will be available, and habitat can be developed on previously disturbed areas. The program provides angler and management access, protects critical fish spawning and other aquatic habitat by protecting adjacent shoreland, and provides areas for education and research. The Taconite State Trail intersects four AMAs: Purvis Creek (Segment 1); East Two River and West Two River (Segment 2); and Bear River (Segment 5). ([Minnesota Statute 86A.05, Subd. 14](#))

School Trust Lands – The DNR manages 2.5 million acres of school trust lands and one million acres of mineral rights to support public schools. School trust lands are owned by the state in trust for all public schools of Minnesota, they are not owned by the local school district. Much of the land is intermixed with county, federal, private, and other state lands. Approximately 19 miles of the Taconite State Trail is located on school trust lands.

Taconite State Trail Master Plan – Trail Alignment

The school trust lands are managed for maximum long-term economic return under sound natural resource and conservation practices. Revenues generated from school trust lands are credited to the permanent school fund which is managed by the State Board of Investment. Interest and dividends from the permanent school fund are transferred twice a year to all school districts of the state.

County and Local Government Interests

Approximately 61 miles of the trail are located on county and local government lands. Where the trail is located on county owned lands (54 miles), whether in St. Louis (23 miles) or Itasca County (31 miles), they are typically administered as either forest or county-tax forfeited lands. Local government ownership includes city, township and school district properties for a length of about 7 miles. Much of the county-owned lands are located within the boundaries of national and state forests.

Tax-forfeit lands are lands whose title have been defaulted to the State of Minnesota due to non-payment of property taxes. Minnesota Statutes ([Chapter 282](#)) gives the county authority over the sale and management of tax-forfeited lands. Upon forfeiture, parcels are classified as either conservation or non-conservation. Conservation parcels are retained for forest management and non-conservation parcels are appraised and put for sale at public auction. Tax forfeit lands, for the most part, are open to the public for hunting, fishing, hiking, camping and other forms of dispersed recreation, including trails.

St. Louis and Itasca counties are committed to ensuring that the economic benefits and environmental integrity of the natural resources are available to present and future generations. County management of tax-forfeited lands provides benefits including healthy forests, wildlife habitat and fisheries, accessible recreational opportunities, forest diversity, forest products, and financial returns that all contribute to local community viability. Ensuring a sustainable resource on tax-forfeited lands provides for these benefits into the future.

Several parcels along the Taconite State Trail are owned by townships or cities, and are also considered public lands. In these locations, a formal agreement with the DNR is in place that allows for the management and operation of the state trail. As with other cooperative agreements, it is important to keep them up-to-date to appropriately reflect and coordinate community and local government interests and management needs.

Private Interests

Approximately 5 miles of the Taconite State Trail are located on private properties, including private citizens, small businesses and large corporations. The DNR has a variety of interests and agreements in place with private landowners, including easements mentioned above (state interests), some of which include seasonal or types of use limitations. Trail uses must comply with these landowner agreements. However, these agreements may be revised or updated to accommodate new uses, as agreed upon by individual landowners.

About 61 miles, or 42%, of the Taconite State Trail is located on county and local government owned land.

About 5 miles, or 3%, of the Taconite State Trail is located on privately owned land.

Sustainable Trail Development Criteria

The Taconite State Trail is currently developed for snowmobiling from Ely to Grand Rapids, with multiple summer uses provided intermittently. Expanding or increasing summer uses by length and types of use, compatibility and sustainability must be taken into consideration. In some cases, portions are considered to be feasible and sustainable in its current conditions. However, in other places, the trail may require a range of improvements to its design or construction of a different alignment in order to provide a sustainable and appropriate treadway for summer or year-round use. The varied terrain and landscapes that make this such a popular snowmobile trail pose a number of challenges for non-winter uses, particularly hiking, biking, and motorized recreation.

The DNR's 2007 *Trail Planning, Design, and Development Guidelines* manual (2007) includes guidelines that emphasize the development of physically and ecologically sustainable trails that will serve the needs of users for generations to come while preserving the sense of place and protecting the surrounding environment. Sustainability guidelines, such as those listed below, will be taken into consideration when evaluating proposed changes to the trail.

Physically and ecologically sustainable trail routes

- **Physical sustainability** - Designing trails to retain their physical form over years of use and natural forces acting on them is a major theme of the guidelines. Guidelines relate to a trail's classification, general and technical design, and stewardship are all focused on developing trails that are physically sustainable.
- **Ecological sustainability** – Minimize the ecological impacts of trails, especially sensitive areas, is a major theme of the guidelines – develop trails that are enjoyable to use without diminishing the environment and sense of place in the process.

Natural surfaced trails:

- Stable, compacted tread material – soils
- Limited displacement – tread material, shape, usage restrictions and or maintenance minimize and/or accommodate displacement
- Tread drainage/erosion potential
- Narrow tread – concentrate compaction and reduce impacts
- Minimal hydrologic impacts – will trail use impact drainage or local hydrology
- Trail maintenance and management

Initial evaluation may include:

- Suitability for summer or year-round use
- Considerations – pros/cons
- Existing uses of corridor – shared or overlapping responsibilities
- Safety considerations – shared use, width, compatibility with existing uses, topography/terrain
- Is there a destination to/from this route? If so, what/where is the destination?
- What trail amenities are available – parking, toilets, signage, pull-offs for resting, etc.

The varied terrain and landscapes that make this such a popular snowmobile trail pose a number of challenges for non-winter uses...

Feasibility for Multiple Trail Uses

Feasibility for allowed uses on any trail segment may change over time due to changing conditions. Examples of changing conditions include: changes in landownership interest or administrator; changes in trail demand or seasons of use; reroutes or alternate trail routes for specific uses; or changes to rules or management policies that apply to underlying lands. Should the existing conditions change, specific project proposals or locations may be re-assessed and the feasibility of the proposed actions may be adjusted.

Each planning segment includes a brief description of existing and potential trail uses and feasibility of those uses on the existing trail corridor. The levels of feasibility are defined as the following:

Feasibility Level	Description
<p>High Feasibility</p>	<ul style="list-style-type: none"> • Little to no work (physical changes, improvements or rerouting) is needed to implement a new use or proposed uses; • The treadway is considered physically stable and sustainable for new/proposed use; and • Landowner agreements or land administration already allows the proposed use or landowner or administrator has agreed to the change in use.
<p>Moderate Feasibility</p>	<ul style="list-style-type: none"> • Existing treadway could sustain proposed use with some minor to moderate improvements, minor reroutes (< 1 continuous mile), or some design considerations; • The treadway may need relatively minor modifications to avoid or minimize impacts to sensitive natural resources (wetland, stream, plant community, etc.); and/or • The treadway may require an update, further coordination or agreement from landowner or administrator (landowner is agreeable to proposed use).
<p>Low Feasibility</p>	<ul style="list-style-type: none"> • Proposed use is incompatible or restricted by land management laws, rules or policies; or • Proposed use would require substantial construction, modifications, or other design changes (physical changes) in order to accommodate sustainable use on the existing treadway; or • The treadway includes landowner or administrator limitations or restrictions regarding proposed use (landowner or administrator does not agree to proposed use).

Challenges that are identified do not necessarily prohibit particular uses, but have issues that need to be worked through in order to accommodate the proposed change. In some cases, the trail alignment may need to be re-located. Permanent or temporary reroutes may be necessary to implement other uses.

Trail supervisors and managers may look to improve the alignment as issues arise or change over time. Opportunities to reduce potential conflicts with resource management issues or landowners should be taken into consideration and pursued.

DNR staff need flexibility to work with other land administrations and owners as necessitated, whether by external circumstances or by internal (DNR) management priorities and responsibilities.

Taconite State Trail Master Plan – Trail Alignment

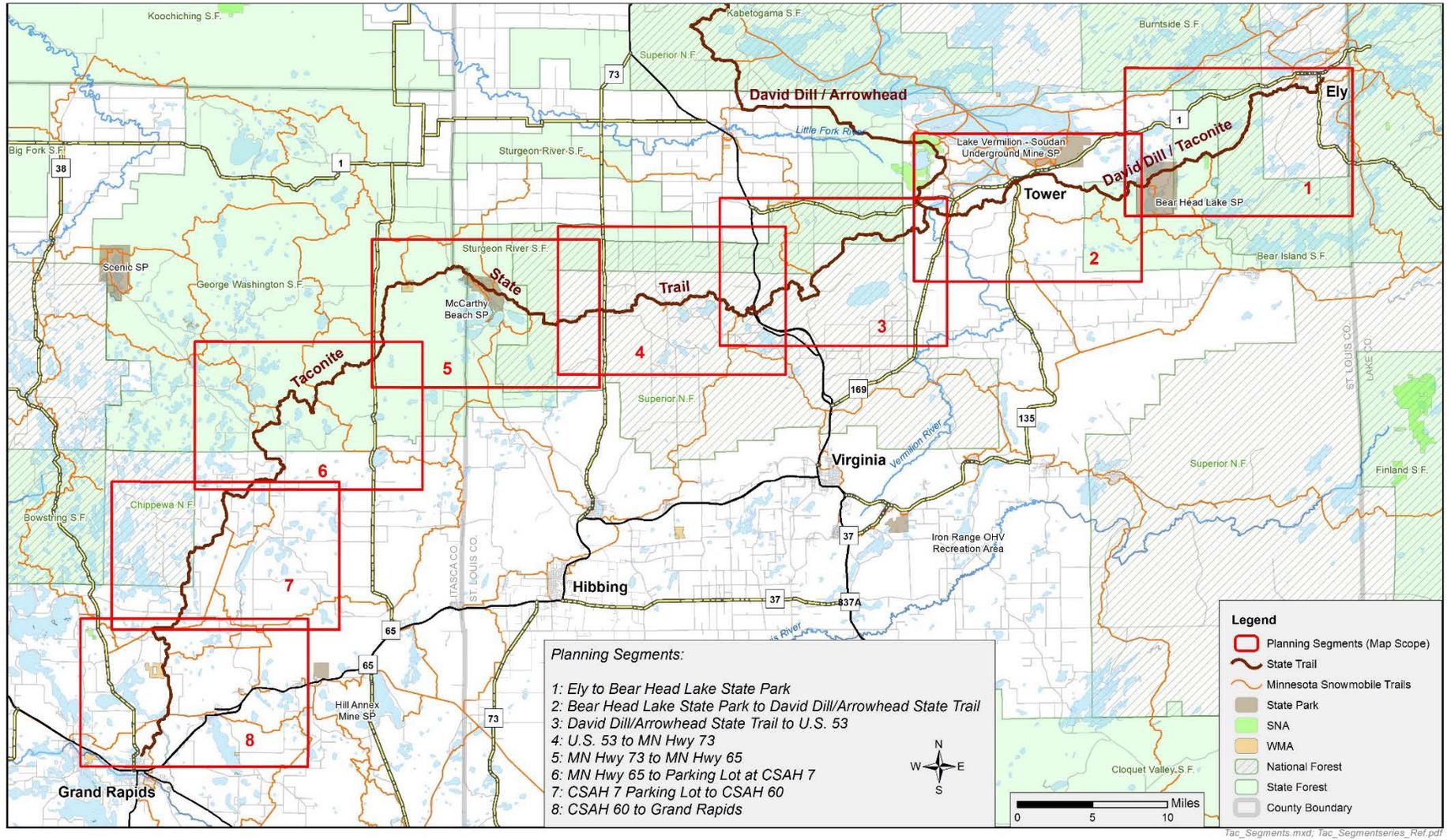
Trail Planning Segments and Details

For purposes of this plan, the Taconite State Trail corridor has been divided into eight planning segments, listed below, for ease of describing and discussing the unique resources and features along that portion of the trail. The eight planning segments are defined as the following:

- 1: Ely to Bear Head Lake State Park
- 2: Bear Head Lake State Park to David Dill/Arrowhead State Trail
- 3: David Dill/Arrowhead State Trail to U.S. 53
- 4: U.S. 53 to MN Hwy 73
- 5: MN Hwy 73 to MN Hwy 65
- 6: MN Hwy 65 to Parking Lot at County State Aid Highway (CSAH) 7
- 7: CSAH 7 Parking Lot to CSAH 60
- 8: CSAH 60 to Grand Rapids

An overview of the eight Planning Segments are illustrated in **Figure 3.2**, with corresponding segment maps following each detailed segment summary.

Figure 3.2. Taconite State Trail Planning Segments Overview



Taconite State Trail Master Plan – Trail Alignment

Planning Segment 1: Ely to Bear Head Lake State Park

Corridor Description

This segment of the Taconite State Trail is part of the **David Dill/Taconite State Trail** segment, authorized in 2016 by the Minnesota Legislature.

The eastern end of the Taconite State Trail is in Ely, and has two separate access points. One access point is at the southeastern edge of Ely, on city-owned land. This trailhead has a parking facility for up to 15 vehicles with trailers (old airport location). The second access point is near the west end of Ely, and does not currently have any designated parking. The 1-mile Taconite Spur/Ely Igloos Trail connects to the Taconite State Trail from this trail access.

The trail corridor is located on federal, state, county, city and private lands, and is surrounded by tall pines, rock outcrops, and rolling hills. As the trail travels west it enters Bear Island State Forest and then Bear Head Lake State Park.

The trail crosses streams and wetlands as it approaches and enters Bear Head Lake State Park. Then, west of County Road 128, the trail follows a state park road (Eagles Nest #3 Access Road) for about half a mile, which has a gravel surface and is open to motor vehicles to the public water access on Eagles Nest Lake #3. As the trail continues through the park, the corridor narrows slightly. Cub Lake Spur, a 1-mile recreational trail, branches off of the Taconite State Trail and provides snowmobile access into the park, ending at the trail center near Bear Head Lake.

A snowmobile shelter is located east of Bear Head Lake State Park, overlooking Purvis Lake. Another snowmobile shelter is located along the trail in the western portion of the park.

Nine stream crossings are located along this segment of the Taconite State Trail, including: an unnamed stream, which is also designated as the Purvis Creek AMA; Longstorff Creek, which is a designated trout stream; and a tributary to Longstorff Creek (culvert). The western crossing of Longstorff Creek has a wood bridge spanning 31 feet. The second crossing of Longstorff Creek (also locally known as Mitchell Creek, located between Twin and Mitchell lakes), does not currently have a bridge. All streams within this segment are in the Rainy River Watershed.

Trail Use

This segment of the Taconite State Trail currently allows snowmobiling, hiking, horseback riding and mountain biking. However, this trail segment is mostly used by snowmobilers. While summer uses are allowed, this segment is not actively maintained for summer recreation. This is because many wetlands are impassable during non-winter months, particularly a large section located just east of Bear Head Lake State Park and west of Purvis Lake – Ober Foundation SNA. Also, several current landowner agreements allow for only winter use or snowmobiling, which means adding new summer uses to the existing trail could be a challenge.

*Planning Segment
Length: 19.2 Miles*



Entrance to Bear Head Lake State Park.

Taconite State Trail Master Plan – Trail Alignment

Horseback riding is allowed on the Taconite State Trail in Bear Head Lake State Park. However, there are no horse-related facilities in the park or nearby, and the trail within the park is not typically used for horseback riding. Horseback riders may use portions of the trail between Ely and Purvis Lake, but a continuous route may not be feasible due to wetlands and privately-owned land.

Mountain biking and fat biking are mostly limited to segments near Ely and within Bear Head Lake State Park. However, these trail segments have not been maintained for mountain biking or groomed for fat biking. The treadway is wider and more rugged than other maintained bike and mountain bike trails in the area.

This section of the trail is used for hiking, although it is quite remote and has few amenities and access points. More suitable and desirable hiking opportunities exist in the surrounding area.

In certain areas, this segment could physically sustain increased trail use and offer a wider variety of summer uses such as hiking, biking, horseback riding, and OHV riding. However, there are a number of resource challenges and competing interests along this segment of the trail. Consideration of new uses to this trail corridor must also be compatible with land management goals and agreeable with landowners.

Trail design techniques will be applied to help avoid, minimize or mitigate potential wetland impacts in numerous areas along the trail (not confined to this segment). However, in some locations separate summer routes or multiple treadways may be necessary to avoid sensitive natural resources and private lands along this segment. For instance, if OHV use is proposed along this segment, alternate routes would be required to avoid Bear Head Lake State Park, and a separate treadway may also be needed to avoid sensitive resources and private lands in order to provide a quality OHV experience and continuous route from Ely to Tower.

Further considerations are also required regarding landownership and land administrations as some existing landowner agreements within this segment do not provide for summer uses and limit or restrict certain types of uses across those properties.

Trail Connections

David Dill Memorial Trail – The David Dill Memorial Trail was authorized in 2016 and consists of a combination of existing trail segments, including all or portions portions of the Arrowhead, Taconite, Tomahawk trails. The **David Dill/Taconite Trail** consists of 38.5 miles of the Taconite State Trail, from Ely to the David Dill/Arrowhead State Trail intersection just west of Tower (Planning Segments 1 and 2).

David Dill/Tomahawk Trail (Snowmobile) – The David Dill/Tomahawk Trail begins at the intersection with the Taconite State Trail in Ely, then continues south/southeast and intersects with the Stony Spur grant-in-aid snowmobile

Taconite State Trail Master Plan – Trail Alignment

trail and Stony Spur II grant-in-aid ATV trail and continues on to connect with additional snowmobile trails, ending at the CJ Ramstad/Northshore State Trail. The David Dill/Tomahawk Trail is over 70 miles long and is maintained by Ely Igloos Snowmobile Club as a grant-in-aid trail.

Ely Igloo GIA Snowmobile Trails – consists of approximately 40 miles of snowmobile trails, including a one-mile connection to the Taconite State Trail from the west end of Ely. These trails are maintained and groomed by Ely Igloo Snowmobile Club. A portion of this trail is also open to ATV use during summer/fall, between Ely and the Taconite State Trail corridor.

Bear Head Lake State Park – The Taconite State Trail travels for 3.5 miles through **Bear Head Lake State Park** before continuing on through Bear Island State Forest. While well-maintained and heavily used during the winter for snowmobiling, the state trail corridor within the park is minimally maintained and used for summer uses, such as mountain biking and hiking. Within the park, Cub Lake Spur Trail leads directly to the trail center. This 1-mile spur trail consists of moderately difficult, hilly terrain and is maintained for year-round recreational use. A small parking lot is available for summer use to access the Cub Lake Spur Trail. Uses of this trail include snowmobiling, cross-country skiing, mountain biking, fat-biking, and hiking. A year-round, multi-use trail center with a fireplace, seating, restrooms and drinking water was built in 2013.

Prospectors Loop ATV Trail System – A new trail system in this area has been proposed by the non-profit organization Prospectors Loop Alliance. The organization is working to develop, promote and maintain a system of ATV trails and to provide ATV-riding safety education. The proposed Prospectors Loop ATV Trail System is located in Lake and St. Louis counties, connecting the communities of Ely, Babbitt, Embarrass, Tower and Soudan. The proposed ATV trail will consist of a combination of existing trails, forest roads, and new trail construction to create a connected system of over 200 miles. The proposed trail system includes three intersections or connections with the Taconite State Trail between Ely and Soudan (Planning Segments 1, 2). In Ely, the Prospectors Trail is proposed to utilize the David Dill/Tomahawk Trail, extending to the east, and connecting to additional ATV trails in the region/Lake County Regional ATV Trail System.

Mesabi Regional Trail – The Mesabi Trail is a regional trail project that is managed and operated by the St. Louis and Lake Counties Regional Rail Authority in partnership with the Itasca County Rail Authority. The proposed trail will travel across the Iron Range from Grand Rapids to Ely, for an estimated 145 miles. Currently, 120 miles are developed (85%), with the longest contiguous stretch consisting of about 68 miles from Grand Rapids to Virginia. This is not a rail-trail with level terrain from end to end. Rather, the terrain varies from rolling hills on the western end to generally level terrain toward the eastern end. Hills may be up to an 8% grade.

The Mesabi Regional Trail requires a Wheel Pass (fee) for riders 18 years and older using a bicycle, inline skates, or skateboard. Hikers, joggers, walkers and



Bear Head Lake State Park Trail Center in winter.

Taconite State Trail Master Plan – Trail Alignment

people with disabilities are not required to purchase a pass. Revenue from the Wheel Pass supports maintenance needs for the trail.

In the Ely area, the Mesabi Trail has not yet been developed, but plans are in progress and a new segment in Eagles Nest Township is under construction. Potential partnership with the DNR may be considered as a paved bike route into Ely is explored, including interest in portions of the Taconite State Trail corridor. Potential for sharing the existing Taconite State Trail corridor is subject to landowner and administrator agreements and existing and proposed trail uses, including multi-use compatibility. Currently, the Mesabi Regional Trail uses 6 miles of the Taconite State Trail corridor in Grand Rapids and includes 6 miles of paved trail (See Planning Segment 8).

Taconite Spur and Stony Spur Trail – The Taconite and Stony Spur Trail is a 57-mile grant-in-aid snowmobile trail that connects to Babbitt and is maintained by the Babbitt ATV and Snowmobile Club.

Landownership and Administration

This segment of the Taconite State Trail includes many landowners, including the city of Ely, Morse Township, St. Louis County, the State of Minnesota (DNR Forestry Division, Parks and Trails Division), the USFS (Superior National Forest) and several private citizens. In most cases, the DNR has secured permanent easements for recreational use of the state trail. However, there are places where other forms of agreements (non-permanent) are in place to allow for the state trail. It is a priority to update landowner agreements and secure more permanent agreements where possible.

Superior National Forest (Planning Segments 1, 3, 4, 5)

The Taconite State Trail is located on several parcels of USFS land within the Superior National Forest boundary. However, within this planning segment there are currently no other recreational trail or forest road connections to the Taconite State Trail on these federal lands.

Bear Island State Forest (Planning Segments 1, 2)

Although the Taconite State Trail is located within the boundary of Bear Island State Forest, much of the trail is located on county tax-forfeited, private and national forest lands. The trail is located within areas of the state forest that include active timber harvest sites. Temporary or minor reroutes may occur as necessary to accommodate forest management activities and for recreational user safety. Approximately 15.2 miles of the state trail is located within the Bear Island State Forest boundary.

In 2008, Bear Island State Forest was included in the **Northern St. Louis County – North Group**, along with Burntside, Kabetogama, and Lake Jeanette state forests, for the State Forest Classification and Road and Trail Designation process. Bear Island State Forest is classified as having a mixed motor vehicle/OHV classification, specifying both “*Limited*” and “*Managed*” areas. State forest lands located outside the Superior National Forest boundary are classified as “*managed*,” as per motor vehicle use, and all other state lands located inside the national forest boundary are classified as “*limited*” to be

Taconite State Trail Master Plan – Trail Alignment

consistent with USFS travel management policy. However, no OHV trails are designated within Bear Island State Forest and OHV travel is limited to forest roads (FR) and minimum maintenance roads (MMR).

Purvis Lake – Ober Foundation SNA

Purvis Lake – Ober Foundation Scientific and Natural Area (SNA) is located in St. Louis County, just east of Bear Head Lake State Park and consists of 140 acres within Bear Island State Forest. It is named after its early owner, who defended its forest and wolf population with a shotgun for many years. He eventually gifted the property to **The Nature Conservancy (TNC)** as a wolf sanctuary at a time when wolves had few defenders. TNC later transferred the property, with its diverse plant communities, to the state to be managed as an SNA.

The topography reflects the effects of numerous glacial advances, with alternating lakes, bogs, and rocky ridges. This beautiful old forest of white and red pine has escaped extensive logging. Popular times to visit are during winter for cross-country skiing or snowshoeing and summer for hiking and bird-watching. The SNA is closed to hunting and trapping. Motorized recreation is not allowed in the SNA.

The Taconite State Trail is adjacent to the northern boundary of this SNA, and intersects with access routes, but it does not enter or cross SNA land.

Bear Head Lake State Park (Planning segments 1, 2)

Bear Head Lake State Park is located about 16 miles east of Tower and 18 miles west of Ely, just south of the Boundary Waters Canoe Area Wilderness (BWCAW). More than 81,000 people visit the 5,685-acre park each year and about 28,000 people camp there. The park surrounds Bear Head Lake and includes several small lakes, two of which are stocked with brook and rainbow trout. Bear Head Lake provides opportunities to fish for walleye, northern pike, largemouth bass, black crappie, and panfish.

The park is dotted with lakes, making it popular for canoeing and fishing. The woods are made up of red and white pine, spruce, paper birch and fir on the highlands and tamarack, black spruce and white cedar on the lowlands. Small, clear trout lakes are set in a rugged terrain and give visitors a look at the type of scenic beauty that attracts so many visitors to the BWCAW each year. Bear Head Lake is completely contained within the park boundary and has a 10 mile-per-hour speed limit for motorized boats. The lake's clear waters and quiet nature make it an ideal location for paddling.

Bear Head State Park has 14 miles of hiking trails, some of which connect with the Taconite State Trail. In the winter, the park has 9 miles of groomed cross-country ski trails and 4.5 miles of snowmobile trails (including the Taconite State Trail). Snowshoeing is permitted anywhere in the park except on the groomed trails. OHV use within state parks is prohibited ([MN Rules, 6100.1900](#)), and state parks are closed to hunting, with the exception of authorized special hunts ([MN Rules, 6100.0800](#)).

OHV use within state parks is prohibited by rules, [MN Rules 6100.1900](#).

Taconite State Trail Master Plan – Trail Alignment

Camping and lodging facilities in the park include 73 drive-in campsites, four backpack campsites, two canoe campsites, one group camp, five camper cabins and one guesthouse, along with two shower buildings and several toilets. Other recreational facilities include a trail center building with restrooms and seating, a picnic area and shelter, fishing pier, swimming beach, and two boat accesses. Boat, motor, canoe, kayak and snowshoe rentals are also available in the park.

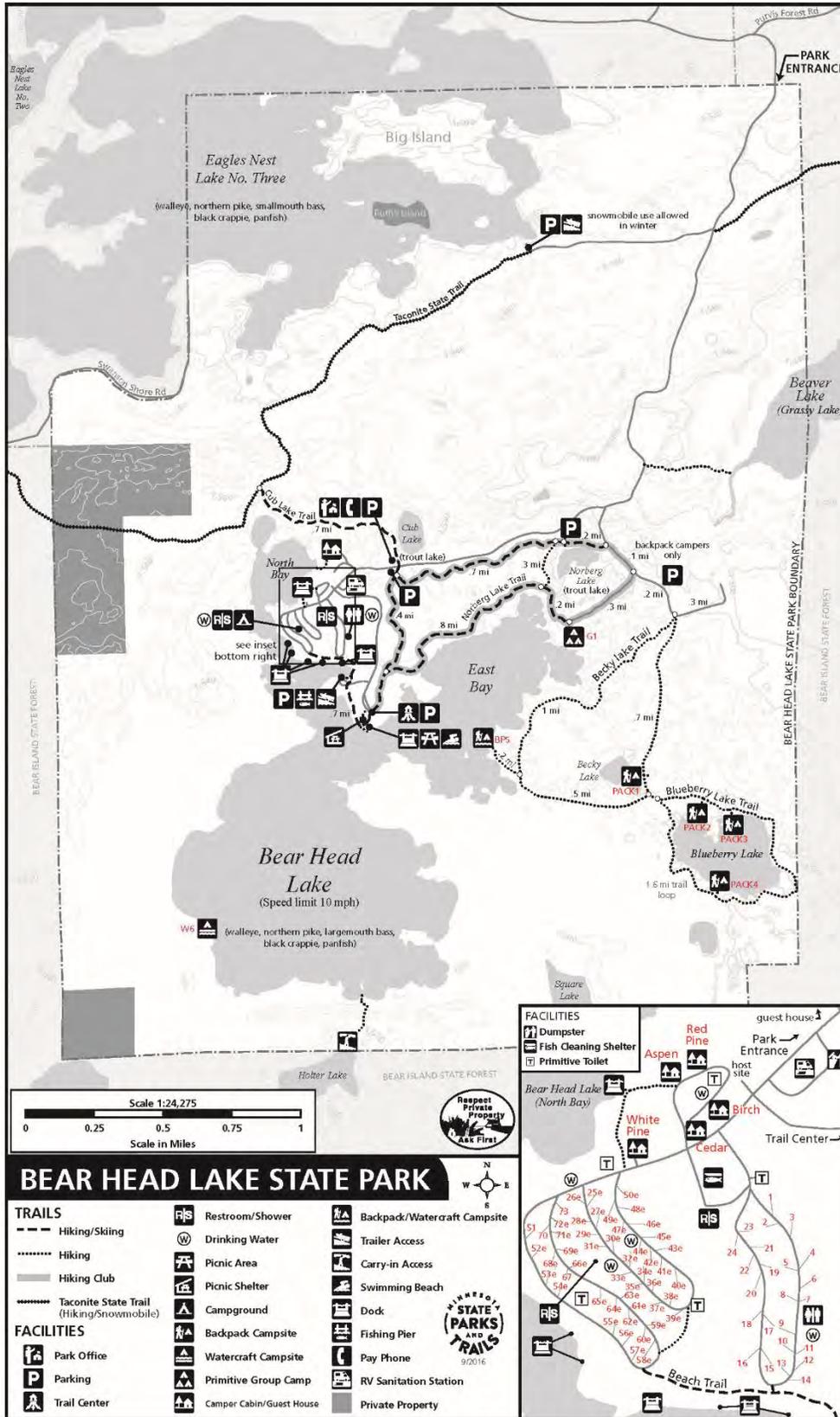
The trail passes through ecologically sensitive areas within Bear Head Lake State Park. **The entire park is ranked as a site of high biodiversity significance**, which means it contains “very good quality occurrences of the rarest species, high-quality examples of rare native plant communities, and/or important functional landscapes.” (Regarding “rarest species”: This is one of the criteria that was used to rank the park site with high biodiversity significance. Also see **Pages 88-91.**)

In the west end of the park, the Taconite State Trail runs through a white pine - red pine forest (Native Plant Community classification FDn43a), which includes a canopy dominated by white and red pine with occasional paper birch, balsam fir, white spruce, quaking aspen, or white cedar. This native plant community is ranked S2 “imperiled”, meaning it is very rare in Minnesota and is at high risk of disappearing from the state. Management of the state park includes protecting and preserving rare and high-quality native plant communities ([M.S. 86A.05, Subd. 2](#)).

If proposed changes to the state trail within a state park vary from the park’s approved management plan, an amendment to the park’s management plan is required. The amendment must address any proposed changes to the natural and cultural resources, interpretive services, recreational opportunities, and administrative activities at the unit. ([MN Statutes 86A.09, Subd. 6.](#))

Taconite State Trail Master Plan – Trail Alignment

Figure 3.3. Bear Head Lake State Park Map



Taconite State Trail Master Plan – Trail Alignment

Trail Use Interests and Feasibility

Interests: Snowmobiling is recommended as the trail's primary use. There is high public interest to expand summer trail uses along this segment, particularly OHV use and bicycling.

- There is strong local interest and support to add motorized use to this segment of the trail.
- OHVs are prohibited in state parks per [MN Rules 6100.1900](#), thus an OHV route around the park would be necessary. Also, the State Park Visitor Surveys and public comments during this planning process indicate strong opposition to adding OHV use within state parks.
- Motorized trail user groups are actively seeking a route that would connect Ely to Tower, and would travel near or to Bear Head Lake and Lake Vermilion-Soudan Underground Mine state parks.
- The Mesabi Trail Organization is interested in developing a paved bike trail connection into Ely. A potential route may overlap with a portion of the existing Taconite State Trail corridor just west of Ely.

Feasibility of adding seasonal uses to existing trail treadway/corridor:

- The trail segment is used for **hiking** and **horseback riding**. However, its use is limited due to wetlands and varied terrain.
- The trail segment is used for **bicycling**. However, its use is limited due to wetlands. Bicycling along this segment primarily occurs within Tower as there is low to moderate feasibility between Ely and Bear Head Lake State Park, and moderate feasibility within Bear Head Lake State Park (planning and minor corridor improvements would be required to add mountain biking). Additional corridor improvements would be required (slopes, erosion) to consider a paved bike trail along this segment.
- **OHV** use has been proposed, with low to moderate feasibility based on existing conditions, and low feasibility within the state park.
 - Potential OHV trail connections – proposed Prospectors Loop ATV Trail may intersect the Taconite State Trail along this segment.

Challenges Summary: Natural resources such as trout stream crossings, wetlands, and other sensitive resources. Forest management activities may limit non-winter recreational uses. Landownership and administration (private; local government; state park; national, state, and county forests).

- **Natural Resources**
 - **Wetlands and sensitive resources** – Wetlands and sensitive resources are located along and adjacent the state trail corridor in this segment. For summer use to occupy this entire segment, several wetlands and wet areas will need reroutes or construction of improvements to sustain summer use. A sizable stretch of wetland is located just east of Bear Head Lake State Park.
 - **Steep slopes, erosion** – An additional reroute may be necessary within the park as it contains steep slopes where erosion and safety issues would need to be addressed to accommodate summer uses.
 - **Trout stream** - This segment includes a trail crossing of a protected

Taconite State Trail Master Plan – Trail Alignment

- tributary to a trout stream and a designated trout stream (Longstorff Creek).
- **Forest management activities** – Temporary or permanent reroutes may be necessary to avoid areas of logging activity for safety reasons or to avoid seasonal conflicts.
 - **State Park** – The trail is developed through sensitive resources within Bear Head Lake State Park.
 - **State Park Rules (2016)** – Minnesota Rules prohibit the use of OHVs within state parks ([MN Rules 6100.1900](#)). OHV use along the Taconite State Trail will require reroutes or alternate routes to avoid state park lands.
 - **State Park Management Plan** – Proposed uses within a state park must be consistent and compatible with the approved management plan. Proposed changes that are inconsistent with the existing plan require an amendment prior to implementation. Management Plan amendments include public participation and review.
 - **Landowners** of the trail corridor include: city of Ely; Morse Township; USFS, Superior NF; private individuals; St. Louis County, including Tax-forfeited parcels; and state ownership – forestry and state park management. Some agreements specify snowmobile trail use only; updates to some agreements are necessary to allow for other trail uses, including bicycling and OHVs. Some private ownership may have fallen into tax forfeiture status where St. Louis County would be the administrator of those lands.

Communities

Ely

Located in northeastern St. Louis County, Ely (pop. 3,460 in 2010) is about 110 miles north of Duluth and 255 miles north of Minneapolis/St. Paul. Best known as a gateway to the Boundary Waters Canoe Area Wilderness (BWCAW), Ely attracts outdoor recreationists and tourists year-round.

The BWCAW is the largest wilderness area east of the Rocky Mountains, consisting of more than one million acres and extending nearly 150 miles along the International Boundary adjacent to Canada's Quetico Provincial National Park. The unique area has over 1,200 miles of canoe routes, several hiking trails, and over 2,000 designated campsites. This area was set aside in 1926 to preserve its primitive character, and in 1964 was made part of the National Wilderness Preservation System, allowing visitors to canoe, portage and camp in the spirit of the French Voyageurs. The BWCAW is the most-visited wilderness in the U.S.

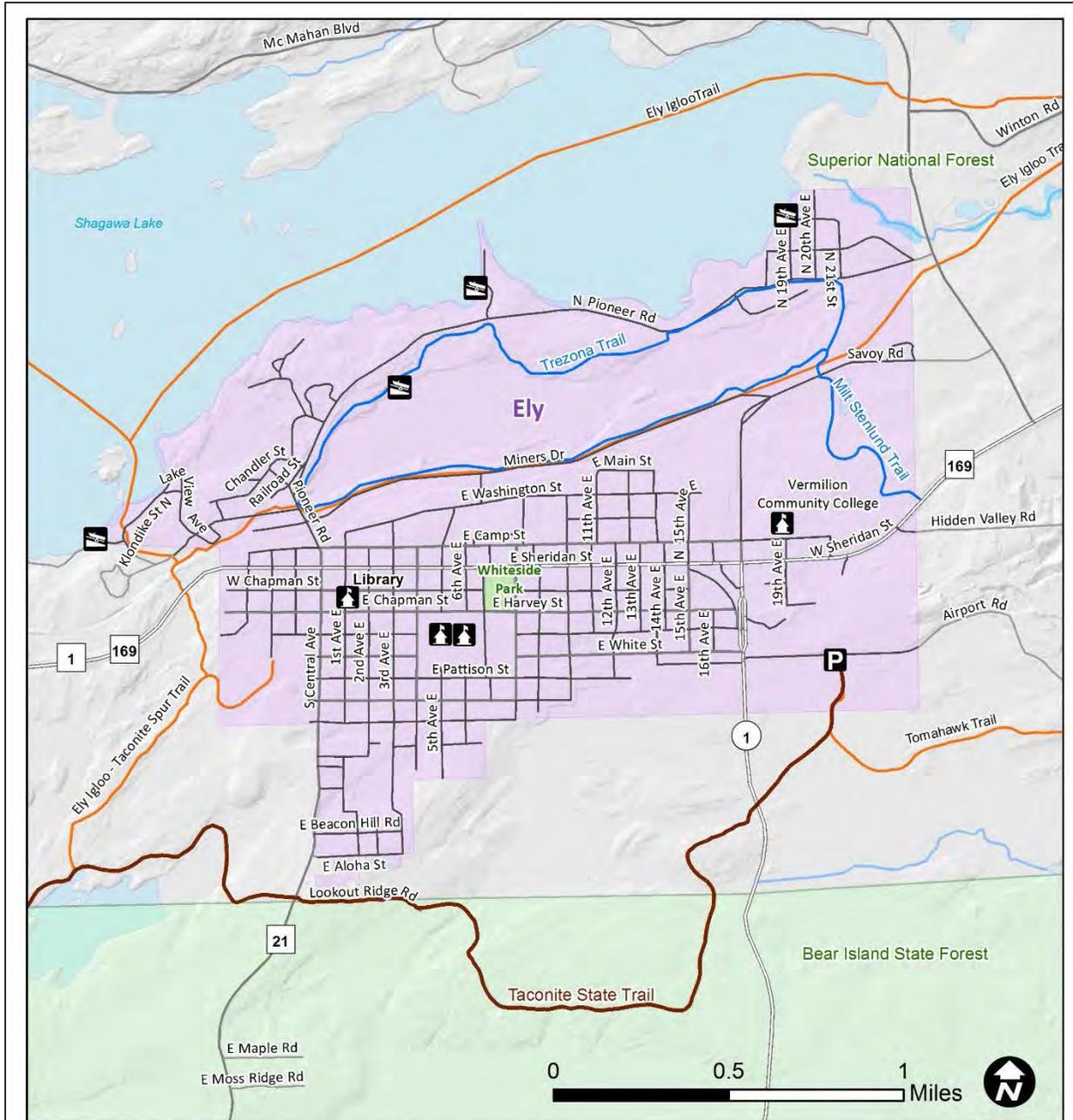
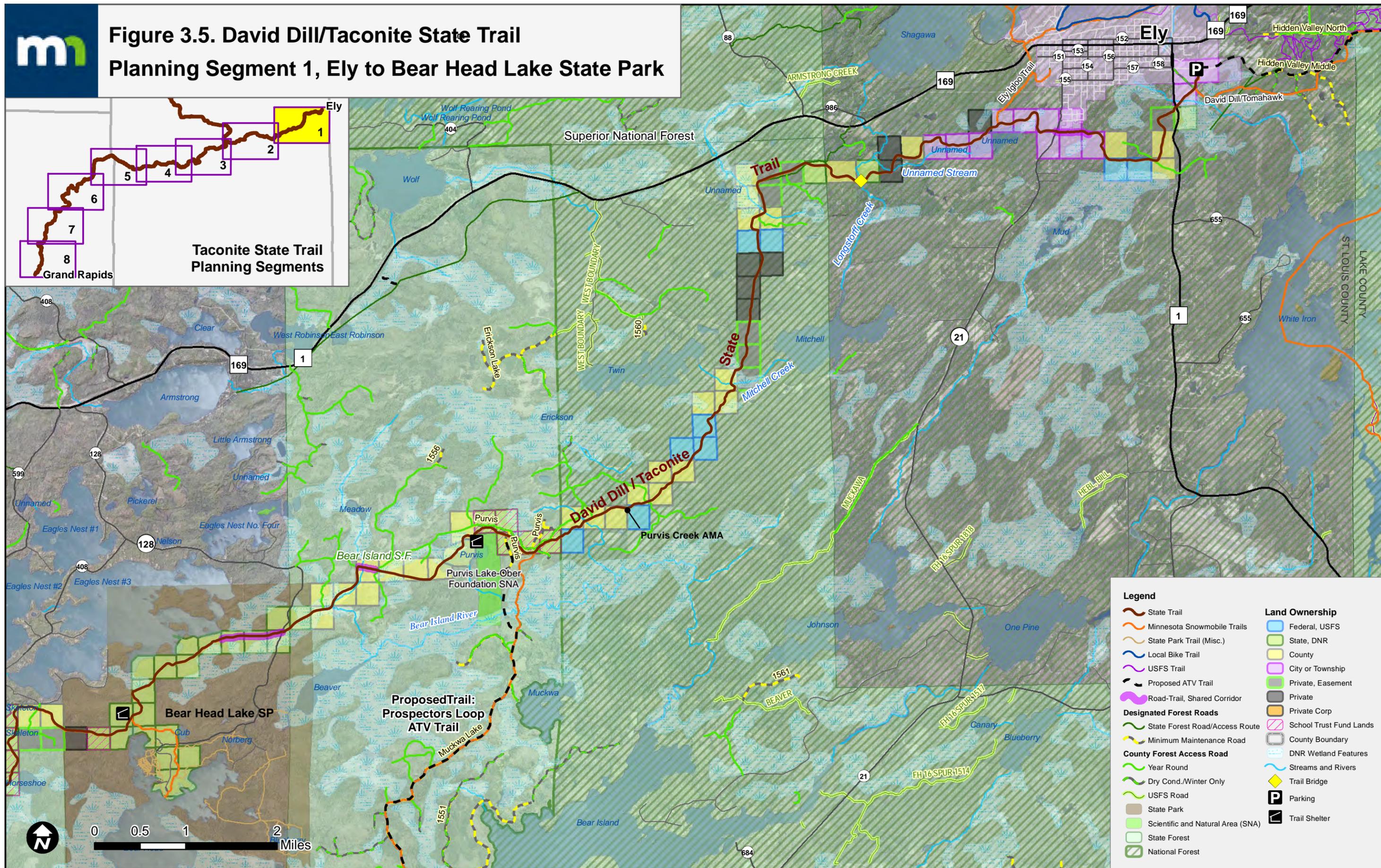


Figure 3.4: City of Ely





**Figure 3.5. David Dill/Taconite State Trail
Planning Segment 1, Ely to Bear Head Lake State Park**



Planning Segment 2: Bear Head Lake State Park to David Dill/Arrowhead State Trail

*Planning Segment
Length: 19.3 Miles*

This segment of the Taconite State Trail is part of the **David Dill/Taconite State Trail** segment, authorized by the Minnesota Legislature in 2016.

As the Taconite State Trail heads west from Bear Head Lake State Park, it meanders through tall pines and over rolling hills on county and state forest lands. The trail crosses several wetlands within Bear Island State Forest, as well as sharing approximately 2 miles of Murray Spur, a forest road. The trail then continues west on county lands and crosses East Two River, a designated trout stream. As it approaches Soudan, the trail follows an abandoned railroad grade for 1.3 miles, where the treadway remains on the elevated, hardened surface.

The trail continues toward Tower, where it crosses East Two River two more times. A short trail spur provides a snowmobile connection to the business district of Tower (no summer use) as well as to the Iron Ore grant-in-aid snowmobile trails that continue north to Lake Vermilion and south toward Hoyt Lakes. Continuing westward, the trail crosses West Two River trout stream and follows rolling hills before intersecting Highway 169, where a trail parking lot is located with a capacity for at least eight vehicles with trailers. About 1.5 miles west of the parking lot are scenic trail views and a 140-foot bridge that crosses Pike River before it intersects with the David Dill/Arrowhead State Trail.

This segment includes 12 stream crossings, five of which are designated trout streams (four East Two River crossings and one West Two River crossing). Three of the East Two River crossings and the West Two River crossing have trail bridges, and there is a culvert in place at one of the East Two River crossings in Tower. Two easements for aquatic management areas (AMAs) are located at the intersections with the Taconite State Trail; one at the first intersection with East Two River and the other is at the intersection with West Two River.

Trail Use

This planning segment is mostly used for snowmobiling; it is not maintained or managed for summer recreation. However, people do walk/jog/hike and bike along a 1.5-mile section of abandoned railroad grade south of Soudan.

Potential for expanding summer use may be considered along portions of this planning segment. Challenges for adding summer use include wetlands and areas of standing water, a need to improve bridges and approaches, and the need to coordinate with multiple landowners.

Trail Connections

- **Grant-in-aid Snowmobile Trails:** Multiple grant-in-aid snowmobile trails intersect, connect to, or branch off from the Taconite State Trail, creating a system or network of snowmobile trails throughout the region.
 - **Iron Ore Trails** - The Iron Ore Trails travel across and around Lake Vermilion and through Tower, and intersect with the Taconite State Trail before extending south to the Taconite and Stony Spur Trail. A second intersection with the Taconite trail is located at the trail

Taconite State Trail Master Plan – Trail Alignment

parking lot off U.S. Highway 169. The Vermilion Penguin Snowmobile Club, active since 1966, maintains the Iron Ore Trails through the grant-in-aid snowmobile program.

- **Bear Island State Forest Trails**

- **Putnam Lakes Trail** – Putnam Lakes Trail is a snowmobile trail that intersects with the Taconite State Trail west of Bear Head Lake State Park in Bear Island State Forest. The trail heads south from the Taconite State Trail into the forest, then, at the intersection with Fishing Lakes Trail, it turns west to connect to Iron Ore Snowmobile Trails. (*Fishing Lakes Trail continues south in the forest and does not directly connect to the Taconite State Trail.*)

- **Lake Vermilion-Soudan Underground Mine State Park.** The state park does not directly connect or intersect with the Taconite State Trail. However, the park management plan recommends a connection to the Taconite State Trail. The proposed Prospectors Loop ATV Trail provides an alternative to utilizing Murray Forest Road as a potential connection from the Taconite State Trail to the park. Non-motorized trails (hiking, biking, cross-country ski) are located within the park, but do not directly connect to the Taconite State Trail.

- **Lake Vermilion-Soudan Underground Mine State Park Snowmobile Trail** – There are about 8 miles of snowmobile trail within the park. This park trail connects to Iron Ore Snowmobile Trails on Lake Vermilion north of the park, and south to the Taconite State Trail through Soudan. The DNR grooms and maintains this trail.

- **Tower Multi-Use Trail** – This is a local multi-use, natural surfaced trail that links the center of Tower’s business area to McKinley Park, which includes a public beach, picnic areas, and a campground on Lake Vermilion. The city of Tower operates and maintains this trail.

- **Tower Bike Trail** – This is a local paved trail that travels approximately 5 miles from Hoodoo Point to Tower and then connects to McKinley Park. About 1 mile of this trail shares the Taconite State Trail and former railroad corridor in Tower. The city of Tower operates and maintains this trail.

- **Mesabi Regional Trail** – Within this planning segment, the Mesabi Regional Trail has a developed segment through Lake Vermilion-Soudan Underground Mine State Park. Opportunities to intersect or connect with the Taconite State Trail may occur in Tower or Soudan as the Mesabi Regional Trail continues to be developed through the area. (See Segment 1 for more about the Mesabi Regional Trail.)

- **David Dill/Arrowhead State Trail** – The David Dill/Arrowhead State Trail is a natural-surfaced trail that is mostly used for snowmobiling. It travels 135 miles from the Taconite State Trail to International Falls. The southern end is located at the intersection with the Taconite State Trail, about 1.8 miles west of Highway 169 and just west of the Pike River flowage. The area around the intersection with the Taconite State Trail consists of wetlands and is not suitable to summer use. The northern end is located 3 miles south of International Falls, at the intersection with U.S. Highway 71. The DNR operates and maintains this trail.

Taconite State Trail Master Plan – Trail Alignment

- The proposed **Prospectors Loop ATV Trail** (not yet developed) includes two separate intersections with the Taconite State Trail along this segment. One intersection is proposed in Bear Island State Forest, west of Bear Head Lake State Park and near the existing snowmobile trail intersection. The Prospectors Loop ATV Trail is proposed to continue north from the Taconite State Trail to connect to Lake Vermilion-Soudan Underground Mine State Park. This segment of the trail could provide a connection to the proposed campground (not developed) in the southern portion of the state park located south of Highway 169. This trail connection may be considered as an alternative to using Murray Forest Road. The second intersection with the proposed Prospectors Loop ATV Trail is proposed west of Highway 135, at the western end of Tower.

Landownership and Administration

The State of Minnesota and St. Louis County own most of the land along this segment, although some parcels of land are municipally and privately owned. (No federal lands are located along this segment of the trail.)

See Planning Segment 1 for descriptions of Bear Head Lake State Park and Bear Island State Forest.

A **Northern St. Louis County State Forest Classification and Road/ Trail Designation Plan** was completed in 2008. The plan recommended OHV use near Tower along a 1.3 mile stretch of the Taconite State Trail. This corridor is located along a former railroad grade near Tower and Soudan. This part of the trail is now used for non-motorized recreation during the summer, and it does not currently provide a connection to other OHV recreational trails.

Trail Use Interests and Feasibility

Interests: There is high public interest to expand summer uses, particularly OHV uses connecting to Lake Vermilion-Soudan Underground Mine State Park and Tower.

Trail Use Interests and Feasibility

Interests: There is high public interest to expand summer uses, particularly OHV uses connecting to Lake Vermilion-Soudan Underground Mine State Park and Tower.

- **Bicycling** – Existing use near Tower, with potential for expansion or connection to other trails. Bicyclists mostly ride along an abandoned railroad grade segment that is located between Soudan and Tower.
- **Hiking** – Existing use, however use is limited due to wetlands.
- **Horseback riding** – Existing use, however use is limited due to wetlands.
- **OHV** – Moderate feasibility from the west boundary of Bear Head Lake State Park to Murray Forest Road. Low feasibility to/into Soudan and Tower, and toward the David Dill/Arrowhead State Trail.
 - **Forest road intersections** in Bear Island State Forest, potential for additional OHV opportunities with forest road connections.

Taconite State Trail Master Plan – Trail Alignment

Challenges Summary: Natural resources such as trout stream crossings, wetlands, and other sensitive resources; forest management activities and landownership and administration.

- **Natural Resources** – Numerous wetlands are located along the trail within Bear Island State Forest; the trail crosses designated trout streams, the **East Two River** (four times) and **West Two River** (one time); other sensitive resources include rare, endangered and threatened species in close proximity to the trail corridor.
- **State Park Rules** - Minnesota Rules prohibit the use of OHVs within state parks ([MN Rules 6100.1900](#)). (See Segment 1 for further discussion regarding Bear Head Lake State Park.) The Taconite State Trail does not pass through Lake Vermilion-Soudan Underground Mine State Park.
- **State Park Management Plan** – The Lake Vermilion-Soudan Underground Mine State Park Cooperative Master Plan includes a proposed campground south of Highway 169 which would allow for OHV access to and from the campground via Murray Forest Road. County and state forest units have expressed safety concerns over using or designating recreational use on Murray Forest Road due to its busy logging traffic. (Murray Forest Road is administered by St. Louis County from the park to 169, then by the state (DNR) in Bear Island State Forest.)
- **Landownership** includes: State of Minnesota (Forestry, Parks and Trails), St. Louis County (tax-forfeited), the city of Tower; and private individuals (the DNR has easements for the trail, one of which is for winter use only).
- **Potential OHV Trail Connections** – Proposed Prospectors Loop Trail/Route may intersect with the Taconite State Trail in two locations along this planning segment.

Communities

Soudan

Soudan (pop. 446 in 2010) is an unincorporated community in Breitung Township, St. Louis County, just east of Tower.

Soudan is believed to be the place of the first mining activity in northern Minnesota, taking place in 1882. Founded at the very edge of the mine, Soudan was a classic company town—the mining company and the community were almost indistinguishable. The mining company managed the settlement and built houses, a hospital, community center, and a saw mill.

The Taconite State Trail is located just south of U.S. Highway 169 on the south side of Soudan. A portion of the trail is located along an abandoned railroad grade. The Iron Ore GIA Snowmobile Trail provides a snowmobile connection through Soudan and on to Lake Vermilion-Soudan Underground Mine State Park and Lake Vermilion.

Taconite State Trail Master Plan – Trail Alignment

Tower

Established in 1882 in anticipation of the mining industry set to begin at the Soudan Iron mine and incorporated in 1889, Tower is the oldest city north of Duluth. Its growth was directly linked to the success of the mine. In May of 1890, Tower had a population of about 3,000. By 1891, the population of Tower doubled to 6,000. However, by 1892 the mining boom had ended and the Tower population dropped to 5,000. The mines closed in 1904, which caused the population to drop again. By 2010 the population was 500.

The Taconite State Trail includes a short spur trail into Tower and also travels along the south edge of the municipal boundary. The trail crosses East Two River and intersects with a segment of the Iron Ore GIA Snowmobile Trail near Highway 135.

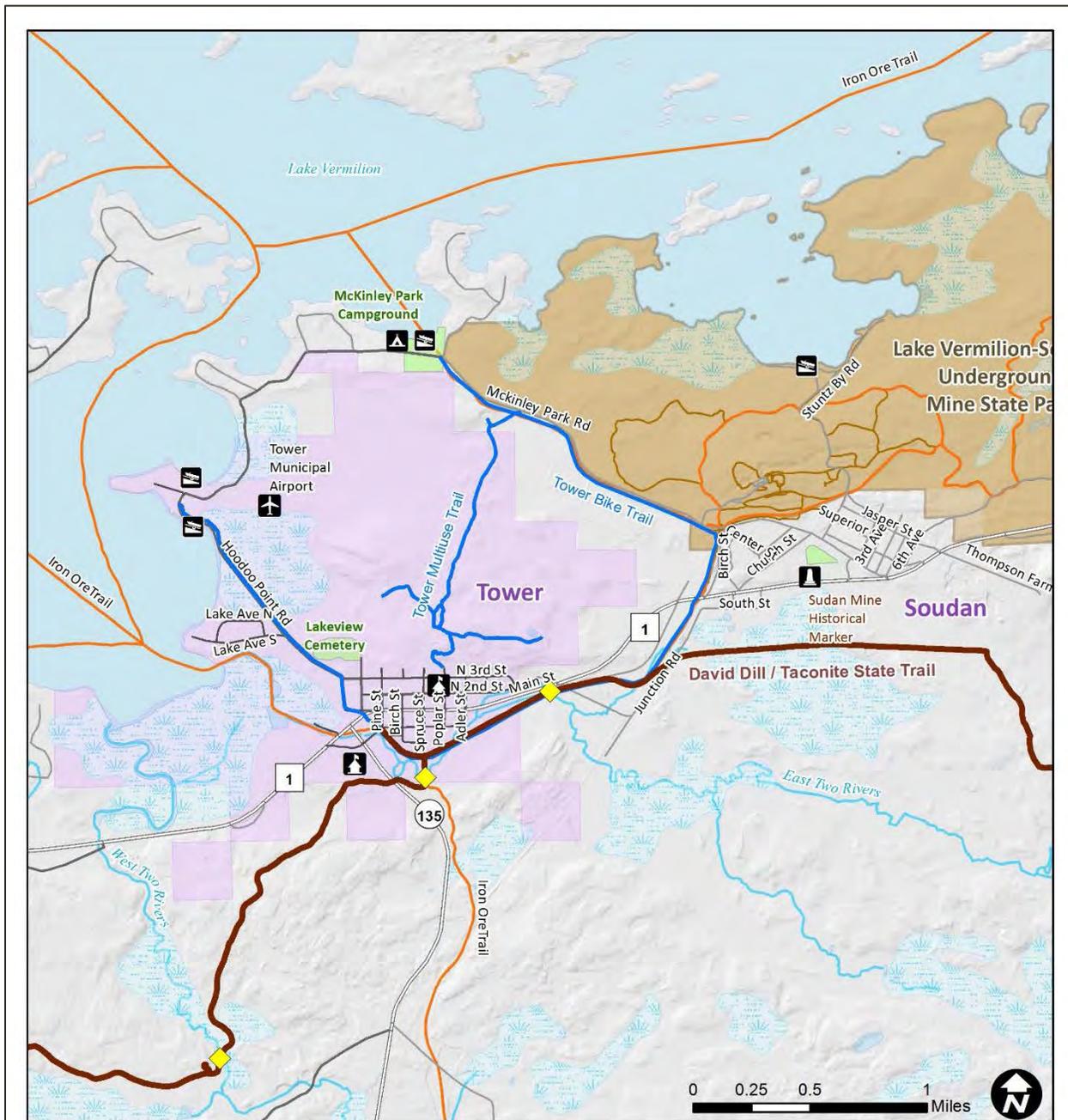
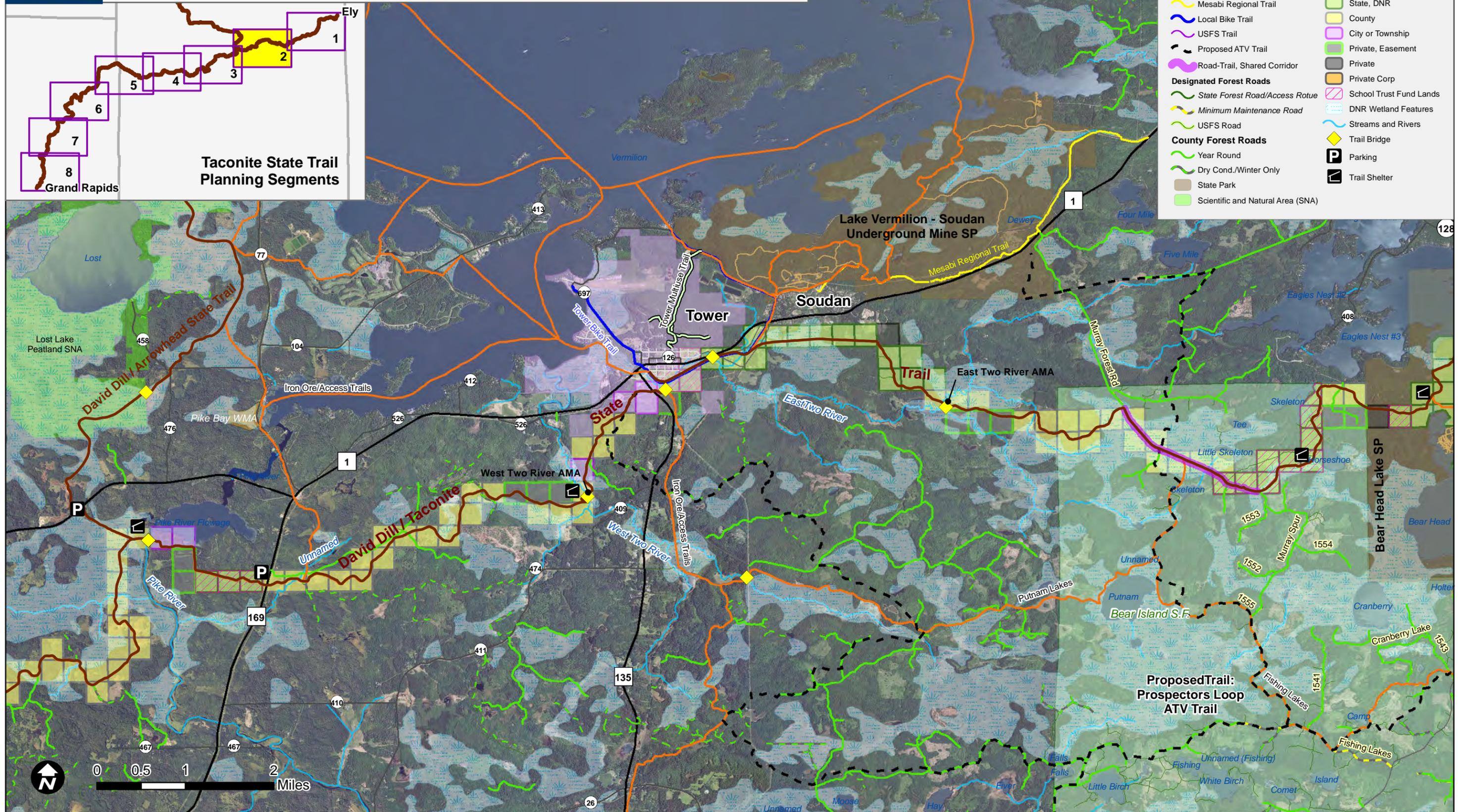


Figure 3.6: City of Tower and Community of Soudan





Figure 3.7. David Dill/Taconite State Trail Planning Segment 2, Bear Head Lake State Park to David Dill/Arrowhead State Trail



Planning Segment 3: David Dill/Arrowhead State Trail to U.S Highway 53

*Planning Segment
Length: 20.8 Miles*

Corridor Description

From the David Dill/Arrowhead State Trail intersection, the Taconite State Trail continues west through more open spaces of wetland complexes and rolling hills on a mixture of federal, state, county and privately-owned land. As the trail continues through the Superior National Forest, the trail intersects with several forest roads including access roads to Pfeiffer Lake Recreation Area, multiple streams, and the Big Aspen Trail system. Just before it intersects with Highway 53, the trail crosses Johnson Creek, a designated trout stream. A parking lot is located at the trail intersection with U.S. 53, on the west side of the highway. This parking lot has a capacity for at least 10 vehicles with trailers.

This segment of the trail includes nine stream crossings, one of which is a designated trout stream. Four of these stream crossings have bridges in place, including a bridge over Johnson Creek, a designated trout stream.

Trail Use

This segment of the trail is mostly used for snowmobiling; it is not maintained or managed for summer use. However, there is summer recreational use in the adjacent Superior National Forest, Pfeiffer Lake Recreation Area, and the Big Aspen Multi-Use Trail System (located east of U.S. Highway 53).

It may be possible to expand summer use along portions of this planning segment, particularly additional summer use connections to the Big Aspen Trail System. Challenges for adding summer use include numerous wetlands, streams and areas of standing water, and coordinating with multiple landowners. (See Feasibility, below.)

Trail Connections

- **Pfeiffer Lake Recreation Area, USFS** - The Pfeiffer Lake Campground is operated by the USFS, Laurentian Ranger District and is located just off of the Taconite State Trail where it intersects with Forest Road 256/Hulm Road. Pfeiffer Lake Recreation Area is open for summer use. It includes a campground with 16 tent/RV sites, a boat access, fishing pier, sandy beach, picnic area, playground and self-guided interpretive hiking trails (loop system). The campground is located on the north shore of Pfeiffer Lake with sandy, rolling hills and scenic views.
- **Cook Area Grant-in-Aid Snowmobile Trails** - Cook Timberwolves Snowmobile Club maintains the Cook Area Snowmobile Trails through the grant-in-aid snowmobile program. The Cook Area Trails provide multiple snowmobile trail connections in and around the Cook area, including to the Taconite State Trail, David Dill/Arrowhead State Trail, and Tim Corey Trail.
- **USFS Big Aspen Multi-Use Trails** - The Big Aspen Trail System is operated by the USFS, Laurentian Ranger District and is located approximately 11 miles from Virginia, easily accessible from Highway 53 and county roads. Two trail parking locations are available. The Big

Taconite State Trail Master Plan – Trail Alignment

Aspen Trail System consists of 21 miles of multi-use loop trail opportunities traveling through large pine and hardwood forests with areas of regrowth. The trails include former logging roads and former abandoned railroad grades from the Virginia and Rainy Lake Lumber Company. Varied terrain and scenic vistas make this trail system especially popular. The trail system allows hiking, mountain biking, ATVs (allowed May 1 – November 20), horses, and cross-country skiing. (All other motorized vehicles are prohibited.)

Landownership and Administration

Most of this segment is located on national/federal forest land within the Superior National Forest boundary. Additional landownership of this segment includes St. Louis County (tax-forfeited lands), the State of Minnesota (Forestry) and private (corporate) landowners.

Sturgeon River State Forest (Planning Segments 3, 5)

The Sturgeon River State Forest is located in northwest St. Louis County north of the cities of Hibbing and Virginia. The forest is bounded on the west by the Itasca County line and is bordered by the George Washington State Forest to the west. The Sturgeon River State Forest is entirely within the Laurentian Mixed Forest Province, but is further divided into three subsection levels: Lake Vermilion Uplands (59%), Nashwauk Uplands (37%), and Border Lakes (4%). The Minnesota Legislature established the now 146,691-acre Sturgeon River State Forest in 1963.

Dispersed camping, fishing, canoe/kayak paddling, and hunting are allowed in the state forest area, and there are hiking, mountain biking, and OHV trails. About 14 miles of the Taconite State Trail are located within the forest.

Superior National Forest

Portions of the Taconite State Trail are located on national forest lands, and some overlap with the state forest boundary as well. In this planning segment the Taconite State Trail passes just north of Pfeiffer Lake Campground and the Big Aspen Trail System (also see Trail Connection descriptions above).

Trail Use Interests and Feasibility

Interests: Low public interest for expanding summer uses due to extensive wetlands along the trail corridor. High interest in OHV use to connect to the Big Aspen Multi-Use Trail System, located east of U.S. 53.

Feasibility of adding summer uses:

- **Bicycling** – Low interest (existing use at Big Aspen Multi-Use Trail System nearby).
- **Hiking**– Moderate from Big Aspen Multi-Use Trail System to U.S. 53.
- **Horseback riding** – Low interest due to wet areas.
- **OHV** – Low from David Dill/Arrowhead State Trail to Big Aspen Multi-Use Trail System; Moderate from Big Aspen Multi-Use Trail System to U.S. 53. Existing use at Big Aspen Multi-Use Trail System nearby, interest in expanding or connecting to system from the Taconite State Trail.

Taconite State Trail Master Plan – Trail Alignment

- **Forest road intersections** exist in Sturgeon River State Forest and Superior National Forest, so there is potential for additional OHV opportunities with forest road connections.

Challenges Summary: Natural resources such as trout stream crossings, wetlands, and other sensitive resources; forest management activities and landownership and administration.

- **Natural Resources** – Numerous wetlands are located along the Taconite State Trail within Superior National Forest and Sturgeon River State Forest; the trail crosses Johnson Creek (a designated trout stream) near U.S. 53; sensitive resources are known to be close to trail.
- **Landowners** include: State of Minnesota (Forestry); St. Louis County USFS – Superior National Forest; and easements and agreements with private individuals and corporate interests.
- **Potential OHV Trail Connections** – The Big Aspen Multi-Use Trail System managed by USFS is accessible from the Taconite State Trail.

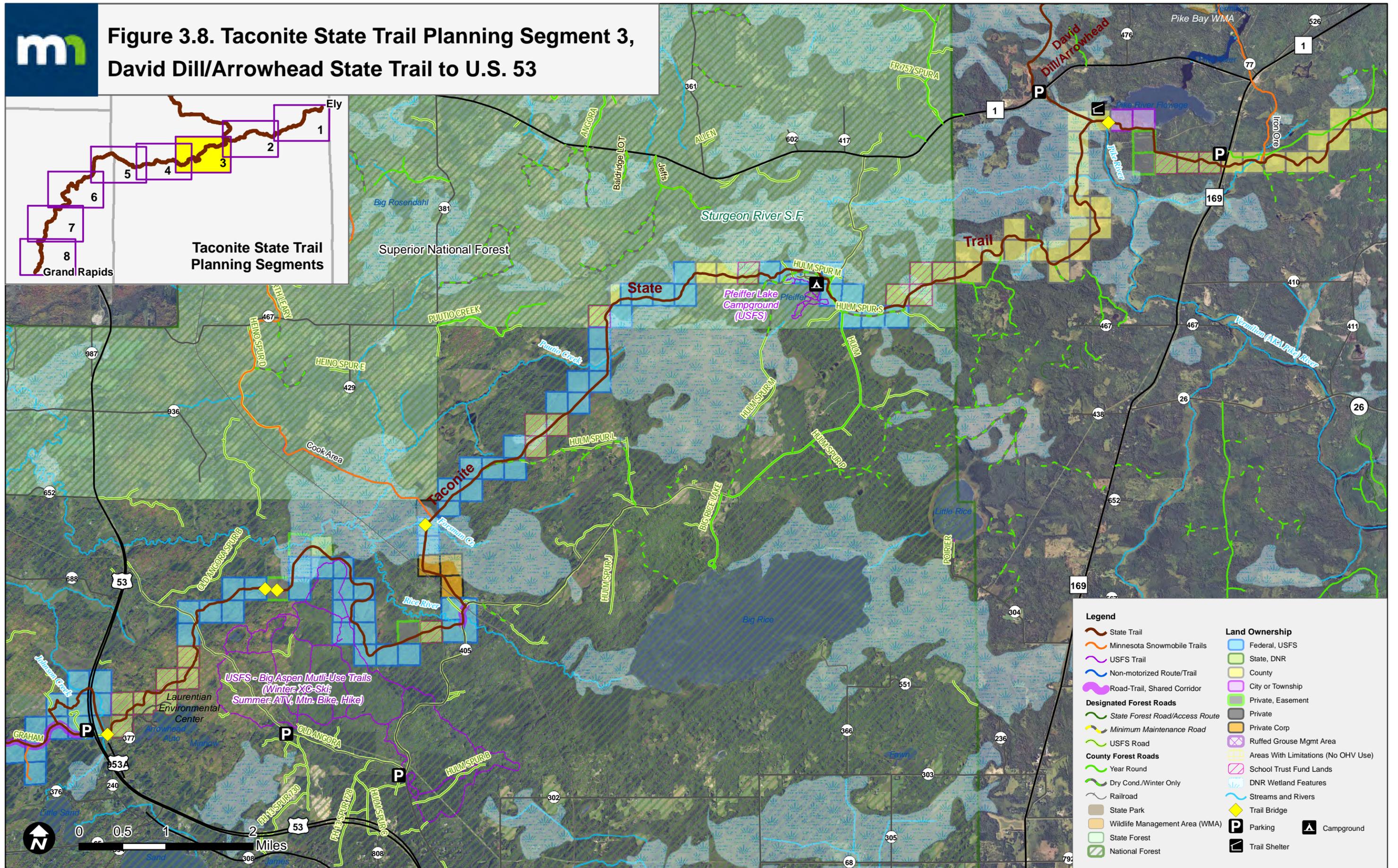
The Taconite State Trail has the potential to provide additional summer-use connections to the existing Big Aspen Multi-Use Trail System, which would connect to U.S. Highway 53. However, extensive wetlands and wet areas along the Taconite State Trail east of Old Angora Road would likely limit summer uses along that section of the trail.

Communities

This segment of the trail does not include any direct connections to local communities.



Figure 3.8. Taconite State Trail Planning Segment 3, David Dill/Arrowhead State Trail to U.S. 53



Planning Segment 4: U.S. Highway 53 to MN Highway 73

*Planning Segment
Length: 13.5 Miles*

Corridor Description

The Taconite State Trail continues west from the designated trail parking lot on the west side of U.S. 53, mostly along federal forest land within the Superior National Forest. For the first 6.7 miles of this segment, from U.S. 53 to County Road 920 (near Beaver Lake), the trail shares the corridor with Graham Road, a national forest road. From County Road 920 to County Road 25, the trail shares about 1 mile of state forest “minimum maintenance road” (MMR 1449). The trail continues west on federal lands and state forest lands, using short segments of forest roads before intersecting with County Road 481. Here it shares the road bridge to cross Dark River, a designated trout stream. The trail continues westward with multiple intersections with forest and county roads before it reaches MN State Highway 73. The terrain is relatively level with gentle rolling hills and curves.

There are parking lots at both ends of this segment, providing direct access to the Taconite State Trail from major highways. At the eastern end of this segment, a parking lot is located on the west side of U.S. 53, with a capacity for at least 10 vehicles with trailers (Also see Segment 3). A second parking lot is located at the western end of this planning segment, on the west side of MN 73, and may accommodate 6-8 vehicles with trailers.

This segment includes two stream crossings, one of which is Dark River, a designated trout stream. The second is an unnamed stream just to the east of Sturgeon River. This crossing includes a bridge.

Trail Use

This segment of trail is mostly used for snowmobiling. There are snowmobiling signs along the trail and signs that prohibit other motorized vehicles. However, because off-highway vehicles (OHVs) and highway licensed vehicles (HLVs) are allowed on forest roads, and the trail merges with a forest road, OHVs use parts of this trail segment. There have been reports of confusion about where the forest road ends and where the trail continues. **Coordination with USFS regarding allowable recreational uses and appropriate signage along this segment is a priority.**

Trail conditions on this segment tend to be reported as excellent year-round. This corridor consists of upland treadway, much of it hardened and maintained as roadway, and includes year-round use.

Trail connections

This trail segment includes two short trail spurs and an intersection with the Laurentian Trails in the grant-in-aid snowmobile system. Numerous forest road and spurs intersect with the Taconite State Trail along this segment. Trail and road signs are important to keep travelers on their desired route.

- **Laurentian Grant-in-Aid Snowmobile Trails** – These trails intersect with the Taconite State Trail just west of U.S. 53. The Laurentian trails head southward toward the Iron Range communities of Kinney and Buhl

Taconite State Trail Master Plan – Trail Alignment

where it connects with other grant-in-aid trails traveling throughout the Iron Range. The Laurentian Trail is maintained by the Range Trail Committee Snowmobile Club.

- **Superior National Forest - Recreational Trails**
 - **North Dark River Trail** is 1.3 miles long and follows the east bank of the Dark River through a jack pine plantation planted in the 1930s. It loops back along an old logging road and is generally level.
 - **South Dark River Trail** is 2.7 miles long and passes through a mixed pine and hardwood forest with terrain that varies from flat to rolling hills. The pine plantation planted by the Civilian Conservation Corps in the 1930s was thinned in 2010.

Border to Border ORV Touring Trail – is an active project proposal that is currently in the early scoping stage of its planning process. The purpose of this trail is to provide a signed, mapped and managed touring trail for enthusiasts of licensed high clearance all-wheel or four-wheel drive vehicles that may also be registered off-road vehicles (ORVs). The project was authorized by the Minnesota Legislature in 2015 and is to provide a route across northern Minnesota, from the shores of Lake Superior to the North Dakota border. The trail will also support connections to communities, amenities, scenic, cultural and historic features; while increasing awareness of ORVs.

An alignment for the Border to Border ORV Touring Trail has not been proposed or determined at this time. However, interest in connecting to or using a portion of the Taconite State Trail is being discussed as a potential opportunity. This trail may consider portions of the Taconite State Trail that are already open to highway licensed vehicles, such as forest roads, or other portions of the trail that are determined to be sustainable for ORV use. DNR is currently coordinating with the National Off-Highway Vehicle Conservation Council to manage the project along with the cooperation of the Minnesota 4-Wheel Drive Association.

Landownership and Administration

This segment is entirely within the Superior National Forest boundary and the USFS is the primary landowner and administrator along this segment of the trail. Additional ownership along this segment includes the DNR (Forestry and Parks and Trails) and easements for the trail across private parcels.

The addition of summer motorized use along this segment of trail (From U.S. 53 to MN 73) has been discussed over a number of years and through various planning processes. Much of this trail segment share the corridor with forest roads that allow motor vehicle use, including highway licensed vehicles and OHVs. As the trail continues beyond roads, it's located on high ground with a hardened surface, with some areas of gravel fill.

The **Superior National Forest** authorizes OHV use on many forest roads, including several that share the corridor with the Taconite State Trail along this planning segment.

Taconite State Trail Master Plan – Trail Alignment

Completed in 2008, the **Northern St. Louis County State Forest Classification and Road/Trail Designation Plan** includes a recommendation that this entire segment of the Taconite State Trail be opened to OHV use. The recommendation spans from the Big Aspen Multi-Use Trails to Highway 73 for a distance of about 19 miles (also see Planning Segment 3). Minimal work to the existing treadway would be required to add summer OHV trail travel along this portion of the Taconite State Trail.

Trail Use Interests and Feasibility

Interests: High public interest for expanding summer uses, especially since a portion of corridor is also forest road where OHVs and HLVs are allowed.

- Motorized user groups are interested in opening the Taconite State Trail to OHVs along this entire segment.
- The *Forest Classification and Road/Trail Designation Plan for DNR Forestry-Administered Lands in Northern St. Louis County* recommends that this segment be open for OHV use. (The State Forest Classification and Road and Trail Designation Planning Process was completed in 2008.)
- The USFS Transportation Plan also recommends that this segment to be open to OHV use. USFS Motor Vehicle Use Maps are updated annually and show which roads and trails are open for each type of OHV, as well as seasonal restrictions.

Feasibility of adding summer uses:

- **Bicycling** – Low interest and use; safety issues with sharing corridor with motor vehicles and active logging traffic.
- **Hiking** – Low interest, low existing use.
- **Horseback riding** – Little to no use known, but is allowed.
- **OHV** – High feasibility, from U.S. 53 to MN 73

Challenges Summary: The existing trail corridor is well established for year-round use. There are few issues to address with this segment; coordination with USFS and DNR Forestry and forest management activities; some sensitive resources in the trail corridor include Dark River, a designated Trout Stream. However, the trail has an existing steel bridge over the river.

Support known: Forest roads are suitable for year-round use and include hardened or gravel surfaces. Very little work to the trail corridor would be necessary to open it for summer motor vehicle use. The USFS Transportation Plan recommends that this segment be open to OHVs; the State Forest Classification and Road/Trail Designation process recommended that this segment be open to OHV use.

- **Natural Resources** – A few sensitive resources are known to be in close proximity to the trail, including Dark River, a designated trout stream; no known wetland issues along trail corridor.
- **Landowners** include: USFS – Superior National Forest; and the State of Minnesota (Forestry, Parks and Trails).

Taconite State Trail Master Plan – Trail Alignment

- **Forest Road Intersections** – The first 6 miles of this segment is also a national forest service road that is open to motor vehicle use; additional shorter segments are also shared with forest roads, as well as numerous forest road intersections along this segment.
- **Potential OHV Trail Connections** – Numerous forest roads and intersections provide potential opportunities for additional OHV routes and connections.

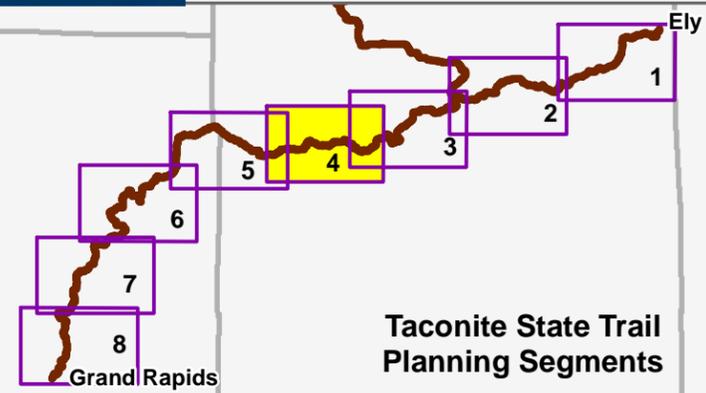
Increasing summer use, particularly OHV use, along this segment of the trail appears to be highly feasible with little to no additional construction, modification, or reroute needs. Project-specific analysis, resource assessments, and DNR management decisions are needed beyond this master plan, as well as coordination and agreement from the landowners, USFS, and road administrators to ensure that all appropriate evaluations and safety considerations are adequate for a proposed increase in recreational use along this segment.

Communities

This segment of the trail does not include any direct connections to local communities.



Figure 3.9. Taconite State Trail Planning Segment 4, U.S. 53 to MN Hwy 73

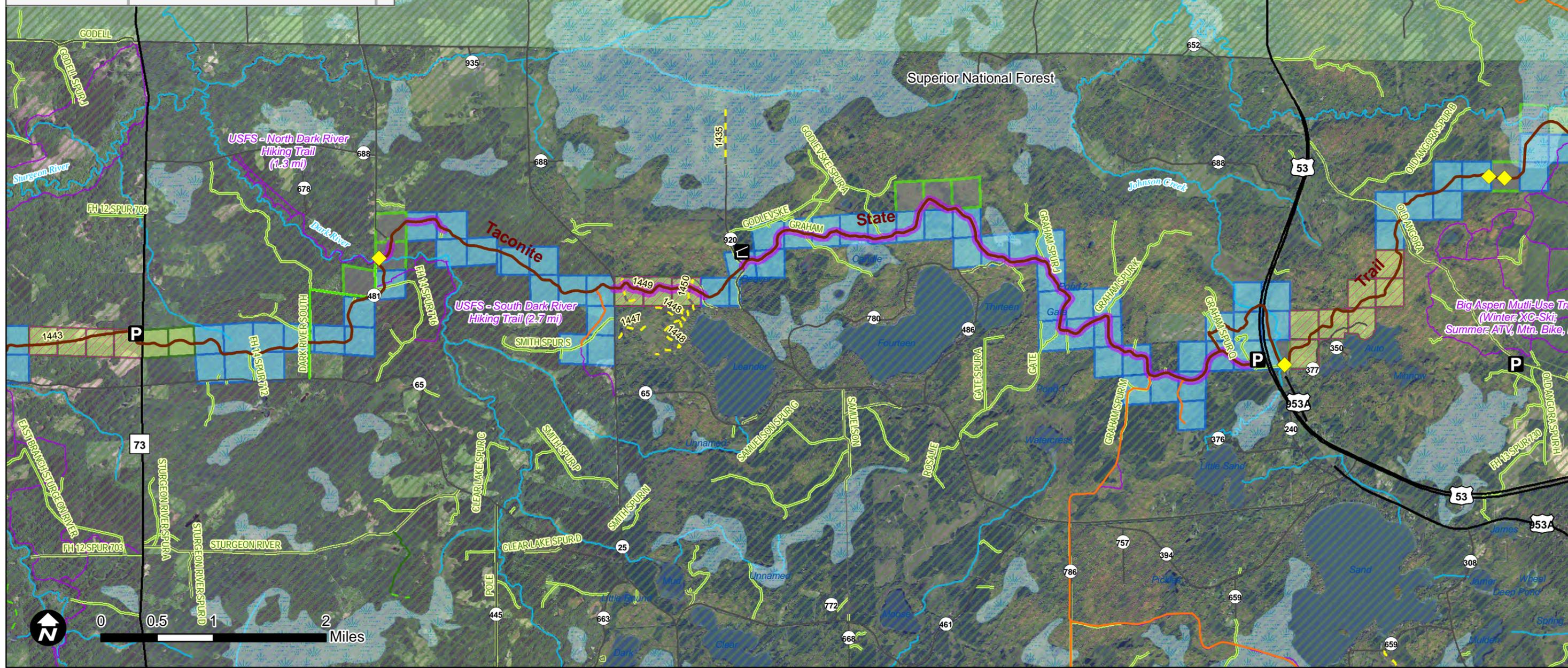


Legend

- State Trail
- Minnesota Snowmobile Trails
- USFS Trail
- Road-Trail, Shared Corridor
- State Forest Roads
 - State Forest Roads/Access Route
 - Minimum Maintenance Road
- County Forest Roads
 - Year Round
 - Dry Cond./Winter Only
 - USFS Road
- State Park
- National Forest
- State Forest

Land Ownership

- Federal, USFS
- State, DNR
- County
- City or Township
- Private, Easement
- Private
- Private Corp
- School Trust Fund Lands
- DNR Wetland
- Streams and Rivers
- Trail Bridge
- Parking
- Trail Shelter



Planning Segment 5: MN Highway 73 to MN Highway 65

*Planning Segment
Length: 23.5 Miles*

Corridor Description

From the trail parking lot near Highway 73, the Taconite State Trail continues west to McCarthy Beach State Park. While a portion of this segment is within the Superior National Forest boundary and is partially located on USFS land, other landowners and administrators include state (DNR Forestry and Parks and Trails), county, and private (corporate and citizen) interests.

The trail corridor offers scenic beauty and interest through Sturgeon River and George Washington state forests, McCarthy Beach State Park, and Peloquin Wildlife Management Area. The trail narrows as it enters the park and follows the natural contours of the hills and valleys through this area. A snowmobile spur trail within the park leads to Sturgeon Lake. The Taconite State Trail also has two intersections with the popular Tim Corey Snowmobile Trail, creating a loop to the north of the park, as well as additional trail connections to the grant-in-aid snowmobile trail system. A trail shelter is located within McCarthy Beach State Park.

As the trail continues west, it crosses the northern boundary of the Peloquin Wildlife Management Area, Ruffed Grouse Management Area (RGMA), Area with Limitations (AWL), and Stony Brook, a designated trout stream, which also includes a portion of the designated Bear River AMA. The trail then heads south and crosses the Laurentian Divide and Sherry Lake Road (forest road) before it reaches Highway 65. Also in this vicinity is the Stony Ridge RGMA. On the west side of Highway 65 is a trail parking lot that may accommodate six to eight vehicles with trailers. This parking lot also serves as a trailhead for the Little Moose GIA ATV Trail (Planning Segment 6).

This segment of the Taconite State Trail has eight stream crossings, including Stony Brook, a designated trout stream and AMA. Three of these stream crossings have a bridge, including the trout stream.

Trail Use

Trail uses of this segment include snowmobiling in the winter, and horseback riding, hiking, and some mountain biking in the summer. Horseback riding is especially popular in this area, including through the state park and surrounding forests. There are trail connections to two nearby horse campgrounds, Stony Brook and Togo, which are located within George Washington State Forest.

The surrounding forest areas include numerous roads and trails that are popular for horseback riding, hiking, hunting and ATV riding.

Trail connections

- **Superior National Forest**
 - **Sturgeon River Trail** – This hiking and cross-country skiing trail is operated by the USFS, Laurentian Ranger District, and is located about 6 miles east of McCarthy Beach State Park. Four parking areas are available, all accessible from Highway 73. The Sturgeon River Trail offers 22 miles of hiking and cross-country skiing trails and also has

Taconite State Trail Master Plan – Trail Alignment

opportunities for camping and river fishing. The trail winds along high ridges of the Sturgeon River, near the river bank with its large silver maples, and through mature pine forests, grassy openings, and reforested areas. Most of the Sturgeon River Trail follows gently rolling terrain, with sections that are suitable for all levels of hikers and skiers.

- **Grant-in-Aid Snowmobile Trails**
 - **Chisholm, Side Lake, Hibbing Spur Trails** – These trails connects with the Taconite State Trail east of Perch Lake and then travel south to connect the communities of Side Lake, Chisholm, Hibbing and Keewatin. One trail segment is located within McCarthy Beach State Park, from the Taconite State Trail to Sturgeon Lake. This system of approximately 66 miles of snowmobile trails is maintained by the Pathblazers Snowmobile Club.
- **Sturgeon River State Forest** – The Taconite State Trail enters Sturgeon River State Forest as the trail crosses Dewey Lake Road, west of the Sturgeon River Trails. About 14 miles of the Taconite State Trail is located within Sturgeon River State Forest.
 - **Tim Corey Trail (two intersections)** – This is a popular snowmobile trail that is located north of McCarthy Beach State Park in the Sturgeon River and George Washington state forests. It is operated and maintained by the DNR. The 14-mile trail includes two intersections with the Taconite State Trail, one within McCarthy Beach State Park and the second west of the park boundary at Peloquin WMA. (It is a state forest unit trail that is not fully accessible during summer due to wetlands, but portions are open to horseback riding during summer and shoulder seasons.)
 - **Forest Roads** – Several forest roads intersect with the Taconite State Trail, including Dean and French roads, which are designated for OHV use.
- **McCarthy Beach State Park** – The Taconite State Trail travels through McCarthy Beach State Park for 3.2 miles. This portion of the Taconite State Trail is popular year-round. It is heavily used during the winter for snowmobiling (groomed trail) and also gets heavy use during spring, summer and fall, particularly for horseback riding, biking, and hiking within the park.
- **George Washington State Forest** – The Taconite State Trail enters George Washington State Forest as it exits the western end of McCarthy Beach State Park and continues for about 27.5 miles within the state forest. George Washington State Forest has red pine, white pine, jack pine, white spruce, balsam fir, and hardwoods (mostly paper birch and aspen). The lowlands include marshes and bogs with tamarack and black spruce. Northern white cedar, elm, and ash also grow in the forest. The variety of topography, vegetation, and animal life contributes greatly to the quality of the recreational trails in this state forest. Several forest roads branch off of county and township roads to provide access into the forest and to surrounding lakes. Within the forest are two horse campgrounds and six other campgrounds with water access and fishing opportunities.

Taconite State Trail Master Plan – Trail Alignment

- **Stony Brook Horse Campground** – This campground is located within **George Washington State Forest**, just west of McCarthy Beach State Park and Beatrice Lake. Approximately 30 miles of multi-use trails are available from the Stony Brook Campground. These trails connect to McCarthy Beach State Park via the Taconite State Trail.
- Additional trails provide a connection to the **Togo Horse Campground**, located about 13 miles northwest of the Stony Brook Horse Campground.

Three wildlife management units intersect with the area: **Peloquin Wildlife Management Area (WMA)**, **Peloquin Ruffed Grouse Management Area (RGMA)** and a designated **Area with Limitations (AWL)**. The Taconite State Trail runs adjacent to the northern boundaries of the WMA and AWL, with the RGMA extending slightly to the north of the trail. Hunting is open to the public in these areas during regular seasons.

- **Peloquin Wildlife Management Area (WMA)** - Designated in 1984, the Izaak Walton League initiated this 322-acre WMA in memoriam of Conservation Officer Louis Peloquin. Deer, black bear, fisher, wolves and birds such as ruffed grouse and warblers use the forest. The Ruffed Grouse Society helped to establish 3 miles of hunter walking trails and a series of wildlife openings.
- **Peloquin Ruffed Grouse Management Area (RGMA)** - This area includes 11.4 miles of hunter walking trails. No motorized vehicles are allowed on these trails. This is a popular hunting area.

Bear River Aquatic Management Area (AMA) - portions of this AMA are designated along Stony Brook, including at the Taconite State Trail intersection.

Areas with Limitations (AWL) are hunting areas that prohibit the use of motor vehicles from off-trail travel, including during the hunting season.

Stoney Ridge RGMA – This is a popular hunting area that includes hunter walking and cross-country ski trails through hardwoods and aspen stands. The recreational trails are maintained by Itasca County.

Landownership and Administration

The State of Minnesota (Parks and Trails, Fish and Wildlife, and Forestry) and Itasca County are the primary landowners along this segment. Additional landowners include St. Louis County, USFS, and private interests.

Superior National Forest

The Taconite State Trail is located on several parcels of USFS land within Superior National Forest on the eastern end of this planning segment. The Sturgeon River Trail crosses the Taconite State Trail at County Road 65, just west of Highway 73 (also see Trail Connection descriptions above).

Sturgeon River State Forest (Planning Segments 3, 5)

Sturgeon River State Forest is located in northwest St. Louis County, north of the cities of Hibbing and Virginia. The forest is bounded on the west by the St. Louis



Ruffed grouse.

Taconite State Trail Master Plan – Trail Alignment

- Itasca County line and George Washington State Forest. The Minnesota Legislature established the now 146,691-acre Sturgeon River State Forest in 1963.

Recreation within the forest include dispersed camping, fishing, canoe/kayak paddling, and hunting, plus various hiking, mountain biking, and OHV trails (also see Trail Connection descriptions above).

The 2008 Sturgeon River State Forest Classification and Road/Trail Designation Plan recommended that 4.7 miles of the Taconite State Trail allow for OHV use. The approved plan identifies two separate locations along the trail, one segment north of McCarthy Beach State Park and one south and east of the park. The plan acknowledged that OHV use within the state park is prohibited. No OHV use was proposed or suggested within state park boundaries during the forest planning. The plan notes that these two segments of the Taconite State Trail could accommodate OHV use without changing the existing trail corridor and that snowmobile use will not be affected if OHV use is added.

These two identified segments of the Taconite State Trail, totaling 4.7 miles, are considered to be critical to completing the 12-mile designated OHV trail system within the Sturgeon River State Forest. OHV designations include routes along Dean Forest Road, French Forest Road, portions of Snake Trail, and three other minimum maintenance forest roads east of McCarthy Beach State Park that intersect with the Taconite State Trail. These segments also provide potential future connections to additional OHV routes in adjacent state forests. Adding ATV use on portions of the Taconite State Trail will allow the larger trail system in the Sturgeon River State Forest to function more effectively, distribute motorized trail use, and help satisfy local demand for more motorized (OHV) trail miles.

George Washington State Forest

Established in 1931 to commemorate the 200th anniversary of the birth of our first president, George Washington State Forest is 306,000 acres. Of this, 93,200 acres, or about 30 percent, are administered by the DNR Forestry Division. The remaining ownership is divided between Itasca County (199,700 acres) and private landowners (93,100 acres). Like much of the forested land in Minnesota, it burned repeatedly during the logging and settlement era from 1880 to 1930. The last large fire burned in 1933. With improved fire protection, the forest has slowly recovered. Today it is growing and providing recreation, scenery, wildlife, watershed protection, and raw materials.

The Civilian Conservation Corps (CCC) played an important role in the development of state lands within the forest. Three camps were in existence from 1933 to 1941. Its workers were responsible for the construction of campgrounds such as those at Owen Lake and Bear Lake. In addition, many miles of roads were constructed, numerous plantations established, and many soil and water conservation projects accomplished. (Also see Trail Connection descriptions above.)

Taconite State Trail Master Plan – Trail Alignment

McCarthy Beach State Park

Established in 1945, McCarthy Beach State Park is 70 miles east of Grand Rapids and 95 miles west of Ely, in St. Louis County. McCarthy Beach State Park covers 2,471 acres and attracts 159,634 visitors and 18,636 overnight visitors each year. The park is located between two major lakes: Sturgeon Lake and Side Lake. In and around the park, five other lakes offer visitors the opportunity to fish for trout, walleye, and panfish. The park's terrain is mainly rolling hills with small valleys.

McCarthy Beach State Park has 18 miles of hiking trails, 17 miles of mountain bike trails, and 12 miles of horse trails. During the winter, the park has 9 miles of cross-country ski trails and 12 miles of groomed snowmobile trails. The snowmobile trails connect to the Taconite State Trail and the Tim Corey Trail. Snowshoeing is also permitted anywhere in the park except on groomed ski trails. Other recreational facilities in the park include 86 drive-in camping sites, three walk-in camping sites, a horse camp and a group camp, a picnic area and shelter, fishing pier, swimming beach, and a boat access. Boat, canoe, and kayak rentals are also available. OHV use within state parks is prohibited ([MN Rules, 6100.1900](#)), and state parks are closed to hunting, with the exception of authorized special hunts ([MN Rules, 6100.0800](#)).

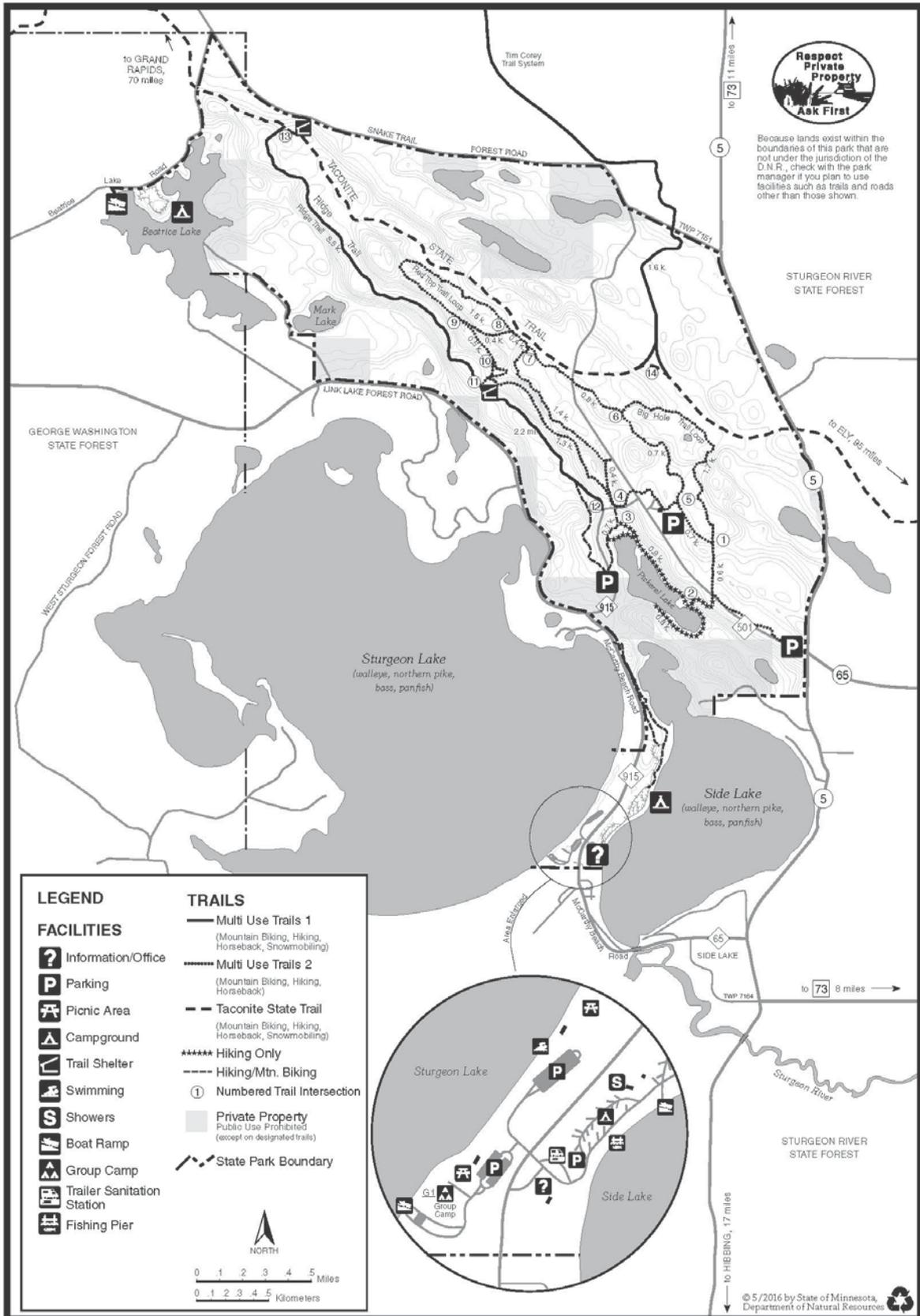
The park's hills and trails allow for good bird and animal watching. Over 175 different species of birds visit the area. Thirty-three species of wildlife, including deer, bear, timber wolf, chipmunk, red squirrel, raccoon, and several species of reptiles and amphibians live in the park.

The trail passes through sensitive natural resources within McCarthy Beach State Park. **The entire park is ranked as a site of high biodiversity significance**, which means it contains “very good quality occurrences of the rarest species, high-quality examples of rare native plant communities, and/or important functional landscapes.” Biodiversity rankings help to guide conservation and management of sites. (Regarding “rarest species”: This is one of the criteria that was used to rank the park site with high biodiversity significance. Also see **Pages 88-91.**)

If proposed changes to the state trail within a state park vary from the park's approved management plan, an amendment to the park's management plan is required. The amendment must address any proposed changes to the natural and cultural resources, interpretive services, recreational opportunities, and administrative activities at the unit. ([MN Statutes 86A.09, Subd. 6](#))

OHV use within state parks is prohibited by rules, [MN Rules 6100.1900](#).

Figure 3.10. McCarthy Beach State Park Map



Taconite State Trail Master Plan – Trail Alignment

Trail Use Interests and Feasibility

Interests: There is high public interest to expand summer uses, especially OHV and equestrian uses.

- Motorized user groups are actively seeking a route to connect Side Lake to surrounding roads and trails in George Washington State Forest.
- There is substantial local interest and support in adding OHV use to the Taconite State Trail. However, there is also strong opposition.
- OHVs are prohibited in state parks per [MN Rules 6100.1900](#), thus an OHV route around the park would be necessary. Also, the State Park Visitor Surveys and public comments during this planning process indicate strong opposition to adding OHV use within state parks.
- Equestrian users have expressed willingness to share trails with motorized groups, but they should not be displaced by new uses.
- Existing levels of trail use in the state park, plus safety concerns due to the narrower treadway and steep slopes, make it more difficult to share the existing corridor. The Taconite State Trail is actively used during summer for horseback riding and hiking within and through the park.

Feasibility of adding summer uses:

- **Hiking, Horseback riding** – High existing use and interest; popular summer uses within park and forest; forest equestrian campgrounds nearby/accessible via Taconite State Trail and other trails.
- **Bicycling** – Existing use, moderate to low use is estimated.
- **OHV – Varies (High – Low)**
 - Known interest and support of ATV use in the area, existing use occurs in vicinity/surrounding forests. Also, strong opposition to motorized use within state parks.
 - High to moderate feasibility along trail sections just east of McCarthy Beach State Park as well as west of the park to Stony Brook Horse Camp, where the trail connects with forest roads and trails. Potential for connection to Little Moose GIA ATV Trail at Highway 65 parking lot.
 - Potential OHV Trail connections – using forest trails and roads (outside the state park boundary) and public lands north of the park, where OHV use is currently allowed.
 - Multiple ATV clubs are looking to connect to grant-in-aid and forest trails in the area (i.e. Chisholm ATV Trail south of Side Lake – active proposal).
 - Low feasibility within McCarthy Beach State Park boundary.

Challenges Summary: Natural resources, such as a trout stream crossing, WMA, RGMAs, wetlands, and other sensitive resources; forest management activities; and landownership and administration.

- **Natural Resources** – Potential **wetlands** and **sensitive resources** are located along and adjacent the state trail corridor, including McCarthy Beach State Park; Stony Brook, a designated trout stream; Bear River

Taconite State Trail Master Plan – Trail Alignment

AMA; Pelouquin WMA; and the Laurentian Divide. The trail is developed through sensitive resources within McCarthy Beach State Park.

- **State Park Rules** – Minnesota Rules prohibit the use of OHVs within state parks ([MN Rules 6100.1900](#)). OHV use along the Taconite State Trail will require reroutes or alternate routes to avoid state park lands.
- **State Park Management Plan** – Proposed uses within a state park must be consistent and compatible with the approved management plan. Proposed changes that are inconsistent with the existing plan require an amendment prior to implementation. Management Plan amendments include public participation and review.
- **Existing summer uses** – The state trail corridor within the state park is actively used during summer/non-winter for horseback riding and hiking.
- **Landowners** include: private landowners (individuals and corporate), USFS, State of Minnesota (state forest, state park, wildlife), St. Louis and Itasca counties. Existing agreements with some private landowners include limitations on use and/or seasons of use (i.e. snowmobile only).

Communities

This segment of the trail does not include any direct connections to local communities. The community of Side Lake is located within one mile of McCarthy Beach State Park and is approximately 2 miles south of the Taconite State Trail. The community and businesses of Side Lake are not directly connected to the Taconite State Trail, but may be accessed via snowmobile using road ditches or local trails.

Side Lake

Side Lake (population 567 year-round, with summer population around 5,000) is an unincorporated community in French Township in St. Louis County. It is located 20 miles north of Hibbing on County Highway 5. McCarthy Beach State Park is adjacent to the Side Lake community. Tourism and the timber industry are the main drivers of the economy in Side Lake.

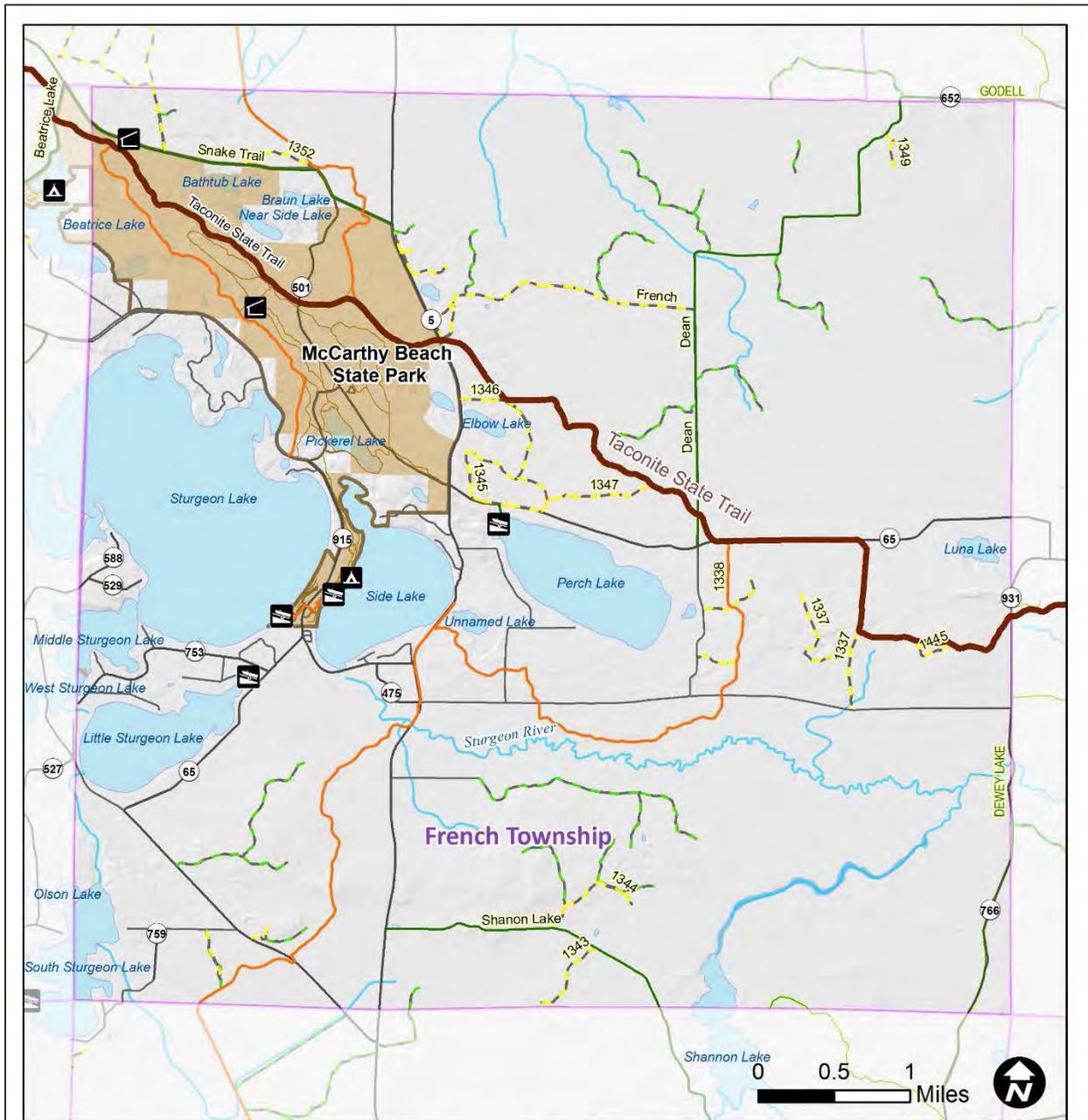
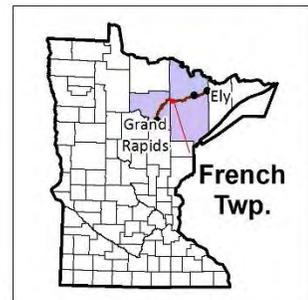
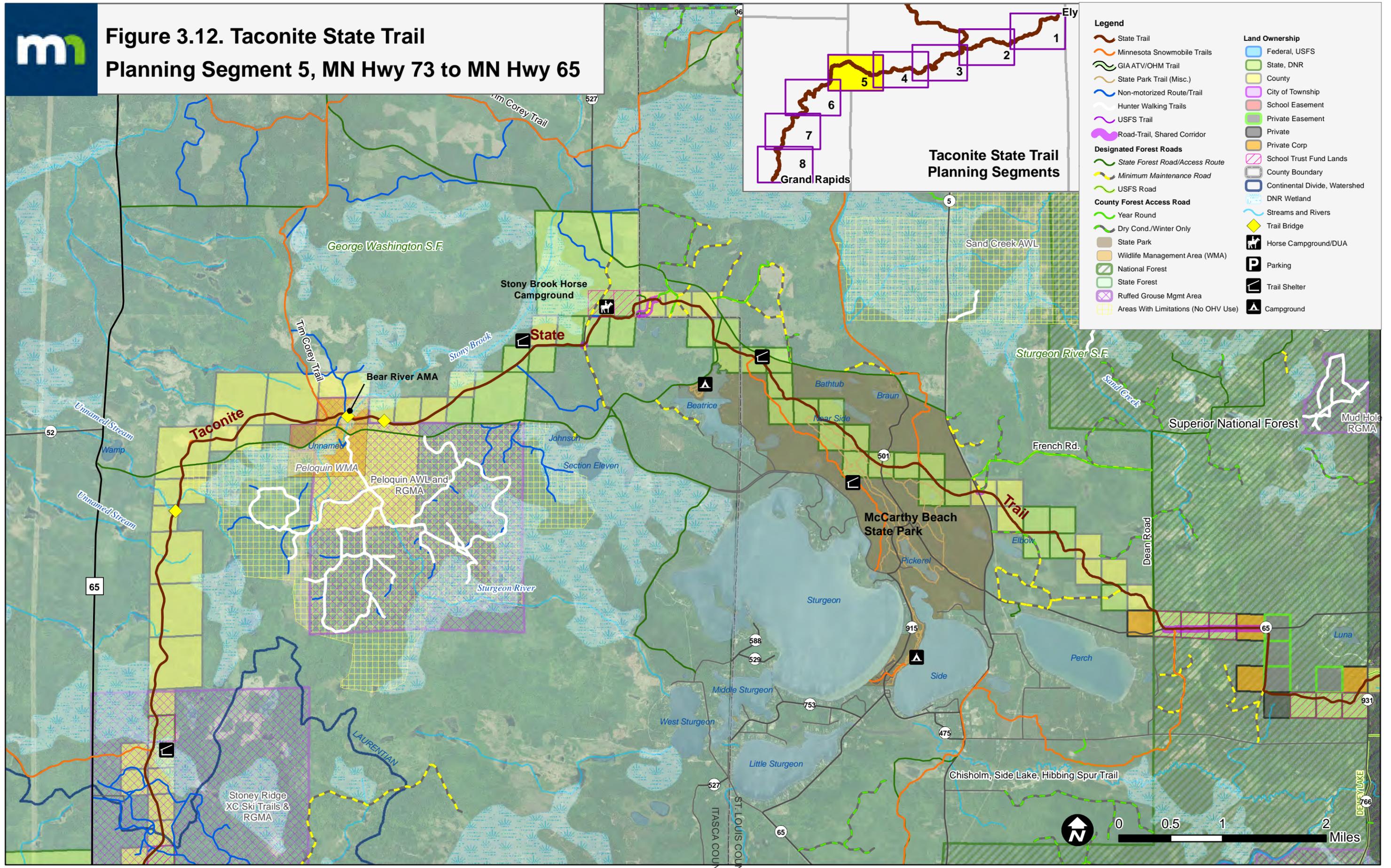


Figure 3.11: French Township, Side Lake Community





**Figure 3.12. Taconite State Trail
Planning Segment 5, MN Hwy 73 to MN Hwy 65**



Planning Segment 6: MN Highway 65 to CSAH 7 Parking Lot

**Planning Segment
Length: 21.7 Miles**

Corridor Description

This segment of the trail is mostly located within George Washington State Forest. The land is owned by state, county and private entities. Trail amenities along this segment include three snowmobile shelters, three bridges, and two parking lots with trail access.

The Taconite State Trail intersection with Highway 65 includes a parking lot on the west side of the highway which may accommodate six to eight vehicles with trailers. This location is also an endpoint for the Little Moose GIA ATV Trail. The Taconite State Trail continues to follow flat lowland brush areas to gently rolling hills with numerous wetlands and swamps. This segment ends at a parking lot located just off of County State Aid Highway (CSAH) 7, which may accommodate three to four vehicles with trailers. Much of this trail segment is impassible when not frozen.

Three separate sections of the trail use Itasca County Forest Minimum Maintenance Roads (MMR). Two segments are located on either side of Scooty Creek. The eastern road segment is about 0.4 miles long and the road segment west of the creek is approximately 2 miles long, from Scooty Creek to Bear Lake Trail, much of which is located on dry upland on both county and state forest lands. A third segment is located west of County Highway 53, starting at the Prairie River bridge and traveling about 2 miles along county land known to be seasonally wet. These county forest roads are currently open to HLVs and all OHVs. The trail segment between these roads is located on a combination of state, county and private land.

This trail segment has four stream crossings: Scooty Creek; an unnamed stream; Prairie River; and Balsam Creek. None of the streams are designated trout streams. There are three bridge crossings. Two of these crossings are 50-foot steel bridges.

Trail Use

The trail segment is mostly used for snowmobiling. The segment is not currently maintained or managed for summer use. To consider the addition of any new uses, the existence of numerous wetlands and privately-owned land would need to be considered.

Potential for expanding summer use may be considered along portions of this planning segment, although dry upland is limited. Two sections of the trail share minimum maintenance road corridors, which may be the most feasible for accommodating summer uses along this segment.

The Bigfork-Balsam ATV Trail is an active grant-in-aid proposal, with Itasca County as the sponsor. It includes using a portion of a county forest road located south and west of the Prairie River. The proposed trail includes a connection to the Little Moose ATV trail, which also intersects with the Taconite State Trail. This proposed route will be under construction during 2016-2017.

Taconite State Trail Master Plan – Trail Alignment

Trail connections

- **Grant-in-Aid Snowmobile Trails:**

- **Bear Lake Trail** – This trail travels north from the Taconite State Trail and is maintained by the DNR within **George Washington State Forest (GWSF)** for approximately 11 miles.
- **Lawron Trail** – This grant-in-aid snowmobile trail travels south from the Taconite State Trail and is maintained by *Lawron Trail Riders Snowmobile Club* in Bovey.
- **Herb Brandstrom Trail** – This trail includes two connection points with the Taconite State Trail. Heading north, the Herb Brandstrom Trail consists of 47 miles of scenic trail riding through state and county forests, and links to many snowmobile trails in all directions. It is one of several snowmobile trails maintained by the *Swampsiders Snowmobile Club* in Bigfork.

- **Grant-in-Aid ATV Trails:**

- **Little Moose GIA ATV (Class I, II) and OHM Trail** – The Little Moose ATV Trail includes an endpoint at the Taconite State Trail parking lot off Highway 65. The trail crosses the Taconite State Trail approximately one mile west of the parking lot and continues past Little Moose Lake. Forested areas vary from densely wooded to harvested pine that opens to wide views of the surrounding landscape. The trail also passes Hartley, Scooty and Wolf lakes and crosses the West Fork of the Prairie River. Completed in 2012, the 18-mile Little Moose ATV Trail is sponsored by Itasca County and is maintained by the *Balsam Trail Blazers*. The trail is open to ATV (Class I and Class II) and OHM uses, typically from May 15 to November 1.
- **Bigfork Balsam ATV Trail** – This trail is currently under construction with proposed connections to the city of Bigfork, located north of the Taconite State Trail, and Little Moose ATV trail. A short segment may follow the Taconite State Trail corridor located on Itasca County lands and portions of county forest road.

Trail Use Interests and Feasibility

Limited interest for expanding other uses:

- **Bicycling, Hiking, Horseback riding** – Limited to no current use due to wetlands, but allowable uses.
- **Cross-Country Skiing** – Limited interest, currently allowed, not a high use (specific segments may see more use in connection with other groomed trails). Cross-country skiing on the groomed snowmobile trail is not recommended.

High interest in expanding for OHV use:

- Proposed **Bigfork Balsam ATV Trail** (grant-in-aid, Itasca County), for a short portion of the Taconite State Trail corridor, located on Itasca

Taconite State Trail Master Plan – Trail Alignment

County lands, potential connection with Little Moose ATV/OHM Trail (active proposal, currently under construction in 2016-2017).

- **OHV – Moderate to Low feasibility** (existing conditions)
 - Limitation due to wetlands along the existing trail corridor;
 - Limited use may occur on county roads or other designated trails;
 - Potential OHV Trail connections – Little Moose GIA ATV Trail; Bigfork Balsam ATV Trail proposal may intersect or overlap with Taconite State Trail.

Challenges Summary: Natural resources, particularly wetlands and swamps and other sensitive resources; forest management activities; and landownership and administration.

- **Natural Resources** – Potential wetlands and sensitive resources are located along and adjacent to the state trail corridor; active forest management.
- **Landowners** include: Itasca County, State of Minnesota (state forest), private (individual and corporate landowners).

Landownership and Administration

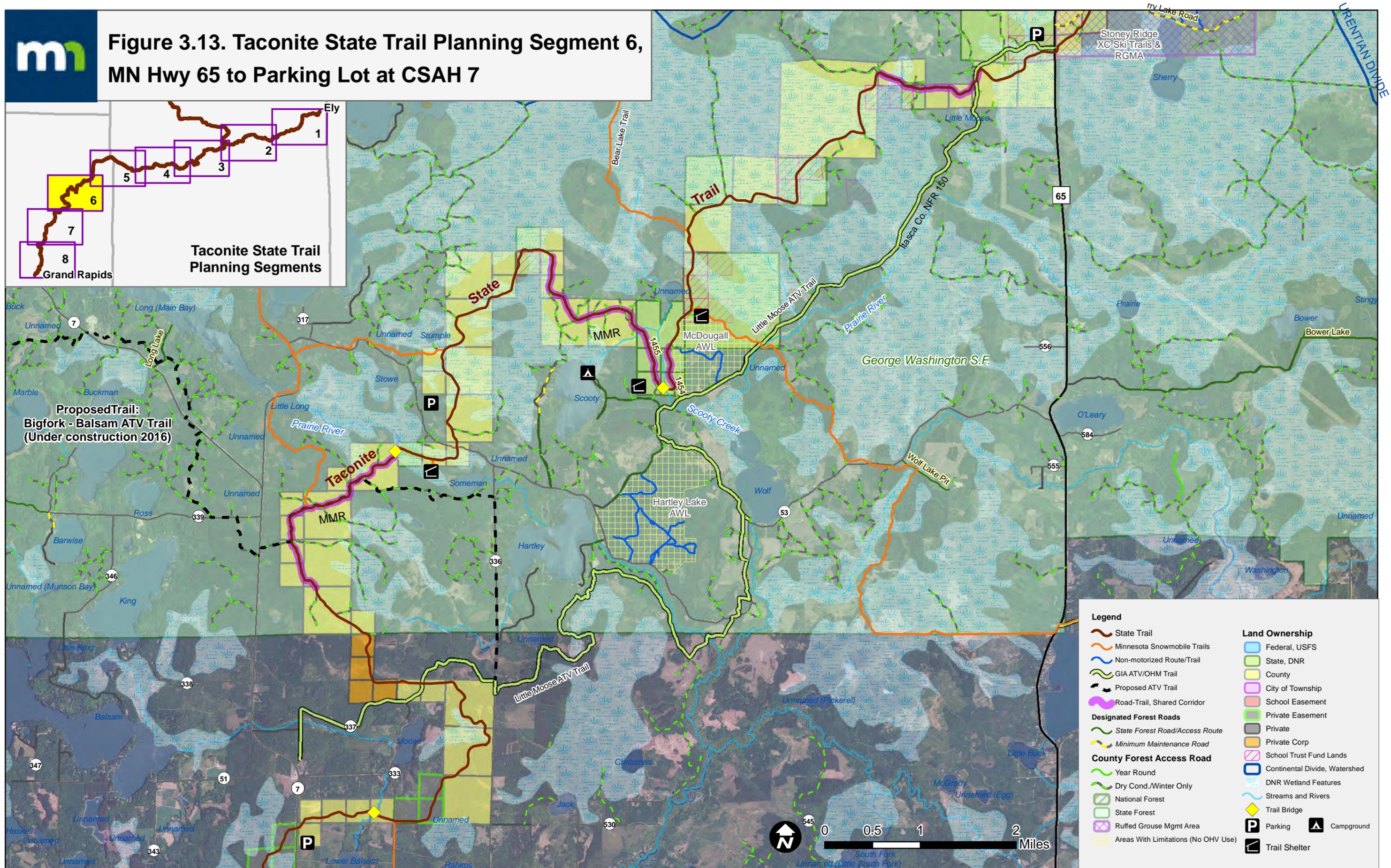
Itasca County is the primary landowner along this trail segment, with portions in State of Minnesota (DNR Forestry, George Washington State Forest) and private ownership. Itasca County is supportive of recreational use on these lands and is a cooperating partner with the DNR.

Communities

This segment of the trail does not include any direct connections to local communities.



Figure 3.13. Taconite State Trail Planning Segment 6, MN Hwy 65 to Parking Lot at CSAH 7



Planning Segment 7: CSAH 7 Parking Lot to CSAH 60

*Planning Segment
length: 13.6 Miles*

Corridor Description

The Taconite State Trail continues southward in this segment, traveling across lands with a variety of landownerships including federal, state, county and private interests.

The terrain along this segment consists of numerous wetlands and gently rolling hills. This is mixed with forest areas of tall pines and hardwoods as it crosses the southeastern edge of the Chippewa National Forest.

This trail segment includes the parking lot at County State Aid Highway (CSAH) 7 and one trail shelter located near My Lake/Unnamed Lake, just east of the Chippewa National Forest boundary and north of the North Hanson Creek trail bridge.

Trail Use

This segment of the trail is mostly used for snowmobiling. The Taconite State Trail is not currently maintained or managed for summer use. Challenges to consider if adding summer use include numerous wetlands and private land. The southern crossing of Hanson Creek is in need of a new bridge and the trail has been temporarily re-routed onto private property. A long-term solution is still needed, which may include relocating the trail on to public lands. Coordination and cooperation from landowners is necessary to resolve these issues for long-term operation and continuity of the trail for snowmobile use.

Potential for expanding summer use along this segment is unlikely due to numerous wetlands, private land, and limited availability for road or trail connections.

Trail connections

- **Grant-in-aid snowmobile trail:**
 - **Lawron Trail** – This grant-in-aid snowmobile trail travels south from the Taconite State Trail and is maintained by *Lawron Trail Riders Snowmobile Club* in Bovey.
- **Chippewa National Forest** – The Taconite State Trail crosses into Chippewa National Forest, however, there are no other trail connections with the Taconite State Trail within the national forest.
- **Wabana Trail** – The 6-mile Wabana Trail is managed by Itasca County for hiking, hunting, and cross-country skiing. It is located within a mixed forest and wildflower sanctuary. Parking for this trail system is provided off County Highway 59, located 14 miles northeast of Grand Rapids and just west of the Taconite State Trail. Itasca County may consider sharing a trail bridge with the Taconite State Trail over Hanson Creek.

Trail Use Interests and Feasibility

Low/Limited interest for expanding uses

- **Bicycling** – No current use due to wetlands; low interest – low feasibility.

Taconite State Trail Master Plan – Trail Alignment

- **Hiking, Horseback riding** – No current use due to wetlands; low interest – low feasibility due to wetlands, private property.
- **Cross-country skiing** – Limited to no use (on the Taconite State Trail), low interest, except for potential sharing of a bridge with the Wabana Trail over Hanson Creek.

Limited interest for expanded OHV use

- **OHV** – No current use; moderate to low interest; low feasibility (existing conditions) due to wetlands, private property.
 - Potential OHV Trail connections – Little Moose GIA ATV Trail; Bigfork - Balsam ATV Trail proposal may intersect or overlap with the Taconite State Trail for short segments.
 - Potentially OHV use on forest roads and private forest roads (Potential connections from County Road 59 to County Road 50, but limitations with wetlands, private property.)
 - Forest Service roads may be open to OHV use.
 - The Lawron Trail (grant-in-aid snowmobile trail) has potential for snowmobile use, but it is not likely for OHV use due to wetlands.

Challenges Summary: Natural resources such as wetlands, and other sensitive resources. Landownership and administration (public and private; national, state, and county forests).

- **Natural Resources:** Potential **wetlands** and **sensitive resources** are located along and adjacent to the state trail corridor; national forest lands.
- **Landowners:** Mix of public and private lands; extensive section of private property (corporate); public landowners include Itasca County, the State of Minnesota (Forestry), and USFS – Chippewa National Forest. Private ownership includes individuals and corporate interests. Trail agreements with private landowners include limitations to trail uses, currently snowmobile-use only.
- **Trail connections:** No OHV or summer use trail connections are in the vicinity; a few forest road intersections within Chippewa National Forest on the west side of Hanson Creek.

Landownership and Administration

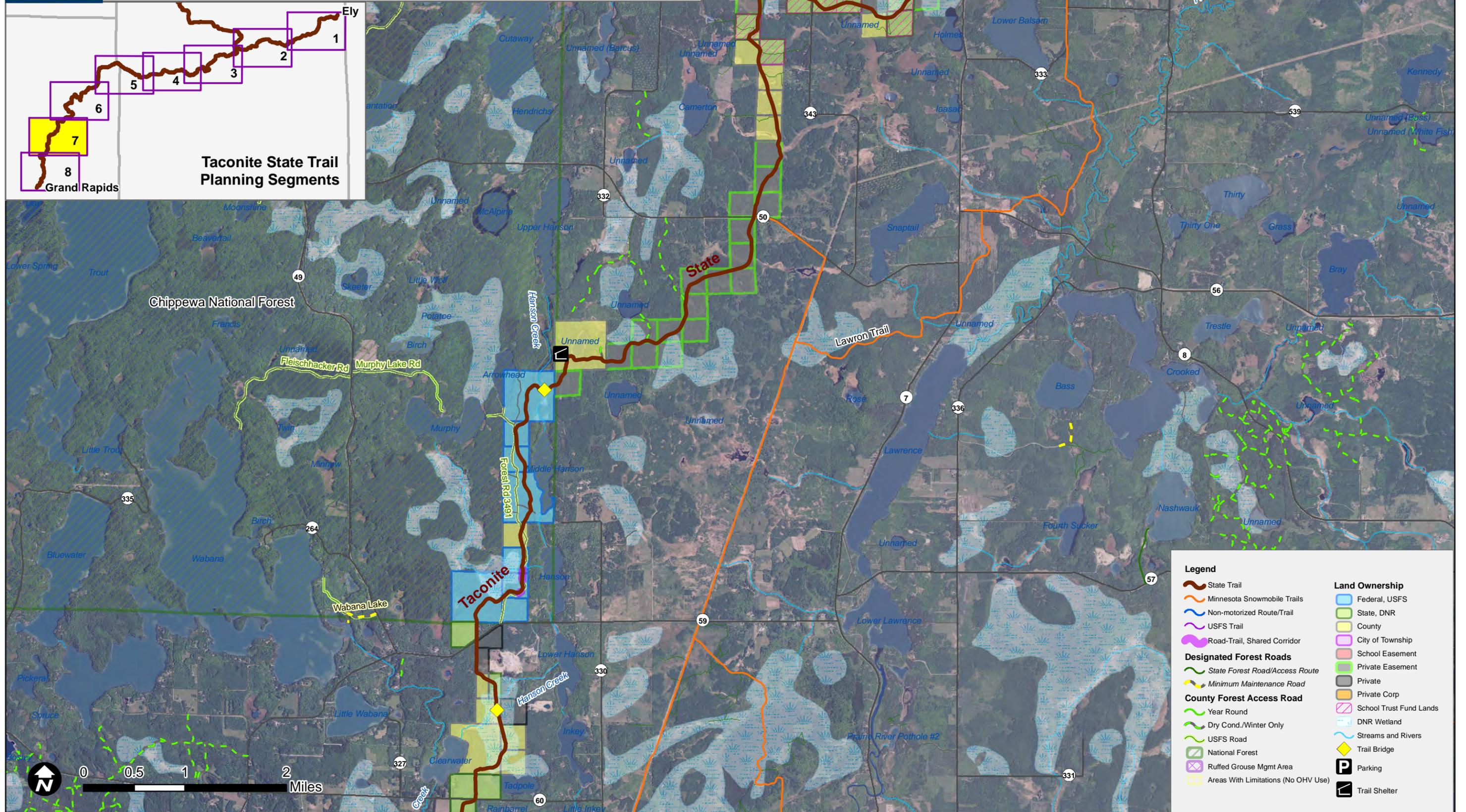
The majority of this segment is located on private land consisting of multiple corporate and individual landowners. Other large sections are located on public lands owned and managed by the USFS within the Chippewa National Forest, Itasca County, and the State of Minnesota (Forestry; Parks and Trails).

Communities

This segment of the trail does not include any direct connections to local communities.



Figure 3.14. Taconite State Trail Planning Segment 7, Parking Lot at CSAH 7 to CSAH 60



Planning Segment 8: CSAH 60 to Grand Rapids

*Planning Segment
Length: 14.3 Miles*

Corridor Description

The Taconite State Trail continues south in this segment to Grand Rapids, where it ends. The segment travels across lands owned by state, county, township, and private interests.

The trail crosses a school district forest located between Clearwater Creek and Prairie River. South of the Prairie River, the trail travels along the eastern edge of the Prairie Lake Deer Yard Wildlife Management Area, a white cedar and aspen forest. Then, just south of County State Aid Highway (CSAH) 61, the trail is paved with asphalt, and it shares the trail corridor with the Mesabi Regional Trail for the last 6 miles until it reaches its western trailhead in Grand Rapids. The paved trail includes a long steel bridge crossing the Prairie River. The terrain along this segment includes gently rolling hills, forested areas, and wetlands.

The trailhead located at the Itasca County Fairgrounds has a large parking area, campground, and a community building. The community building, constructed in 2003, is used year-round for various public meetings, recreation, and community classes. The building has a classroom/meeting room, kitchen area, and restrooms. Restrooms are typically open to trail users during the winter months. This trailhead facility was funded cooperatively by the DNR, federal grants, and the Blandin Foundation to provide year-round public use and enjoyment.

This trail segment also includes two trail shelters, one at the intersection with Suomi Clearwater GIA Snowmobile Trail, and the other in Grand Rapids along the shared treadway with the Mesabi Regional Trail, south of CSAH 61.

Trail Use

This segment of the trail is mostly used for snowmobiling during the winter. The southern 6 miles of the trail are managed for non-motorized summer uses including bicycling and hiking/walking. North of the paved segment, the Taconite State Trail is not managed or maintained for summer uses.

Potential for expanding summer uses (north of CSAH 61) is unlikely due to numerous wetlands, private land, and limited availability for road or trail connections.

Trail connections

- **Grant-in-Aid Snowmobile Trails:**

- **Suomi - Clearwater Trails** – The Clearwater and Suomi grant-in-aid snowmobile trails cover about 32 miles, including a 1 mile stretch that uses the Taconite State Trail corridor to cross Clearwater Creek. The Clearwater and Suomi trails are maintained by the *38ers Snowmobile Club* based out of the Grand Rapids - Deer Lake area.
- **Keystone Trail** – The Keystone Trail intersects with the Taconite State Trail near Prairie Lake and then travels east toward Coleraine, Bovey and Taconite for a total of 13 miles. The Keystone Trail is maintained by the *Itasca Snow Rangers* from Bovey.

Taconite State Trail Master Plan – Trail Alignment

- **Bushwacker Trail** – The Bushwacker Trail intersects with the Taconite State Trail at the Prairie River bridge near County Road 61. The trail then travels west and northwest towards Deer River for a total distance of 42 miles. It is maintained by the *Deer River Bushwackers*.
- **Itasca Driftskipper Trails** – These trails intersect with the Taconite State Trail in Grand Rapids, and provide nearly 70 miles of snowmobile routes south of Grand Rapids to Hill City. The trails are maintained by the *Itasca Driftskippers* from Grand Rapids.
- **Mesabi Regional Trail** – This is a non-motorized paved bike trail currently under development to connect Iron Range communities from Grand Rapids to Ely.

Prairie Lake Deer Yard Wildlife Management Area – The WMA is open to hunting, trapping, and compatible wildlife uses. The Taconite State Trail crosses the eastern edge of this WMA, with snowmobile use as the only managed use in this location at this time.

Itasca County – The DNR has fostered a unique partnership with Itasca County to develop a paved bike trail starting at the trailhead location at the Itasca County Fairgrounds and heading north for 6 miles. The trail corridor was established by the DNR for the Taconite State Trail, primarily for snowmobiling, but remaining open to the potential for other uses in the future. This paved trail section has since evolved, through further coordination with the Itasca County Railroad Authority, to be part of the Mesabi Regional Trail.

This partnership and cooperative management has resulted in year-round recreational opportunities on the Taconite State Trail in Grand Rapids. The DNR maintains and grooms the snowmobile trail in winter and Itasca County maintains the paved segment of the trail corridor during the summer and shoulder seasons for bicycling and hiking/walking.

The Mesabi Regional Trail branches off of the Taconite State Trail corridor near Highway 61, and the Mesabi Trail continues east, providing a connection to the city of Coleraine.

Trail Use Interests and Feasibility

Interests: Existing summer use along 6 miles from Itasca County Fairgrounds (terminus), where corridor also is shared with Mesabi Regional Trail, a paved surface for non-motorized uses.

- High local interest in keeping summer uses intact (non-motorized uses along paved treadway).
- High interest in finding OHV trail connections in Grand Rapids, but not necessarily on the Taconite State Trail (recognizing its limitations).
- **Hiking** – Current use, from trailhead at Itasca County Fairgrounds to County Road 61, 6 miles, paved treadway, and may continue north to Prairie Lake WMA before hitting wetland, private property.
- **Horseback riding** – Not currently managed for or allowed along the paved treadway; sensitive resources, land ownership and management have

Taconite State Trail Master Plan – Trail Alignment

limitations for trail uses north of Grand Rapids. The campground at the Itasca County fairgrounds accommodates horses, but horse use is restricted to the county fairgrounds property.

- **Bicycling** – Current use from County Road 61 south to Itasca County Fairgrounds/Taconite State Trail trailhead location; shared corridor with Mesabi Regional Trail; paved 6 miles.
- **Cross-country skiing** – An allowable use, but limited current use. Local ski trails are located nearby and in the vicinity.
- **OHV – Low - limited feasibility** (existing conditions)
 - Potential OHV trail connections – few to none in vicinity.
 - Existing trail corridor is too narrow to accommodate dual treadway to add motorized use; safety and compatibility issues in existing corridor; well established year-round uses.
 - Arbo Township agreement allows snowmobiling and non-motorized uses (multi-use trails); specifically excludes other motorized uses.
 - High interest to find OHV trail connections through Grand Rapids, connecting to nearby trails or communities; currently no OHV trail connections or intersections with the Taconite State Trail.

Challenges Summary: Wetlands, sensitive resources, landownership and administration; existing partnerships.

- **Natural Resources** – extensive wetlands and sensitive resources are located along and adjacent to the state trail corridor; Prairie Deer Yard WMA is intersected by trail – winter use is acceptable, summer use is not permitted.
 - Taconite State Trail corridor is very wet along much of this segment, north of Grand Rapids (from 61 to 325).
- **Landowners:** Mixture of public and private lands; extensive section of private property (corporate), Itasca County, State of Minnesota (state forest), township (Arbo), private (individual and corporate). (*Current Arbo Township agreement with the DNR does not allow for OHV use.*)
- **Partnership** with Itasca County for the Mesabi Regional Trail, sharing the trail corridor for 6 miles.

There is public interest to add motorized use in this vicinity. However, it is not compatible with the existing management and development of this segment of the state trail. Further to the north, the Taconite State Trail does not currently include existing or proposed connections to motorized trails.

Public input and comments throughout the planning process identified a strong community interest in providing motorized recreational opportunities in the Grand Rapids area and providing trail connections to neighboring communities. However, the Taconite State Trail corridor in this segment is not likely to be able to accommodate this interest due to the existing partnership with Itasca County and Rail authority for the paved section. Many of the landowner agreements and easements along this segment of trail include trail use limitations. The existing DNR easements from Arbo Township allows for snowmobiling and non-

Taconite State Trail Master Plan – Trail Alignment

motorized recreation (hiking, biking, horseback riding and cross-country skiing). Other forms of motorized recreation are specifically prohibited by the current agreement.

Landownership and Administration

This trail segment includes a mix of public and private lands, with the DNR having obtained easements for the trail along the majority of the private lands. Public lands are owned by the State of Minnesota (Wildlife), Itasca County, Arbo Township, and a local school district.

Prairie Lake Deer Yard WMA

Prairie Lake Deer Yard WMA, accessible from Township Road 325, was acquired in the 1970s, and consists of 564-acres. The primary management objective of this WMA is to provide optimum food and shelter for wintering deer. The WMA consists of swamp conifer lowland with cedars, tamaracks, and spruces and scattered small upland islands of mixed aspen and balsam fir.

The WMA is managed to provide habitat for forest song birds, forest game birds, small mammals, reptiles, amphibians, deciduous forest species, wetland species, migratory waterfowl, cavity nesting birds, and deer. Located within several thousand acres of public land adjacent to Prairie Lake, the WMA is open to hunting, trapping, and compatible wildlife uses.

Communities

Grand Rapids

Grand Rapids (pop. 10,869) is located in Itasca County at the junctions of U.S. Highways 2 and 169. It was originally founded as a logging town on the Mississippi River. Grand Rapids was named for 3.5 miles of rapids in the Mississippi River. The rapids were the uppermost limit for steamboat travel on the river during the late 19th century. Today, the rapids are hidden underneath the Blandin Paper Mill dam. Grand Rapids is the county seat of Itasca County.

In 2014, Grand Rapids approved a Parks and Trails Master Plan to help guide the parks and trails owned and operated by the city. The plan includes guidance for 19 community parks, eight neighborhood parks, and seven recreational trails within the city limits. The trail system includes designated routes along city streets and sidewalks, including non-motorized and motorized uses. The plan also includes existing snowmobile trail connections to and from the Taconite State Trail. Additional guidance is included pertaining to motorized trails, specifically addressing snowmobile and ATV interests for connecting routes to neighboring communities and within the city.

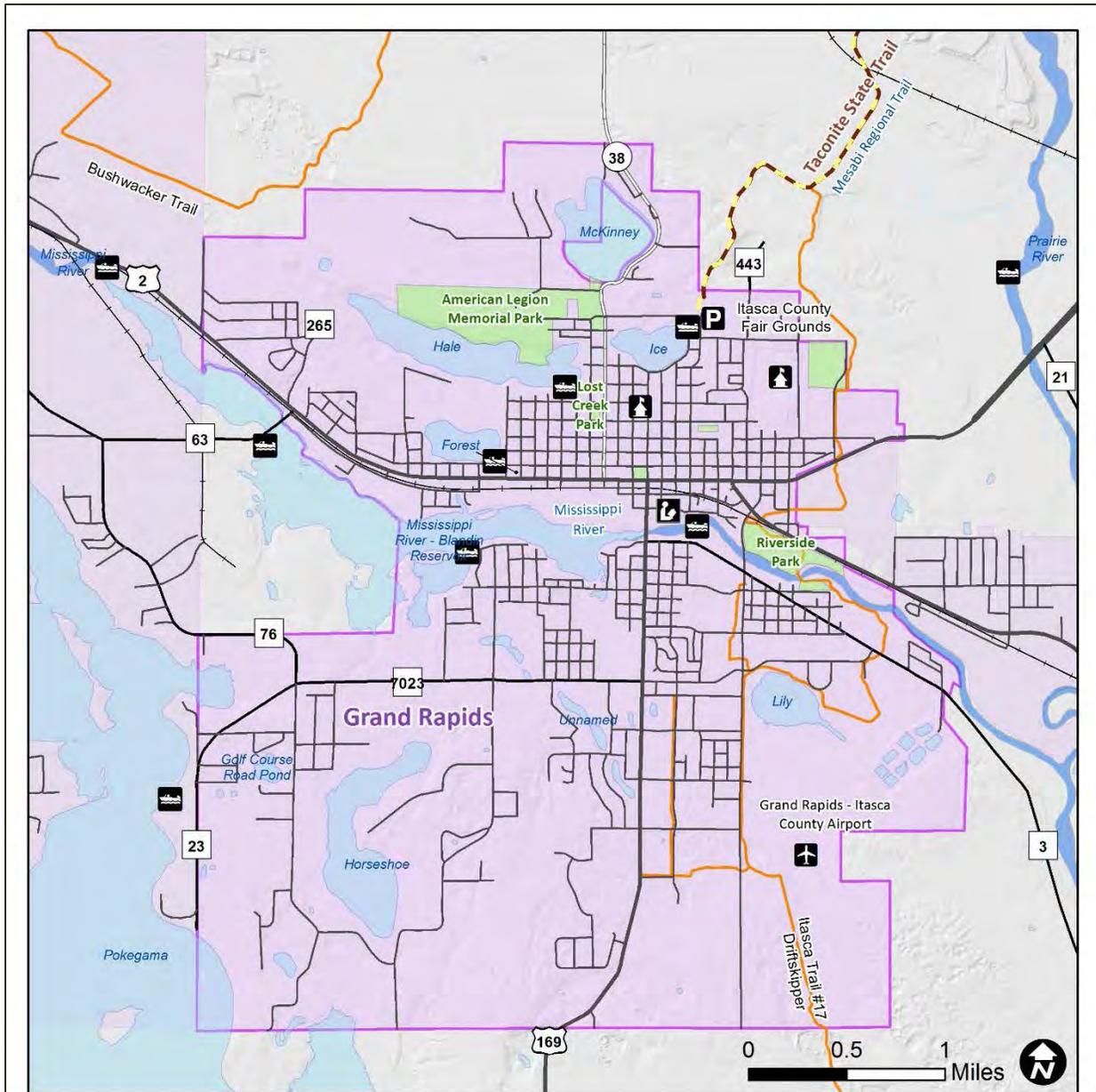


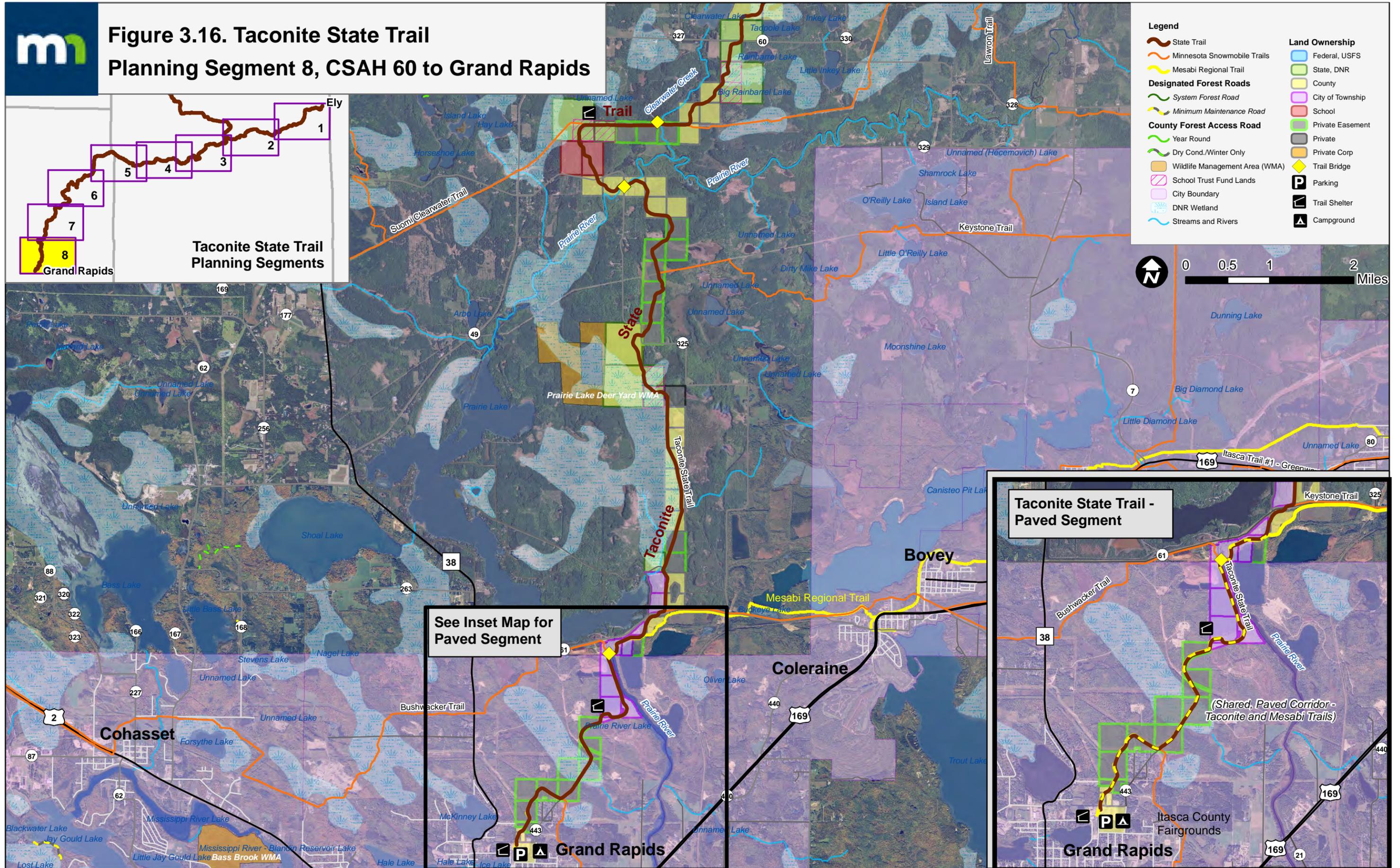
Figure 3.15: City of Grand Rapids

Legend	
	State Trail
	Snowmobile Trail
	Mesabi Regional Trail
	City Boundary
	City Park
	Parking
	School
	Library
	Public Water Access
	Airport





**Figure 3.16. Taconite State Trail
Planning Segment 8, CSAH 60 to Grand Rapids**



Taconite State Trail Master Plan – Trail Alignment

Trail Alignment Recommendations

TA-1: Continue to work with willing landowners and administrators to secure the trail alignment for permanent or long-term recreational use.

TA-2: Consider additional, new, or year-round trail uses that meet sustainability criteria and are compatible with existing uses, treadway conditions, and local needs and preferences.

TA-3: Consider and pursue ways to reduce potential conflicts with landowners and avoid resource management issues.

TA-4: Provide consistent recreational trail use along shared corridors with forest roads and trails and appropriate signage indicating shared corridors and allowable uses.

TA-5: Use the trailhead building at Grand Rapids County Fairgrounds to its fullest potential. Allow more use of the building for public events, meetings, and recreation-related training activities or classes. Public and private funds were used to develop this building so the public can use it.

4. Trail Management

History of Use

The Taconite State Trail has been in operation for over 30 years. Its primary use has been snowmobiling, which is accommodated on the entire length of the trail. Summer use has been focused in particular locations. In Grand Rapids, 6 miles are paved and share the corridor with the Mesabi Regional Trail. In and near McCarthy Beach State Park, equestrian use is a popular summer use activity as the trail provides a route through the state park as well as connections to forest trails and horse campgrounds nearby.

Snowmobile, ATV, OHM, ORV Registrations 2000-2016

While snowmobiling remains a popular winter outdoor recreation activity in Minnesota, total registrations have been in decline since its peak in 2001. Demand for snowmobiling has been declining over the last fifteen years, but seems to be holding steady since 2012. New snowmobile registrations have recurrently been below 15,000 since the early 2000's, with 2015 new registrations at 10,770. In 2015, there were 213,298 registered snowmobiles in Minnesota.

ATV total registrations are experiencing all-time highs the past two years, exceeding 276,000 total registrations in 2015 and increasing further to 287,995 in 2016. While new registrations declined in the mid 2000's, they have been holding steady to slightly increasing during the past few years. Both OHM and ORV registration numbers peaked in 2006, experiencing a sharp decline in the coming years. However, the new registration numbers have remained fairly consistent for the last five years.

Minnesota Horse Pass Sales

In 2006, the Minnesota Legislature established a Horse Pass to create a dedicated source of funding enabling users to assist directly with the operation and maintenance of the DNR's horse facilities (trails, campgrounds and day use areas). In 2009, a commercial horse pass was authorized to allow commercial riding facility owners to purchase passes that may be issued to riders who hire or rent horses from a commercial facility. Currently, the annual horse pass is \$21 for an individual, a daily trail pass is \$5, and the commercial pass is \$200 for 15 passes or \$20 for an individual pass. Annual horse pass sales have been relatively stable, averaging around 6,000 passes, generating \$90,000 to \$100,000 in annual funds. These funds are dedicated to equestrian-related projects.

See **Appendix C** for DNR License Center Registration Data.

Trail Operations and Maintenance

Seasonal or temporary trail closures may be imposed at any time due to treadway repairs, wet soil/treadway conditions, logging operations or other

Taconite State Trail Master Plan – Trail Management

natural resource protection or public safety concerns. Seasonal closures most often occur during spring thaw or following heavy summer rains events.

With the established corridor, consideration of adding or increasing summer uses may be more feasible in some areas than in others. It should not be assumed that a trail designed and developed for snowmobiling can adequately provide for sustainable summer uses in its existing condition. Careful consideration, evaluation and assessment for summer uses must take place before implementation. Various portions of the existing trail corridor are not likely suitable or sustainable for summer use. In these locations, a more suitable reroute or summer route may be considered and established where sustainable trail development criteria are taken into consideration. It is also important to maintain vegetation on trails with steeper slopes to prevent off-season erosion, which could cause a rough trail, creating difficulties with grooming or handling snowmobiles.

Snowmobile trails typically provide a variety of terrain consistent with the location or setting. While it is preferred to keep trail grades to 10% or less for safety and sightlines, steeper slopes or grades are acceptable for snowmobiles. The steeper grades require longer approaches and run-outs, at least as long as the slope itself, to give riders enough space to control their machines before entering a curve. For snowmobile trail design, it is important to approach hills and steeper slopes at a right angle (up the fall line) to prevent rollovers. On two-way trails, such as the Taconite, it is also common to have separate uphill and downhill sections to increase safety and reduce potential conflicts.

Adequate maintenance of state trails is critical to provide and sustain the experience trail users appreciate. Monitoring and maintenance of the Taconite State Trail will be critical to provide users with a safe trail experience. A routine monitoring and inspection schedule is important to catch maintenance issues at an early stage.

Maintenance activities are numerous and diverse. The following is a generalized list and may not be exhaustive of all maintenance needs and activities. Specific practices must be tailored to local trail conditions and seasonal uses.

- Monitoring trail conditions, which includes scheduling and documentation of inspections; monitoring the condition of railings, bridges, trail surfaces, and signage; hazard tree inspection; and removal of debris such as downed trees
- Scheduling of maintenance tasks
- Mowing and brushing trail corridor (seasonal needs); including trail shoulders, intersections, rest areas/shelters, and parking lots
- Winter grooming and plowing
- Tree and shrub pruning
- Trash removal

Trail Grade

Trail grade is an objective measure of steepness or slope and is expressed as a percentage.

Trail grade is determined by the elevation gain (rise) between two points divided by the distance between them (run), and then multiplied by 100 to get the percentage.

$$\text{Grade\%} = \text{Rise} \div \text{Run} \times 100$$

Taconite State Trail Master Plan – Trail Management

- Trail repair, such as fixing washouts and controlling erosion
- Maintaining bridge decking and railings
- Trail drainage control
- Trail surface maintenance
- Repair of animal and storm damage to trail or facilities
- Checking and repairing fence lines and gates
- Cleaning out ditches and culverts, replacing failing culverts
- Vegetation management – restoration, enhancement
- Controlling invasive species, noxious weeds
- Maintaining equipment
- Painting posts and picnic tables
- Patch holes caused by erosion, culvert failure, subgrade problems, animals, or other factors
- Maintain trail head facilities, including parking lots and trail shelters
- Place and maintain signage for the purposes of orientation, interpretation, safety, and boundary enforcement
- Maintain fencing, railings and gates for trail safety and boundary enforcement
- Continue to coordinate with partners for co-managed segments

The DNR has a partnership with Itasca County, sharing the maintenance responsibilities for the 6 miles of paved trail out of Grand Rapids. Itasca County is responsible for the maintenance of the paved treadway. However, the DNR may provide Itasca County information about potential maintenance needs while conducting other operational activities. A suggested inspections schedule for paved trails is provided in *Trail Planning, Design and Development Guidelines* (DNR 2007).

Trail Operations and Maintenance Recommendations

OM-1: Conduct year-round inspections to detect maintenance issues before safety is compromised.

OM-2: Continue to coordinate with other land administrators and agencies to maintain shared corridors and facilities (i.e. forest roads, county roads, other trails).

OM-3: Support flexibility for DNR staff to work with other land administrations and owners as needed, whether by external circumstances or by internal (DNR) management priorities and responsibilities.

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OM-4: To consider expanding, changing or adding new uses to the trail will include specific evaluation and assessments to ensure that proposed changes meet compatibility and sustainability criteria prior to implementation.

OM-5: Seasonal and temporary trail closures will be imposed due to wet trail conditions, active logging or resource operations, wildfire dangers, and maintenance and repair activities. Heavy precipitation and spring thaws may lead to trail closures.

OM-6: Pursue additional maintenance funds as needed to maintain the trail for new or additional trail uses. Consider funding from dedicated accounts as appropriate, such as when and where motorized uses (OHV) are operating/in use.

OM-7: Provide support amenities and facilities including designated parking, water, toilets, rest areas/shelters, and other amenities along the trail, as appropriate and as funding allows.

Information, Education and Interpretive Services

Trail User Orientation

Trail users must have reliable, accurate orientation information about the trail system so they can make informed decisions about destinations appropriate for their time frame, skill level, need for services such as gas, food, lodging, links to other trails, and types of scenery and other recreational opportunities available along the trail. This type of information should be displayed on information boards at parking areas, shelter locations, and at trail junctions. It should also be available on maps and on the DNR website. Routes and distances to communities, along with options for other trail connections and locations of services, should also be included. If any significant deviation from the typical design occurs, such as when the trail enters a community, it should be noted on signs or informational kiosks to assist trail users in understanding what the trail experience will be like. Division standards and best practices for way finding and trail user orientation should be implemented throughout the trail.

Identification of Services

Trail users benefit from knowing where they can obtain services (medical assistance, telephones, gasoline, food, lodging, restrooms, campgrounds, repair facilities, or other retail services) and local businesses benefit from an increase in customers. A listing of services available in each community should be displayed on information kiosks at parking areas and key junctions.

Trail Rules and Regulations

User-friendly trail courtesy and safety display boards that communicate appropriate behavior, promoting safe trail use and protecting the quality of the trail environment should be posted at information kiosks along the trail.

Taconite State Trail Master Plan – Trail Management

Trail users are responsible for obeying the rules and regulations provided in [Minnesota Rules, Chapter 6100, Public Uses of State Parks and Other Recreational Areas](#).

Trail Courtesy and Safety Information

Trail courtesy and safety display boards aimed at education trail users about appropriate behavior, promoting safe trail use, and protecting the quality of the trail environment should be developed and posted at trailheads and other key locations.

Interpretive Services

The DNR Parks and Trails Division interpretive program “forges emotional and intellectual connections to Minnesota’s natural and cultural heritage by provoking curiosity, encouraging discovery, and inspiring stewardship across generations.”

The division’s interpretive services program connects people with the outdoors through self-guided and staff-led experiences. Professional interpreters present in a variety of ways: personal experiences such as naturalist-led talks, special events and outdoor skills building programs; and self-guided experiences such as interpretive trails, exhibits, brochures and electronic media.

The goal of interpretive services along the Taconite State Trail is to promote the unique natural, cultural and recreational resources of the trail, enhance the trail user’s understanding, appreciation and stewardship of the trail (through interpretation and signage); encourage considerate behavior towards other trail users (foster trail etiquette); and to satisfy trail orientation and safety needs (through signage).

Because of the trail’s length and the ability of users to travel at higher speeds (speed limit on state trails is 50 miles per hour), safety, orientation and interpretive messages will be spaced at greater intervals and at sites which are natural stopping points such as access points, intersections (trails and roads), shelters, and scenic overlooks.

Proposed Interpretive Themes

Natural Resource Themes for Interpretation

- Identify and demonstrate the significance of unique geologic features.
 - The continental (Laurentian) divide west of McCarthy Beach State Park separating the Mississippi watershed from the Hudson Bay watershed.
 - Evidence of glaciation.
 - The man-made landscape created by iron mining.
- Identify and demonstrate the significance of natural resources such as native plant communities and wildlife found in the area.
 - Many forest communities along the trail are in various successional stages due to logging/timber harvest.

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- Importance of biodiversity.

Cultural Resource Themes for Interpretation

- Identify and demonstrate the historical and present day significance of the logging/timber industry in the area.
- Identify and demonstrate the historical and present day significance of mining in the area.
- Identify and demonstrate the significance of the Civilian Conservation Corps in the area.

Recreational Resource Themes for Interpretation

- Identify and demonstrate the recreational significance of the trail.
- Identify methods for promoting recreational use of trail through skill-building programs and events.

Volunteer Trail Ambassador Program

The Minnesota DNR's Enforcement Division administers the Minnesota Off-Highway Vehicle Safety and Conservation Law ([M.S. 84.9011](#)), referred to as the "Volunteer Trail Ambassador Program." This program was established to promote safe, environmentally responsible operation of off-highway vehicles (OHVs) through informational, educational contacts and enabling volunteer monitoring efforts. Oversight and management of the program is the responsibility of the DNR Enforcement Division, Safety/Education section with funding provided by the state legislature.

Trail Ambassadors are specially trained volunteers, who must also be an active Certified DNR Youth Safety Training Instructor and sponsored by a qualified organization, such as a local OHV club that is committed to outdoor recreation, and OHV safety and education. Trail Ambassadors play a critical role in assisting land managers' efforts to provide a recognizable presence on the lands they enjoy while providing a positive and informative role model for fellow Off-Highway Vehicle (OHV) and trail users. Volunteer trail ambassadors are not licensed peace officers; therefore, they cannot arrest or detain violators. They are responsible for greeting fellow outdoor enthusiasts, educating trail users, giving minor aid in emergencies, and providing useful information about responsible OHV use on public lands.

Information, Education and Interpretive Services Recommendations

IEIS-1: Develop/incorporate an interpretive plan for the trail so that users better understand the trail's unique natural, cultural and recreational features.

IEIS-2: Use and expand partnerships with other organizations such as local municipalities, chambers of commerce, tribal nations, historical museums, and corporate landowners to develop content for interpretive displays.

IEIS-3: Improve existing—or develop new trail kiosks—that reflect the interpretive theme(s) for the trail that can be used at trailhead locations, key



Trail Ambassadors assisting ATV riders on a trail.

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intersections, and rest areas. These include but are not limited to: Ely, Bear Head Lake State Park, Soudan, Tower, David Dill/Arrowhead State Trail intersection, Side Lake/McCarthy Beach State Park, and Grand Rapids.

IEIS-4: Follow Parks and Trails Division standards and best practices for wayfinding and orientation. Provide community services information, trail orientation, wayfinding signage, trail rules, and trail courtesy/etiquette information at key locations and intersections along the trail. Include universal trail use symbols to communicate shared uses along the trail.

IEIS-5: Use the Volunteer Trail Ambassador Program on trail segments that are open to OHV use (motorized recreational use) to help monitor trail use and conditions, particularly during peak motorized-use times.

IEIS-6: Provide trail orientation signs at junctions with other trails or roads, parking lots, trail shelters, and trailheads so that trail users understand allowable uses on each trail or trail segment. Not all uses are allowed on all segments of the trail system. For example, many grant-in-aid snowmobile trails intersect with the Taconite State Trail. Horses, ATVs and OHMs are not allowed on most of these grant-in-aid snowmobile trails. Trail users need clear and accurate signage to understand where and when they are allowed the trail.

IEIS-7: Continue and expand coordination with county 911 dispatch/enforcement agencies by posting Geographical/Global Positioning System (GPS) coordinates at trail junctions throughout the trail.

IEIS-8: Install additional gates or barriers, as needed, to manage multiple recreational uses along the Taconite State Trail. For example, additional gates or barriers are recommended at intersections with grant-in-aid snowmobile trails that do not allow other types of uses during other times of the year.

Enforcement

Enforcement activities are a vital aspect of maintaining a safe and secure trail environment. Minnesota State Trails are very safe and generate very few complaints. User conflicts, noise, unauthorized use of the trail, and trail users leaving the treadway designated for their use are often among the concerns identified during the planning process, and are all likely areas for enforcement activity. Enforcement of state trail rules and regulations, information and education, trail design, trail maintenance and the mix of trail uses are all factors that contribute to the maintenance of a safe and secure trail environment.

The DNR has the primary responsibility for law enforcement on DNR-owned and operated recreation areas. Enforcement assistance will also be coordinated with local police departments and county sheriffs, as necessary.

The DNR's goal is to provide an adequate level of enforcement to maintain a safe and secure trail environment, to encourage users to understand and obey all trail rules and respect other trail users and adjoining properties.

Enforcement Recommendations

ENF-1: Provide an adequate level of enforcement through a multifaceted approach to help maintain a safe and secure trail environment, to encourage trail users to understand and obey trail rules, and to respect other trail users and adjoining properties.

ENF-2: Develop on-site information that communicates important trail courtesies (etiquette) and rules that lead to a safe and enjoyable experience for all. Information needs to be specific to the uses of each trail segment and any issues or conflicts that may occur at those locations.

ENF-3: Continue to work with local law enforcement, local first responder, and/or emergency medical services personnel to insure public safety.

ENF-4: Increase visibility of DNR staff during peak use times to provide information to the public and an enforcement effect.

5. Natural Resources

Ecological Classification System

Minnesota also uses an Ecological Classification System (ECS) that is part of a nationwide mapping initiative developed to improve our ability to manage all natural resources on a sustainable basis. Both systems integrate climatic, geologic, hydrologic and topographic, soil and vegetation data. Minnesota lies at the center of North America where the prairie, boreal forest, and eastern deciduous forest meet. Four major ecological provinces are represented in Minnesota: Eastern Broadleaf Forest; Laurentian Mixed Forest; Prairie Parkland; and Tallgrass Aspen Parklands. All four are parts of much larger systems that cover major areas of central North America. The Eastern Broadleaf Forest Province, primarily consisting of deciduous forest, extends eastward from Minnesota all the way to the Atlantic Ocean. The Laurentian Mixed Forest Province, largely consisting of coniferous forest, extends northward into Canada. The Prairie Parkland Province extends westward into the Dakotas and across the Central Plains of the United States. The Tallgrass Aspen Parklands Province represents the southern tip of a larger province that extends north and west into the Canadian Prairie Provinces. The Taconite State Trail is located within the Laurentian Mixed Forest Province.

These ecological provinces are further divided into sections and subsections defined by vegetation, geology, and other resource criteria that make up distinct landscapes. The Taconite State Trail corridor is located in four ecological subsections: Beginning at the eastern end of the trail, the trail is located within the Border Lakes Subsection for a short distance before moving into the Nashwauk Uplands, then just skirting the southern boundary of the Littlefork-Vermilion Uplands before heading southerly toward Grand Rapids in the St. Louis Moraines Subsection.

Border Lakes Subsection – The eastern most portion of the trail, primarily from Ely to Tower, is located within the Border Lakes Subsection (Planning Segments 1-2). This subsection consists of scoured bedrock uplands or shallow soils on bedrock, with a large number of lakes. Over 300 lakes larger than 160 acres cover this subsection, which is about 13% of its surface area. Glacial ice moved from west to east across the subsection, deepening stream valleys in the bedrock. Topography is dominantly rolling with irregular slopes and many craggy outcrops of bedrock. The highest point in Minnesota, Eagle Mountain, at 2,301 feet above sea level, is located within this subsection.

Historic forest types on uplands were mostly aspen-birch, aspen-birch-conifer, and on dry sites, jack pine barrens. Much of this subsection consists of the BWCAW, which is an internationally known wilderness area. Most of the subsection remains forested, with most forest types persistent with present stand composition and structure. Logging occurred within the subsection, but large areas remain unlogged.

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Nashwauk Uplands

Much of the Taconite State Trail lies within this subsection, primarily along its northern boundary with the Littlefork-Vermilion Uplands (Planning Segments 2-5). The western part of the northern boundary is formed by the limit of the Nashwauk Moraine. Its southern boundary is formed by Giant's Range, a prominent feature on the land. Brown glacial sediments form the parent material for much of this subsection.

Landforms include end moraines, outwash plains, and lake plains. Soils are varied and range from medium to coarse textures. One unique aspect of this region is the Giants Range, where the majority of iron mining in Minnesota takes place. It is a high, narrow ridge trending northeast to southwest and is caused by bedrock. This region consists of forest communities dominated by white pine, red pine, balsam fir, white spruce, and aspen-birch.

Littlefork – Vermilion Uplands

The Taconite State Trail runs along the south eastern lobe of the Littlefork – Vermilion Uplands subsection near Side Lake and McCarthy Beach State Park (Planning Segments 4-5). The Vermilion River serves as the subsection's eastern border. This is a level to gently rolling lake plain and transition zone to the Border Lakes region to the east. Numerous rivers and streams meander extensively throughout the subsection.

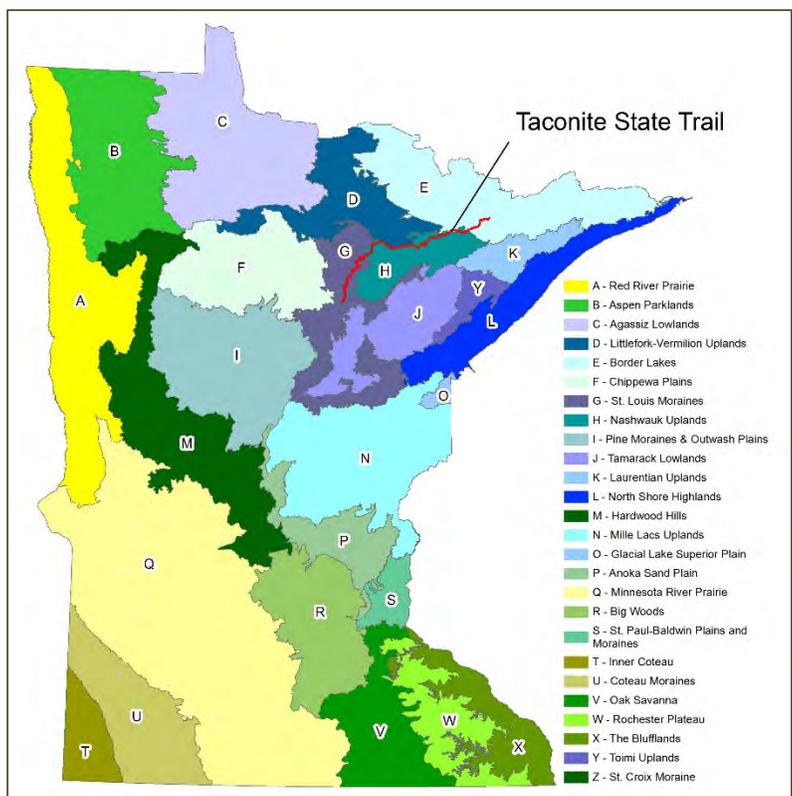
Forestry is the most common land use in this subsection, and quaking aspen is the most common tree species, which is harvested for pulp. In the southeastern portion of this subsection, recreation is an important land use, which includes the area where the Taconite State Trail is located among other public lands.

St. Louis Moraines

The Taconite State Trail enters the St. Louis Moraines Subsection west of Highway 65 as the trail turns southwesterly toward Grand Rapids (Planning Segments 6-8). The St. Louis Moraines Subsection is characterized by rolling hills with steep slopes. The Mississippi River cuts through portions of this area, but mainly small, relatively short rivers are present, including the Prairie, Willow, Hill, and Moose, as well as numerous lakes.

Predominant land uses in this subsection are forestry, recreation and tourism. This area is heavily forested and timber harvesting is extensive with Quaking Aspen as the primary species harvested today. Popular recreational activities are also associated with the forests and lakes, including fishing, hunting, snowmobiling and skiing. Key habitats that also intersect with the Taconite State Trail include George Washington State Forest and Chippewa National Forest.

Figure 5.1. Minnesota Ecological Subsections



Climate

Minnesota experiences a continental climate influenced by cold arctic air during winter months, and is influenced by warm air masses from the Gulf of Mexico during the summer months. The Pacific Ocean air masses that push through the state produce relatively mild and dry weather throughout the year. Average temperature and precipitation can vary between the two end points of the trail. Total annual precipitation is approximately 28.5 inches in the Tower area and 26.4 inches in the Grand Rapids area, with 67.4 inches total annual mean snowfall in Tower and 56 inches in Grand Rapids. Annual mean temperature is 36.1 degrees Fahrenheit in Tower and 39.5 degrees Fahrenheit in Grand Rapids.

Climate Change

Climate change alters the character of the state's lands, waters, plants, fish and wildlife, and affects the DNR's ability to manage these resources for the long-term benefit of the public. The DNR's responsibility is to use the best available science to implement adaptation strategies that will minimize the negative impacts of climate change on the state's natural resources, outdoor recreation opportunities, and commercial uses of natural resources.

The DNR will develop and implement land management practices that sustain Minnesota's natural resources while helping to reduce future climate change by mitigating the environmental impacts of increased carbon emissions. This will be guided by DNR Operational Order #131, "Climate Adaptation and Mitigation in Natural Resource Management." The DNR is committed to enhancing ecosystem resilience and reducing the negative impacts of climate change on the state's resources and outdoor recreation opportunities.

Climate change will impact temperature and precipitation patterns. The rate of increase of average annual temperature in Minnesota from 1970-2014 has been 5.0°F/century. Temperatures are expected to continue increasing into the foreseeable future with the greatest change reflected in winter minimums. Annual average precipitation is anticipated to increase by 3-5" per century. In addition, the number of heavy precipitation events has increased annually, resulting in more frequent and heavier flooding events.

Climate change could impact outdoor recreation and trail management. A decline in winter snowfall amounts and season length could impact the feasibility of winter (snow-based) recreation activities. On the other hand, warmer temperatures in the spring and fall could extend the season for traditional summer uses.

LIKELY IMPACTS OF CLIMATE CHANGE ON OUTDOOR RECREATION ACTIVITIES

- Increased shoulder seasons: Warmer temperatures earlier in the spring and later in the fall may extend shoulder seasons, meaning the demand for almost all summer activities could be extended earlier in the spring and later in the fall.
- Adjustments may be needed as participation in traditional winter sports declines due to changing winter weather patterns.

Climate change is expected to impact outdoor recreation on the trail.

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- A shift to greater use and demand for non-snow trail activities will likely generate greater maintenance and sustainability issues for existing trail systems, both motorized and non-motorized uses. Existing facilities may become over-used resulting in impacts to facilities and natural resources.
- Some cold-water lakes and streams may warm to the point that the fishery changes to a more warm-water based fauna. This could have an impact on angling recreation.
- A decline in winter snowfall amounts and season length will mean decreased funding to dedicated accounts related to those activities such as cross country skiing and snowmobiling because of fewer users and registrations.
- Winter staffing may need to be adjusted if dedicated funds are impacted by changing climatic conditions.

Geology and Soils

Bedrock geology

The Border Lakes Subsection, including the trail area near Ely, consists of scoured bedrock uplands or shallow soils on bedrock with a large number of lakes. Topography in this area is dominated rolling hills with irregular slopes and rocky outcrops of bedrock. The subsection has Precambrian-age bedrock, including gneiss, undifferentiated granite, and metamorphosed mafic to intermediate volcanic and sedimentary rocks.

The southern boundary of the Nashwauk Uplands Subsection is formed by the Giant's Range, a narrow bedrock ridge towering 200 to 400 feet above the surrounding area. The ridge trends southwest to northeast. Bedrock is locally exposed in the end moraines. The thickness of the glacial drift varies across the subsection. On moraines, the depth to bedrock is commonly greater than 100 feet. Bedrock consists of gneiss, undifferentiated granite, and metamorphosed mafic to intermediate volcanic and sedimentary rocks. The area immediately south is the iron formation of the Iron Range, which has been heavily mined, first for iron ore and later for taconite, the namesake of the trail.

The Littlefork-Vermilion Uplands Subsection includes bedrock outcrops and thin glacial drift to the eastern side as it transitions from the Border Lakes Subsection, and gradually gets thicker to the west side where glacial drift may be up to 300 feet thick. The underlying bedrock includes gneiss, amphibolite, undifferentiated granite, and metamorphosed mafic to intermediate volcanic and sedimentary rocks. There are also iron formation, metasediments and metamorphosed felsic volcanic rocks in this subsection.

The St. Louis Moraines Subsection is dominated by end moraines associated with the St. Louis and Koochiching Sublobes. Topography ranges from very steep, ice disintegration features, around Grand Rapids to rolling and gently rolling in surrounding areas. Glacial drift ranges from 100 to 200 feet in depth to bedrock, which consists of undivided granites, metavolcanics and metasedimentary rocks.

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Soils

Soils vary across the length of the trail corridor, as expected with the change in subsections and topography. The Border Lakes Subsection consists of soils derived from a mantle of acid, cobbly, and gravelly glacial till of variable depth. Coarse-loamy to coarse soil textures are most common, with small areas of sandy and clayey lacustrine soil in the western part of the subsection. These soils are classified as Ochrepts (poorly developed soils formed under forest vegetation), with localized Aquents (wet undeveloped soils) and Hemists (moderately decomposed organic soils or peat).

The Nashwauk Uplands soils are formed in sandy to fine-loamy glacial till and outwash sand. Soils in this subsection have a loamy cap with dense basal till below at depths of 20 to 40 inches and area classified as Boralfs (well drained soils developed under forest vegetation).

Littlefork-Vermilion Uplands soils are primarily moderately well to poorly drained mineral soils formed from clayey lake-laid sediments or loamy to clayey glacial till. Organic soils are common, but are not dominant. Peat depths vary from shallow to deep, up to 15 feet thick. Soils are classified primarily as Aqualfs (wet soils developed under forest vegetation), Aquents, Boralfs and Hemists.

In the St. Louis Moraines Subsection, soils are primarily loamy calcareous soils, with small areas of excessively well-drained outwash sands and poorly drained soils. The soils are most commonly classified as Boralfs, and other classifications include Aqualfs, Hemists, and Psamments (sandy, poorly developed well-drained soils).

Vegetation

Pre-settlement Vegetation

F.J. Marschner, a researcher with the U.S. Department of Agriculture, compiled a map in 1920-1930 titled, "The Original Vegetation of Minnesota" based on the notes of the Public Land Survey, 1847-1907. Pre-settlement vegetation in the vicinity of the Taconite State Trail, based on Marschner's map, consisted of mixed white pine and red pine, aspen-birch (trending to conifers), jack pine barrens and openings, and mixed hardwood and pine (maple, white pine, basswood, etc.). Wetland vegetation, scattered throughout the trail corridor, included conifer bogs and swamps. Most of the red and white pines were removed by the early 20th century.

Present Day Vegetation and Land Use

Quaking aspen is the most common species of tree throughout all four Subsections crossed by the Taconite State Trail. It is found in both pure and mixed stands and is heavily harvested for pulp. Logging of conifer species, including balsam fir, white spruce white pine and red pine also occurs. Large tracts of unlogged areas remain within the Border Lakes Subsection, particularly in the BWCAW.

Important land uses throughout the trail corridor and in its vicinity include forestry and recreation. Popular recreational activities include fishing, hunting,

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cross-country skiing and snowmobiling. Mining is also an important land use within the Nashwauk Uplands Subsection.

The Minnesota Biological Survey (MBS) is currently in progress in St. Louis County and has been completed work in Itasca County. At the end of survey work in a geographic region, MBS ecologists assign a biodiversity significance rank to each survey site based on the presence of rare species populations, the size and condition of native plant communities within the site, and the landscape context of the site. There are four biodiversity ranks: outstanding; high; moderate; and below. These ranks are used to communicate the statewide native biological diversity significance of each site to natural resource professionals, state and local government officials, and the public. The biodiversity ranks help to guide conservation and management.

Bear Head Lake and McCarthy Beach state parks are known as sites with high biodiversity significance, which by definition exhibit “very good quality occurrences of the rarest species, high-quality examples of rare native plant communities, and/or important functional landscapes.” Native plant communities intersected by the Taconite State Trail within these parks include: alder swamp/forested peatland complex; aspen – birch forest, balsam fir subtype; beaver wetland complex; black ash – conifer swamp; northern poor conifer swamp; poor tamarack – black spruce swamp; red pine – white pine woodland, balsam fir subtype; sedge meadow; and white pine – red pine forest.

Preliminary sites of biodiversity significance have been identified along the entire trail corridor representing all four rankings, from “outstanding” to “below”.

Vegetation management plans for state forest lands have been developed using Ecological Classification System boundaries. The Subsection Forest Resource Management Plans (SFRMPs) establish management direction for lands administered by the DNR Forestry and Fish and Wildlife divisions. These plans help ensure state forest management activities meet statewide goals for ecological protection, timber production and cultural and recreational values. Additional guidance and recommendations may be sought from the *Border Lakes* and *North 4* (which includes St. Louis Moraines, Tamarack Lowlands, Nashwauk Uplands, and Littlefork-Vermilion Uplands Subsections) SFRMPs.

Invasive Species

The spread of invasive non-native plant species is a concern for any activity that results in soil disturbance. Trail users could contribute to the spread of invasive species. To minimize the potential of spreading invasive species, the trail should be monitored for invasive species during summer uses, especially during the first year after a new use is added or expanded and periodically thereafter by DNR staff. Where OHV use is occurring, Volunteer Trail Ambassadors may also assist with invasive species monitoring along the trail.

While developing and maintaining the Taconite State Trail, the Parks and Trails Division will follow the divisional guidelines established under Operational

Ranks of Biodiversity Significance:

Outstanding - sites contain the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most ecologically intact or functional landscapes.

High - sites contain very good quality occurrences of the rarest species, high-quality examples of rare native plant communities, and/or important functional landscapes.

Moderate - sites contain occurrences of rare species, moderately disturbed native plant communities, and/or landscapes that have strong potential for recovery of native plant communities and characteristic ecological processes.

Below - sites lack occurrences of rare species and natural features or do not meet MBS standards for outstanding, high, or moderate rank. These sites may include areas of conservation value at the local level, such as habitat for native plants and animals, corridors for animal movement, buffers surrounding higher-quality natural areas, areas with high potential for restoration of native habitat, or open space.

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Order 113, “Invasive Species.” The guidelines prescribe methods for avoiding the introduction or spread of invasive species, and managing and treating infestations of such species specific to Parks and Trails Division-administered lands and waters, as well as actions that the division regulates, permits or funds (grants). In addition to division staff, the guidelines apply to contractors, volunteers, and cooperators working on behalf of the DNR.

Prevention strategies include the following:

- Identify and map invasive plants on the trail and adjacent lands;
- Minimize vegetation and soil disturbance during maintenance and construction;
- If working in an area with invasive species, prevent spreading viable roots and seeds by cleaning equipment;
- Use weed free surface hardening materials on the constructed treadway;
- Re-vegetate disturbances with temporary non-invasive cover crops to avoid erosion and allow native vegetation to re-populate the disturbance;
- Monitor disturbed sites particularly during the time vegetation is reestablished, and periodically thereafter; and
- The use of fill material (soils) from borrow sites could create an opportunity for invasive species to be moved or introduced into new areas. Top organic layers would be removed prior to excavating fill materials so that only mineral soils would be distributed along the treadway.

Existing invasive non-native species are known to exist along the existing trail corridor, but specific sites and species are not inventoried. When trail projects, reroutes or new uses are proposed, corridor assessments will provide opportunities to identify and inventory infested areas along the trail. Invasive species will be physically removed where practicable or treated with herbicides if necessary. All herbicide applications would comply with labeling, safety protocols and the precautions prescribed in DNR Operational Order 59, which governs the DNR’s use of pesticides. The Operational Order specifies that all pesticide applications must be preceded by a natural heritage database review to insure endangered or threatened species or significant native plant communities are not harmed.

Vegetation Management Recommendations

VM-1: Use native plant species, from locally collected seed sources that are consistent with the native plant communities of the area, to re-vegetate areas disturbed by erosion, overuse and construction.

VM-2: Restore or, if necessary, establish native woodlands or wetland plantings along the trail to minimize maintenance and the use of pesticides, control noxious weeds, and increase the abundance of natural species and biodiversity in ways that enhance the user experience.

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VM-3: Avoid or minimize impacts to Minnesota Biological Survey Sites of Outstanding or High Biodiversity Significance. If avoidance is not possible, then impacts to the features that make the site “of outstanding or high biodiversity significance” are minimized.

VM-4: Be adaptive to the changing climate and consider year-round, sustainable recreational uses of the trail corridor.

VM-5: Follow Operation Order #131 and current Parks and Trails Division guidelines developed for climate change adaptation, mitigation, and management approaches specific to state parks and trails.

VM-6: Follow Operational Order #113 and current Parks and Trails Division guidelines developed for preventing and controlling the spread of invasive species on Parks and Trails Division-administered lands.

VM-7: Monitor and control the spread of invasive species; trail corridors are especially vulnerable when land is mowed during routine maintenance of the trail.

VM-8: Regularly coordinate and communicate with land managers about trail management and operations to ensure and promote high quality recreational opportunities along the Taconite State Trail and connected recreational units and systems.

VM-9: Continue to coordinate with the U.S. Forest Service regarding management activities and recreational uses wherever the trail is located on, or adjacent to national forest property.

Water Resources

Minnesota is unique in that there are two continental divides within the state. A continental divide is a drainage divide such that the drainage basin on one side of the divide feeds into one ocean or sea, and the basin on the other side feeds into a different ocean or sea. The Laurentian Divide separates the river systems that flow northwards to the Arctic Ocean and Hudson Bay from those that flow southwards to the Atlantic Ocean, Caribbean Sea and Gulf of Mexico.

The Taconite State Trail crosses the Laurentian Divide a few miles west of McCarthy Beach State Park, within the George Washington State Forest (Planning Segment 5).

Basins and Watersheds

A basin (or drainage basin) is an area of land drained by a river or lake and its tributaries. Minnesota has 10 major drainage basins. Each drainage basin is made up of smaller units called watersheds, which correspond to the drainage of a tributary or lake system. Minnesota has 80 major watersheds. The Taconite State Trail crosses or intersects numerous wetland and river resources located within two basins and four major watersheds.

The **Rainy River Basin** sits on Minnesota's border with Canada and is home to some of the state's finest forest and water resources. Voyageurs National Park and the Boundary Waters Canoe Area Wilderness are located within the Rainy River Basin, as are several of Minnesota's most famous walleye fisheries and many top-notch trout streams. Other prominent uses of natural resources in the basin are forestry, mining and various forms of recreation, including the Taconite State Trail. The waters from the Rainy River Basin flow north, eventually reaching the in Hudson Bay.

Figure 5.2. Major Basins and Watersheds in Minnesota



The Taconite State Trail crosses three major watersheds in the Rainy River Basin: Rainy River – Headwaters (Planning Segment 1); Vermilion River (Planning Segments 1, 2, 3); and Little Fork River (Planning Segments 3, 4, 5).

The **Upper Mississippi River Basin** covers about 20,100 square miles, and stretches from the headwaters of the Mississippi River at Lake Itasca to Lock and Dam Number 2 near Hastings (south of St. Paul). From its start at Itasca State Park, the Mississippi River flows south 2,350 miles, to the Gulf of Mexico. As the river runs this course, it drains into a mixture of forest, prairie, agriculture, and urban land areas.

The Taconite State Trail crosses the Mississippi River – Grand Rapids major watershed (Planning Segments 6, 7, 8) within the Upper Mississippi River Basin.

Stream Crossings

Wetlands, riparian areas, and water bodies are always considered sensitive ecological systems irrespective of their location and condition. The Taconite State Trail corridor currently consists of 52 stream crossings. This includes thirteen crossings of designated trout streams and protected tributaries to designated trout streams. Some streams are crossed multiple times. Existing trail crossings of waterways include bridges, culverts and fords as acceptable for existing trail uses. Potential new uses or additional summer use will require further evaluation and assessments to determine appropriate crossings prior to implementation. This may include new bridges to allow for unimpeded stream flow, fish passage, reduction of erosion and sedimentation and overall stream protection. Stream stability is important for all fish species.

Some trail sections may still prove to be too wet or cross extensive wetland areas and thus are not able to provide a sustainable treadway for year-round use. In these locations, seasonal or permanent reroutes or alternate routes may be considered to provide continuity of trail uses, where practical and feasible.

A complete list of stream crossings, with reference maps, is in **Appendix D**.

Wetlands

The Taconite State Trail intersects or crosses numerous types of wetlands along its existing corridor, predominantly shrub and wooded swamps and bogs. These include both Public Waters Inventory (PWI) wetlands, regulated by the DNR, and non-PWI wetlands, regulated by local governments under the Wetland Conservation Act. The vast majority of the wetlands along the trail corridor are managed and maintained for snowmobile/winter use only, minimizing the potential for impacts to these sensitive resources. Careful consideration and resource evaluations are required for any potential wetland impact resulting from summer uses.

Wetland sequencing must be taken into consideration when assessing for additional trail uses, particularly summer uses. Development or improvements to the trail should avoid wetlands if at all possible. If avoidance is not possible, then impacts must be minimized, and losses replaced if impacts cannot be avoided. Existing state laws and rules encourage or require wetland mitigation to occur on the site of the impact or within the same watershed or county in order to replace the types and functions that were lost.

Bogs, or peatlands, are wetlands whose soils are made up of peat, which is the partially decomposed remains of plants. North-central Minnesota has among the most extensive peatlands in the lower 48 states. Bogs contain peat (organic) soil, with the water table at or near the soil surface year-round. Vegetation within bogs includes woody, herbaceous, or both, supporting a spongy covering of mosses; typical plants are heath shrubs, sphagnum mosses, sedges, leatherleaf, Labrador tea, cranberry, and cottongrass; and may include stunted black spruce and tamarack trees. Common sites are mostly on shallow glacial lake basins and depressions, flat terrains, and along sluggish streams.

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Shrub and Wooded swamps are shrubby or forested wetlands found along the edges of lakes, rivers, and streams and in glacial basins. Shrub and wooded swamps contain organic or mineral soil, with the water table at or near the surface for most of the growing season.

Shrub swamps are common throughout the state and may be covered with as much as six inches of water. Vegetation includes alder, willow, dogwood, and buttonbush (southeast Minnesota). Shrub swamps are commonly found along sluggish streams, drainage depressions, and occasionally on floodplains.

Wooded swamps may be covered with as much as one foot of water for shorter periods. Vegetation includes hardwood and coniferous swamps with tamarack, northern white cedar, black spruce, balsam fir, balsam poplar, red maple, and black ash trees; and deciduous sites frequently support beds of duckweed and smartweed. Wooded swamps are commonly found in shallow ancient lake basins, old riverine oxbows, flat terrains, and along sluggish streams.

(Review Note: An update to Minnesota’s National Wetland Inventory (NWI) data is in progress, conducted through a collaborative effort coordinated by the DNR. This update is not yet complete for the area surrounding the Taconite State Trail, but is expected to be available by 2019. Also, no trail intersections with State Water Trails; or impaired waters – no discussion needed.)

Water Resources Recommendations

WR-1: Trail bridges are preferred for stream crossings. Where culverts are used, the culvert width will, at a minimum, match the normal bank full width of the stream and be installed to match the natural gradient of the stream. Best management practices will be used for maintenance, repair and installation.

WR-2: Wetland sequencing must be followed. Avoid impacting wetlands if at all possible. If impacts are unavoidable, a wetland mitigation plan will be prepared to address and identify impacted wetlands.

WR-3: Minimize trail development and maintenance impacts to adjacent water features through the use of mulching, geo-textiles, silt screens, and other up-to-date best management practices.

WR-4: Use native plant materials appropriate to the locale to re-vegetate construction sites near water resources. Seek opportunities for in-stream habitat restoration or improvements.

WR-5: Coordinate with appropriate regulatory authorities and follow regulatory requirements that may apply to specific trail projects that may impact water resources.

Fisheries

Trout Streams

Minnesota's designated trout lakes and streams (and portions of streams and tributaries) are identified in state rules ([MN Rules 6264.0050](#)). These waterways have specific fishing regulations and special conditions to protect them from misuse.

Minnesota has two native trout species, brook trout (*Salvelinus fontinalis*) and lake trout (*Salvelinus namaycush*). The other trout found in Minnesota are brown trout (*Salmo trutta*) and rainbow trout (*Oncorhynchus mykiss*). Both were introduced to Minnesota in the late 1800s. Most trout streams are in southeastern Minnesota and along the North Shore of Lake Superior. The southern streams have mainly brown trout with some rainbow trout and, in the cold clear headwaters, brook trout. The northern streams have mostly brook trout. Lake trout are found in Lake Superior and in many deep, cold, clean northern lakes. A hybrid between a lake trout and a brook trout, called a splake, is also found in some northern lakes.

Trout rely on loose, coarse gravel bottom material and clean, unimbedded rubble for spawning habitat and development of eggs. They rely on deep pools with overhead cover to provide habitat for adult fish. Erosion from roads, trails, and ditches can degrade spawning and nursery habitat by releasing sediment that can smother developing eggs and imbed spawning gravels. Severe erosion can fill-in pools and smother riffle areas needed for production of invertebrates. A variety of techniques are available to limit erosion and runoff, including maintaining vegetative cover near streams. Vegetation on the treadway is likely to be diminished if the trail is opened to new summer uses.

The Taconite State Trail crosses six different designated trout streams and four protected tributaries, several of which are crossed multiple times for a total of 14 trout stream and tributary crossings along the trail. Trail bridges are preferred at these locations. However, some trout stream crossings do not have bridges or culverts.

Routine trail maintenance activities are generally acceptable so long as it does not affect water quality or include work below the banks or in the stream, particularly during peak spawning season. Northern trout streams have fall spawning seasons. Work in public waters permits within the northern trout stream floodplains have exclusion dates from September 15 to June 30.

Aquatic Management Areas

The aquatic management area (AMA) program provides angler and management access, protects critical shoreland habitat, and provides areas for education, research, and recreation as part of the Outdoor Recreation Act.

The Taconite State Trail intersects four separate AMA easements:

- Purvis Creek AMA, at an unnamed stream (not a trout stream) – ford crossing (Planning Segment Map 1, crossing number 7)



Minnesota native brook trout (top) and lake trout (bottom).

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- East Two Rivers AMA, East Two Rivers – bridge, trout stream (Planning Segment Map 2, crossing number 12)
- West Two Rivers AMA, West Two Rivers – bridge, trout stream (Planning Segment Map 2, crossing number 17)
- Bear River AMA, Stony Brook – bridge, trout stream (Planning Segment Map 5, crossing number 33)

A list of stream crossings, with reference maps, is provided in **Appendix D**.

Fisheries Recommendations

FISH-1: Trail intersections with public waters should minimize potential impacts as much as possible. Stream crossings should be properly designed for the trail use types, while also maintaining stream integrity.

FISH-2: Minimize the impact of trail operations and maintenance on water resources through the use of mulching, geo-textiles, silt screens, and seeding to establish vegetation. Appropriate erosion control measures should be taken to minimize the potential impacts on adjacent water resources.

FISH-3: Avoid construction or maintenance activities within the floodplain or below the banks during the prime spawning seasons of northern trout. Northern trout spawn from mid-September to June. (Exclusion dates will be part of the general waters permit.)

FISH-4: Bridges should span the river bank-full dimensions and should not have structures in the water channel that would catch debris and require frequent maintenance or diminish water quality or flow.

FISH-5: Avoid and minimize potential impacts to aquatic management areas (AMA) through best management practices and coordination with DNR fisheries staff.

Wildlife

The Taconite State Trail travels through many different habitats and ecosystems which support a diverse community of plants and animals. The trail is uniquely positioned as it traverses stands of deciduous forest in the south and coniferous forest as it meanders north. The trail also passes by rivers, lakes and wetlands which are important resources for wildlife. Wildlife found along the trail is typical of northeastern Minnesota and includes many large and small, game and non-game bird and mammal species, as well as several reptiles and amphibians.

Mammals

Distinguished mammal species in the trail area include: black bear, white-tailed deer, Canada lynx, northern bog lemmings, smoky shrew, rock vole, heather vole, gray wolf, American badger, American pine marten, northern myotis bat, beaver, bobcat, and mink. The transition between four different ecological subsections provides habitat for many diverse mammal species.

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Birds

Minnesota's northern forests provide habitat for many avian species, including: bald eagles, spruce grouse, American bitterns, ospreys, northern goshawks, great gray owls, boreal owls, boreal chickadees, Connecticut warblers, gray jays, black-backed woodpeckers, yellow rails, merlins, red-necked grebes, and trumpeter swans.

Reptiles and Amphibians

Reptiles and amphibians in the vicinity of the trail include Common snapping turtle, eastern red-backed salamander, spring peeper, boreal chorus frog, wood frog, northern leopard frog, mink frog, and red belly snake.

Threatened, Endangered, and Special Concern Species, and SGCN

The DNR's Natural Heritage Information System provides information on Minnesota's rare plants, animals, native plant communities, and other natural features. This database is continually updated as new information becomes available and it the most complete source of data available for these features. The list of features found within one mile of the Taconite State Trail corridor is provided in **Appendix E**.

Species in Greatest Conservation Need (SGCN) have been identified for each ecological subsection in Minnesota. Many SCGN are known to occur in the project area. The Taconite State Trail intersects four ecological subsections, including the Border Lakes, Nashwauk Uplands, Littlefork-Vermilion Uplands, and St. Louis Moraines Subsections. Each of these subsections contains at least 60 identified SGCN, with a combined total of 91 different species among SGCN. This category, which takes into account both plant and animal species, includes:

- Species whose populations are identified as being rare, declining, or vulnerable in Minnesota, including species with legal protection status (federal or state endangered or threatened species);
- Species at risk because they depend upon rare, declining, or vulnerable habitats;
- Species subject to specific threats that make them vulnerable (i.e. invasive species);
- Species with certain characteristics that make them vulnerable (i.e. highly localized distribution);
- Species with stable populations in Minnesota that are declining outside of Minnesota.

The various scientific and natural areas (SNAs) provide retreat for many SGCN. Key habitats along the Taconite State Trail as defined by these subsections are the Upland and Lowland Coniferous Forests, Upland Deciduous Forests, Upland Shrub/Woodland, and Headwater to Large River systems as well as Deep Lake systems.

Notable SGCN in the area of the Taconite State Trail include:

- **Bald eagle** (*Haliaeetus leucocephalus*), A formerly federally and state listed endangered species. The bald eagle is widespread throughout Canada and

portions of the United States, with two races, northern and southern, identified. The decline of bald eagles over its entire range of the contiguous 48 states has been well documented as a result of environmental contamination by the use of DDT. Since DDT was banned in 1972, the bald eagle populations have increased nationwide. However, in 1978, the species was listed as federally threatened and endangered. In recognition of the decline in population, the bald eagle was listed as threatened in Minnesota when the first state endangered species list was created in 1984.

In 2007, the bald eagle was removed from the federal list of endangered species because their populations recovered. The bald eagle will continue to be protected by the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act (MBTA). The MBTA and the Eagle Act protect bald eagles from a variety of harmful actions and impacts.

- **Canada lynx** (*Lynx canadensis*), a federally-listed threatened species, is known to occupy habitats similar to those found in the vicinity of the Taconite State Trail and is known to use the arrowhead region of Minnesota, an 8,000 square mile area designated as Critical Habitat by the U.S. Fish and Wildlife Service. The Canada lynx is a rare wildcat in Minnesota, and is most likely to occur just after the population of their main prey, snowshoe hare, crashes in Canada. The lynx has large "snowshoe" like feet that enables it to walk on top of deep, soft, snows.

It is possible that the Canada lynx uses suitable habitat in the surrounding forests, and animals may occasionally cross the trail corridor. The Taconite State Trail is an existing corridor through the region and should have minimal impacts on the Canada lynx.

- **Gray wolf** (*Canis lupus lycaon*), sometimes also called the timber wolf, is a federally listed threatened species in Minnesota and endangered in other states. The DNR has committed to ensuring the long-term survival of the wolf in Minnesota, and also to resolving conflicts between wolves and humans. In 2001, the DNR completed a comprehensive wolf management plan which includes provisions for population monitoring, management and control of problem wolves, management of wolf habitat and prey, enforcement of laws restricting the taking of wolves, public education, and increased staffing for wolf management and research.
- **Northern Long-Eared Bats** (*Myotis septentrionalis*), the northern long-eared bat, also known as the northern myotis, is widely distributed in Canada and throughout the eastern half of the United States. In 1984, it was designated a species of special concern, at which time it was known from only a few widely distributed localities in the state. Subsequent survey work has documented additional locations in Minnesota, and confirmed that the species can be found in the state in both summer and winter. A large hibernaculum was discovered in St. Louis County, and northern long-eared bats have been found in most other caves and mines

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surveyed in Minnesota, although typically in low numbers. The northern long-eared bat is one of the most impacted species by white-nose syndrome, which has now been confirmed in Minnesota.

In 2015, it was listed as a threatened species under the Endangered Species Act which includes a rule beneath section 4(d) designed to protect the bat while minimizing regulatory requirements for landowners, land managers, government agencies and others within the species' range. Several of the known northern long-eared bat hibernacula are located in state parks and receive adequate protection. Attempts are being made to work with private landowners with known hibernacula sites to help protect hibernating bats.

A summary of SGCN species in the vicinity of the trail is provided in **Appendix F**.

Wildlife Recommendations

WILD-1: Avoid threatened, endangered, and special concern species. Data from the Natural Heritage database was used to assess the location of threatened, endangered, and special concern species. Parks and Trails Division staff will keep current with this data and perform on-the-ground surveys when changes or projects are proposed.

WILD-2: Minimize disturbances to habitats that support Species of Greatest Conservation Need. Maintain key habitats for SGCN that live along the trail corridor. Maintenance of these habitats within the trail corridor should be consistent with the management goals of surrounding lands including national, state, county and private forests, state parks, and wildlife management areas.

WILD-3: Provide interpretation, educational information, and demonstration areas for habitat management/landscaping and special wildlife features. Develop and provide checklists or other guides for plants and animals to engage trail users with wildlife resources.

WILD-4: Maintain regular consultation with DNR resource managers and Natural Heritage and Nongame Research Program staff for current information on occurrences of sensitive or rare species or natural communities in the corridor. Many occurrences change over time, remain unknown, or are undocumented.

6. Cultural Resources

Archaeological and Historical Context

The earliest known inhabitants of the area left pictographs (rock paintings) and petroglyphs (rock carvings) north of the present trail corridor, which date to thousands of years ago.

The only Native Americans in recent history to be identified in the region are Ojibwe people. European Immigration expanding from the east, forced Ojibwe to move west along the St. Lawrence Seaway and Great Lakes. They entered present day northern Minnesota in the late 1600s. The lake and forest resources provided the Ojibwe with abundant fish and wildlife despite the harsh winters. However, continued European immigration eventually forced the Ojibwe from most of their land.

Documentation of fur trade in this area began in 1679, when French-Canadian voyageurs from Montreal and Quebec came west to participate in fur trade with the American Indians. The trade was first dominated by the French, followed by the British and then finally, the ‘Americans’. The fur trade era lasted about 175 years. When it ended, many voyageurs and new immigrants turned to logging.

From 1869 to 1900, homesteading in Minnesota boomed. Railroads, mineral exploration, including iron ore, and lumbering attracted people, including new immigrants, to northeast Minnesota.

Timber Industry/Logging History

During the early years of logging in the area, thousands of acres of virgin red and white pine were cut down to supply the building boom in cities across the country. After the vast majority of mature growth pines were removed, aspen forests were established. Because aspen are fast-growing, they have become the primary tree that is planted and harvested today. They support a thriving wood products industry which produces paper and building products.

The Civilian Conservation Corps (CCC) established in 1933 played an important role in the development of state lands within the forest. CCC crews were responsible for the construction of campgrounds, miles of roads, and established numerous plantations and various soils and water conservation projects within the state and national forests.

Mining Industry

Minnesota's iron ore was discovered while miners were on their way to seek gold in the late 1800s. Since their goal was gold, the iron was ignored. Iron ore was discovered on the three iron ranges at different times. The first ore shipped from the Vermilion Range (Soudan Mine) was in 1884, the Mesabi Range in 1892, and the Cuyuna Range in 1911.

The mines attracted immigrants from almost every nation in Europe. Thousands of immigrants were arriving in America at the same time as the mines were

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opened, providing an abundance of jobs. Most of the jobs were for unskilled, manual labor that required great physical strength. Miners used shovels and pickaxes to take the ore out of the rock. Horses and mules hauled the ore out of the mine. Later, steam shovels and engine-powered tools were used. Towns were built around the mines. As the mines were expanded, many towns were moved to new locations because they were built on top of iron ore.

Minnesota is the largest producer of iron ore and taconite in the United States. Even though nearly all of the high grade natural iron ore in Minnesota has already been mined, advances in technology have found a use for lower grade iron ore, called taconite. When the high-grade natural iron ore was plentiful, taconite was considered a waste rock and was cast aside. However, as the supply of high-grade natural ore decreased, industry began to utilize the taconite as a resource. The taconite is crushed, processed into hard, marble-sized pellets, and shipped to steel mills. The taconite pellets are melted in blast furnaces and then blown with oxygen to make steel. Minnesota currently has seven operating taconite plants which make the pellets. About 44 million tons of taconite pellets were shipped from the state in 1996, which would fill over 500,000 rail cars.

In the past, iron ore was mined on three iron ranges - the Cuyuna, Mesabi and Vermilion – as well as in Fillmore County in southeastern Minnesota. Today, the Mesabi Range is the only location in the state where iron ore/taconite mining is active. Manganese, copper, nickel, and titanium have also been discovered in the state in minable quantities, but are not of high enough quality under today's prices to mine profitably. Exploration for additional resources, such as gold, platinum, diamonds, zinc, and lead, still continues today.

Socioeconomic Context

The table below (Figure 6.1) illustrates population change between 2000 and 2010 in St. Louis and Itasca counties and cities located along the Taconite State Trail. Itasca County is experiencing some growth while St. Louis County is relatively stable with a slight population loss. While Ely has a slight population loss, the other cities show population growth. It is important to recognize that even where population remains relatively stable, numbers of households have increased as family sizes have declined over the past 25 years.

Grand Rapids is the largest community along the trail and serves as a regional service center due to a large seasonal and weekend population of summer residences on surrounding lakes, as well as a number of smaller communities located nearby. Its economy has been historically based on paper manufacturing and other wood products. Its current economy also includes an important tourism and recreation base. There are many local resorts, golf courses, public and industrial forest lands that provide excellent hunting and outdoor recreation activities, including recreational trails, and more than 1,000 lakes for fishing and water-based recreation.

Figure 6.1. Population Change for Trail Communities

County	2000	2010	Change	Percent Change
St. Louis Co.	200,528	200,226	-302	-0.20%
Itasca Co.	43,992	45,058	1,066	2.40%
City				
Ely	3,724	3,460	-264	-7.09%
Soudan*	421	446	25	5.94%
Tower	479	500	21	4.38%
Grand Rapids	10,347	10,869	522	5.04%
State of Minnesota	4,919,492	5,303,925	384,433	7.80%

*Soudan is an unincorporated community and Census-designated place (CDP) in Breitung Township, St. Louis County, Minnesota.

7. Implementation

What happens after the Master Plan is completed?

Minnesota Statutes [Chapter 86A.09](#) requires that a master plan be prepared for state trails before trail development can begin – although planning, design, and land acquisition can take place before the plan is complete. Trail users and trail advocates need to recognize that the completion of a master plan is only one step in what typically is a long process of implementation.

Throughout the planning process for this trail, local trail advocates have asked for guidance as to how to implement the plan – that is, how to establish feasible alignments, contact landowners, and work with DNR regional staff on land acquisition. The process can be lengthy and complex.

Many of the first generation of state trails in Minnesota were developed primarily on abandoned rail rights-of-way that state or local governments were able to acquire. Since that time, most of the remaining abandoned rail rights-of-way in the state have reverted to private ownership. The Taconite State Trail was unique in that it was pieced together across public lands with multiple land administrators, but also numerous private properties. The next generation of trails is also likely to cross a variety of public and private lands, making them much more challenging to develop than rail-trails.

DNR Parks and Trails Division staff work with individual landowners to acquire land or easements on a willing seller basis, keeping in mind that a series of acquisitions on adjoining properties will be needed in order to create a trail segment with a logical beginning and end. In other words, a trail segment should begin at an existing trail, park, town center, or major road intersection that can serve as a trailhead, preferably with parking and restroom facilities, and end at some type of destination – such as a city or community, a park, a wildlife preserve, or a historic site, if possible.

In this process, DNR acquisition and development staff frequently work with city and county governments, conservation organizations, and local trail interest groups to assess the feasibility of a particular trail alignment. Acquisition is done on a willing seller basis. Where the DNR has not acquired land, but has a formal agreement with the landowner allowing for the trail, evaluation of those agreements will be needed to ensure any changes or new uses remain agreeable to the landowner. Otherwise, reroutes may be necessary through acquisition, easement or other forms of agreements. The DNR strongly discourages local governments from using other means, such as eminent domain, to obtain trail corridors.

Land can be acquired or otherwise set aside for trail development through a variety of methods:

- A trail may be located on non-DNR public land, such as county or city-owned land, through a cooperative agreement.

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- A local government or not-for-profit organization can acquire land from a willing seller and then sell it to the DNR.
- Local interest groups and/or DNR staff may make the initial contact with landowners; then DNR staff will assess the feasibility of a particular trail alignment and complete the land acquisition.

No matter which method is used, advanced coordination with DNR staff is essential in order to ensure that the selected trail alignment is feasible to develop.

The following is a typical sequence of events in trail planning and development. However, the steps will likely overlap and repeat. This process often requires several rounds of feasibility assessment, landowner contact, and staff review and discussion, and is not always a linear process.

In the case of the Taconite State Trail, the primary trail corridor has been established and a master plan was completed in 1981. However, the trail corridor is not fully in DNR or state ownership, nor is the entire existing corridor feasible for year-round uses in its current condition or location. Adding new uses may require varying levels of improvements or construction activity to the existing corridor and will include applicable steps below. Even so, the state planning process places an emphasis on public and stakeholder input, including local residents, businesses, government units, and other stakeholders.

- ❑ **Complete the master plan.** This master plan focuses on the existing, currently established trail corridor, as well as acknowledging that securing alignments for year-round use or adding new seasonal alignments may be necessary to accomplish adding new uses. This plan provides flexibility for decision-making while identifying where primary uses are compatible and sustainable with existing conditions, local needs and preferences.
- ❑ **Explore feasibility of each alignment or proposed projects.** Assess land ownership, road right-of-way width (*Is there enough room for a trail within the right-of-way? Will the trail need to share the roadway?*), connectivity, and physical conditions such as slope, wetlands and natural and cultural resources. The alignment must allow state and federal design guidelines and rules to be met, including trail width, shoulders, curvature, accessibility, etc. Therefore, it is important for local governments and trail groups to coordinate their efforts with DNR staff. While there may be priorities specific to the Taconite State Trail, statewide priorities must also be considered in the greater context of the state trail system. DNR will work with stakeholders to help determine priorities, funding, timelines, and staff resources in context with other needs and demands.
- ❑ **Initial informal landowner contact.** It is often preferable for landowners to be contacted by local trail supporters rather than by DNR staff. Landowner concerns frequently relate to privacy, safety and liability, and there are many information resources available to address these concerns.

This plan provides flexibility for decision-making while identifying where primary uses are compatible and sustainable with existing conditions, local needs and preferences.

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- ❑ **Formal landowner contact; complete acquisition process.** As mentioned above and with proper coordination, the DNR or other entities may take the lead on land acquisition.
- ❑ **Resource Assessment Policy #040** - Consult Parks and Trails Resource Assessment Policy Manual to determine whether a formal resource assessment is required for proposed development or implementation of projects or proposals. This process also takes into consideration environmental review and permit requirements and may be conducted prior to or during the trail engineering and design process.
- ❑ **Trail engineering and design.** The design process offers a final opportunity to assess feasibility, including the need to avoid sensitive natural or cultural resources and address constraints such as wetlands or steep slopes. Trail alignments may shift during the design process.
- ❑ **Construction** may be staggered or sequenced along the trail. Construction may occur on one or more segments, while the processes of negotiation and design continue on others.
- ❑ **Ongoing maintenance and stewardship.** Trail associations often act as “eyes on the trail” to monitor conditions, notify the DNR of concerns and volunteer on certain efforts. Local units of government may provide trail maintenance via a cooperative agreement.
- ❑ **Orientation and Interpretation.** All trails are developed with traffic safety and directional signs. Some trails provide interpretive signs that highlight notable natural and cultural resources and landscape features. An interpretive plan may be developed to identify themes and features that will be interpreted.

Actions Local Governments Can Take to Support Trail Development:

City and county governments can play an important role in trail development through their planning and development review processes, including the following:

- **Integrate the trail concept into community plans**, including comprehensive and land use plans, park and open space plans, and transportation plans.
 - Through the local park and trail plan, link the state trail corridor to local and regional trails; integrate it with local parks
 - Seek opportunities to meet multiple goals through trail development – i.e., to improve water quality, protect natural areas, provide educational opportunities, or provide additional transportation options.
- **Require park and trail set-asides.** Through their subdivision ordinances, cities and counties may require that developers dedicate a reasonable portion of land within a development to public use for such things as

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streets, utilities, drainage, and parks, trails and recreational facilities. (If the set-aside is for a state trail, coordinate with DNR staff in advance.)

Work with DNR staff to seek funding for state trail acquisition and development. State trails are typically funded by the State Legislature via bonding money or special appropriations, or through the Legislative-Citizen Commission on Minnesota Resources (LCCMR). Some federal grants are also eligible to be used in conjunction with state funding for development. Transportation enhancement project grants and other transportation funding sources may also be used for state trails. It is important for local government representatives to work closely with DNR regional staff in any pursuit of state trail funding.

Seek funding for local and regional trail connections. Local and regional trails can be funded through a variety of sources, available through the DNR and other agencies, including:

- **Snowmobile Trails Assistance Program - Grant-in-Aid (GIA) Program**
http://www.dnr.state.mn.us/grants/recreation/gia_snowmobile.html
- **Off-Highway Vehicle (OHV) Grant-in-Aid Program:** for all-terrain vehicle (ATV), off-highway motorcycle (OHM), and off-road vehicle (ORV): http://www.dnr.state.mn.us/grants/recreation/gia_ohv.html
- **OHV Damage Account:**
<http://www.dnr.state.mn.us/ohvdamageaccount/index.html>
- **Cross-Country Ski Grant-in-Aid Program:**
http://www.dnr.state.mn.us/grants/recreation/gia_crosscountry.html
- **Parks and Trails Legacy Grant Program:**
http://www.dnr.state.mn.us/grants/recreation/pt_legacy.html
- **Local Trail Connections Grant Program:**
http://www.dnr.state.mn.us/grants/recreation/trails_local.html
- **Federal Recreation Trail Grant Program** (also available for state trails):
http://www.dnr.state.mn.us/grants/recreation/trails_federal.html
- **Regional Trail Grant Program:**
http://www.dnr.state.mn.us/grants/recreation/trails_regional.html
- Moving Ahead for Progress in the 21st Century Act (MAP-21) - (Statutory citation: MAP-21 §1122; 23 USC 101, 206, 213; SAFETEA-LU §1404) establishes a new program to provide for a variety of alternative transportation projects, including many that were previously eligible activities under separately funded programs.

Transportation Alternatives Program (TAP) – The TAP replaces the funding from pre-MAP-21 programs including Transportation Enhancements, Recreational Trails, and Safe Routes to School, wrapping them into a single funding source. <http://www.dot.state.mn.us/map-21/tap.html>

8. Plan Modification Process

The DNR Parks and Trail Division's state trail master plans document a partnership-based planning process, and the recommended actions resulting from that process. These comprehensive plans recognize that all aspects of trail management are interrelated, and that all recommendations should also be interrelated.

Over time, however, conditions change that affect some of the plan recommendations or even an entire plan. Plans need to acknowledge changing conditions, and be flexible enough to allow for modifications as needed.

There are two scales or types of plan modifications: plan revisions and plan amendments. Minor plan revisions concern less controversial issues and can generally be made within the DNR Parks and Trails Division as plan revisions. Larger issues that represent changes in management direction or involve other portions of the Department, or other state agencies, are addressed as plan amendments. The DNR Parks and Trails Division will make the decision whether a plan revision or plan amendment is appropriate.

To maintain consistency between plans and processes, all revisions and amendments will be coordinated through the DNR Parks and Trails Division Policy, Programs and Planning Section. Requests for planning assistance should be directed to the DNR Parks and Trails Division's policy, programs and planning manager in the Central Office, St. Paul.

Plan Amendments

Plan Amendment Criteria

The criteria outlined below will be used to determine whether the proposed change warrants a plan amendment:

The proposed change:

- Alters the mission, vision, goals, specific management objectives, or proposed development plans outlined in the plan;
- Is controversial between elected officials and boards, user groups, the public, adjacent landowners, other DNR divisions or state agencies; or
- Directly affects other state agencies (i.e., Minnesota Historical Society).

Plan Amendment Process

The plan amendment process has a series of steps.

1. Review the proposed change at the area and regional level. Determine which stakeholders potentially have a major concern and how those concerns should be addressed. If the major concerns are within the DNR Parks and Trails Division, the issue should be resolved within the Division, with input from the public. The proposed change is then reviewed with the DNR Parks and Trails Division Management Team.

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2. If the proposed change involves other DNR divisions, the issue should be resolved by staff and approved by the affected division directors. This may require one or two area/regional integrated resource management team meetings. The proposed change will be reviewed through the DNR Regional Interdisciplinary Review Service (RIRS).
3. If the proposed change issue involves other state agencies, the issue should be resolved by staff and approved by the DNR Parks and Trails Division Management Team - with input from the public - and reviewed by RIRS.
4. If the proposed change is potentially controversial among elected boards, user groups, adjacent landowners or the public, an open house will be held that is advertised in the local and regional area.
5. All plan amendments should be coordinated, documented, and distributed by the DNR Parks and Trails Division planning staff.

Plan Revisions

If a plan change is recommended that does not meet the amendment criteria above, and generally follows the intent of the Taconite State Trail Master Plan (through mission, vision, goals, and objectives), the Department has the discretion to modify the plan without a major planning process.

References

The following sources were used in the development of this master plan. Additional information was also drawn from DNR reports and databases, state forest, park and trail brochures, and other Department documents.

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Appendix A. Legislative Authorization and Outdoor Recreation Act Criteria

Legislative Authorization

The Taconite State Trail was authorized by the Minnesota Legislature in 1974 and amended several times to adjust its description and to add other units to what is currently part of the Arrowhead Region Trails authorization. In 2016, Minnesota Statutes 85.015, Subd. 13, consists of the following: (Text pertinent to the **Taconite State Trail** is highlighted below.) [2016, Revisor of Statutes, State of Minnesota.]

Subd. 13. Arrowhead Region Trails, Cook, Lake, St. Louis, Pine, Carlton, Koochiching, and Itasca Counties.

(a)(1) *The Taconite Trail shall originate at Ely in St. Louis County and extend southwesterly to Tower in St. Louis County, thence westerly to McCarthy Beach State Park in St. Louis County, thence southwesterly to Grand Rapids in Itasca County and there terminate;*

(2) *The C. J. Ramstad/Northshore Trail shall originate in Duluth in St. Louis County and extend northeasterly to Two Harbors in Lake County, thence northeasterly to Grand Marais in Cook County, thence northeasterly to the international boundary in the vicinity of the north shore of Lake Superior, and there terminate;*

(3) *The David Dill/Arrowhead Trail shall originate at International Falls in Koochiching County and extend southeasterly through the Pelican Lake area in St. Louis County, intersecting with the Taconite Trail west of Tower; then the David Dill/Taconite Trail continues easterly to Ely in St. Louis County; then the David Dill/Tomahawk Trail extends southeasterly, outside the Boundary Waters Canoe Area, to the area of Little Marais in Lake County and there terminates at the intersection with the C. J. Ramstad/Northshore Trail; and*

(4) *The Matthew Lourey Trail shall originate in Duluth in St. Louis County and extend southerly to St. Croix State Forest in Pine County.*

(b) *The trails shall be developed primarily for riding and hiking.*

(c) *In addition to the authority granted in subdivision 1, lands and interests in lands for the Arrowhead Region trails may be acquired by eminent domain. Before acquiring any land or interest in land by eminent domain the commissioner of administration shall obtain the approval of the governor. The governor shall consult with the Legislative Advisory Commission before granting approval. Recommendations of the Legislative Advisory Commission shall be advisory only. Failure or refusal of the commission to make a recommendation shall be deemed a negative recommendation.*

It is DNR policy to only use eminent domain for friendly condemnations, with land owner approval.

Outdoor Recreation Act Criteria

The Taconite State Trail meets the following criteria established for state trails in the *Outdoor Recreation Act*, [*Minnesota Statutes 86A.05, Subdivision 4*](#), *State Trail: purpose; resource and site qualifications; administration; designation*.

(a) A state trail shall be established to provide a recreational travel route which connects units of the outdoor recreation system or the national trail system, provides access to or passage through other areas which have significant scenic, historic, scientific, or recreational qualities or reestablishes or permits travel along an historically prominent travel route or which provides commuter transportation.

(b) No unit shall be authorized as a state trail unless its proposed location substantially satisfies the following criteria:

(1) Permits travel in an appropriate manner along a route which provides at least one of the following recreational opportunities:

(i) travel along a route which connects areas or points of natural, scientific, cultural, and historic interest.

The Taconite State Trail travels through or provides connections to Superior and Chippewa national forests; Bear Head Lake and McCarthy Beach state parks; Purvis Lake-Ober Foundation Scientific and Natural Area (SNA); Peloquin and Prairie Lake Deer Yard wildlife management areas (WMA); Bear Island, George Washington, Sturgeon Lake state forests; and St. Louis and Itasca county forests across the Iron Range, spanning approximately 145 miles from Ely to Grand Rapids.

The trail corridor passes through communities abundant in cultural history and traditions of logging and mining industries. The trail crosses the Laurentian Divide just west of McCarthy Beach State Park, as well as Civilian Conservation Corps (CCC) era camp sites.

(ii) travel through an area which possesses outstanding scenic beauty.

The trail corridor travels through remote areas of tall pines, rolling hills and open spaces, providing scenic views of lakes and streams in the deep woods of national, state and county forests, as well as Bear Head Lake and McCarthy Beach state parks, each of which provide experiences of outstanding scenic beauty.

(iii) travel over a route designed to enhance and utilize the unique qualities of a particular manner of travel in harmony with the natural environment.

The Taconite State Trail provides recreational access across national, state and county forest lands. The wooded corridor largely utilizes the natural contours and terrain to shape the trail, winding through heavily forested areas with tall pines, birch and aspen, rolling hills, rock outcrops, and across meandering rivers, trout streams and wetlands (when frozen), providing a high quality experience in the north woods and iron range landscapes of Minnesota.

(iv) travel along a route which is historically significant as a route of migration, commerce, or communication.

The trail travels through national, state and county forest lands. Trail users will experience various stages of forest regeneration and active timber harvest operations. North of Grand Rapids, impacts of the taconite and iron mining industry is evident with views of open spaces and mine pit lakes.

(v) travel between units of the state outdoor recreation system or the national trail system.

The trail corridor travels through or connects to multiple units of the state outdoor recreation system, including: Bear Island, Sturgeon River, and George Washington state forests; Purvis Lake-Ober Foundation Scientific and Natural Area (SNA); Bear Head Lake and McCarthy Beach state parks; David Dill/Arrowhead and David Dill/Tomahawk state trails; Purvis Creek, East Two Rivers, West Two Rivers, and Bear River aquatic management areas (AMA); Peloquin and Prairie Lake Deer Yard wildlife management areas (WMA); and the Big Aspen Multi-use Trails in the Superior National Forest.

(2) Utilizes, to the greatest extent possible consistent with the purposes of this subdivision, public lands, rights-of-way, and the like.

This trail would not be possible without the cooperation of multiple land owners and administrators, both public and private. The use of federal, state, county and municipal public lands is utilized to the greatest extent possible with minimal segments established along private lands to provide a continuous trail corridor between Ely and Grand Rapids.

(3) Provides maximum potential for the appreciation, conservation, and enjoyment of significant scenic, historical, natural, or cultural qualities of the areas through which the trail may pass.

Traveling through remote areas of multiple forests, as well as through state parks, scientific and natural areas, and wildlife management areas, the trail provides a variety of scenic, historical, natural and cultural qualities representative of the region. Interpretive facilities are proposed to enhance the trail user's understanding, appreciation and stewardship of the trail and its surrounding natural and cultural resources.

(4) Takes into consideration predicted public demand and future use.

The trail is, and has historically been, supported by local snowmobile groups. Increasing interest in summer uses of this trail include consideration of adding new uses. Proposed trail use takes into consideration public interest, demand and future uses for greater utilization of the existing trail corridor and increasing outdoor recreational opportunities in the area.

Appendix B. Public Comment Summary

Public Comment Summary

Public Review of Draft Plan Summary of Comments

The Taconite State Trail Master Plan Draft was available for public review and comment from December 1, 2016 to January 6, 2017. The DNR announced the public review through a statewide news release, updates to the project web page, and informal communications with stakeholders.

The DNR held three open house meetings during the public review period. Open house meetings were held on December 15 in Grand Rapids, December 19 in Ely, and December 20 in Side Lake/French Township. Copies of the master plan draft, a variety of handouts and trail planning segment maps were provided for review and discussion. Multiple DNR staff were available at each meeting to answer questions and receive comments about the master plan. A total of about 50 people attended the open house meetings.

Interested citizens were able to provide comments on the master plan at the open house meetings, through an online comment form, or by U.S. Mail, email, phone and FAX. A total of 180 comment letters were received, with the majority submitted by email.

The DNR acknowledges the comments and appreciates the wide range of perspectives that were shared on a number of different topics. While many comments expressed general support for the Taconite State Trail, sentiments ranged from 'keep it the same' to supporting the addition of motorized uses, including year round motorized use, wherever possible. A majority of comments expressed concern and opposition to allowing OHVs on the state trail, specifically within state parks. Others provided comments related to specific trail uses, issues, or locations, such as a particular trail segment or intersection with another trail or road.

Comments from the public input are summarized in the following table. The table does not include every comment submitted, rather it organizes them into major themes as they relate to the various sections of the master plan, and then by topic, as many letters included multiple topics. The comments are sorted into broad categories due to the volume and similarity of many comments. The table includes a DNR response indicating whether or not the comment resulted in a change to the plan and an explanation of the decision.

Comments were reviewed and considered individually and adjustments to the master plan were made where deemed appropriate, such as corrections, clarifications, minor deletions, and addition of new or updated data with the intent of improving the overall plan. Other changes to the master plan occurred based on plain language editing, agency comments, and additional DNR staff comments, which are not itemized in the table below.

Public Comment – PLANNING PROCESS	DNR Explanation/Response
The plan should include public input.	<p>The state trail planning process requires public input by law (MS 86A.09). Public participation and input in this planning process is described in the plan.</p> <p>See Pages 3-6; Table 1.1; and Appendix B.</p>
“Why are planners trying to make [the trail] a place for OHVs?”	<p>A new master plan is needed for multiple reasons, one of which includes responding to requests from communities and trail user groups to expand year round uses of the trail, including consideration of motorized uses. See Page 3.</p>
Someone from a horse organization should be part of the planning team.	<p>A number of people from the equine community provided input and comments at various stages of the planning process.</p> <p>An advisory group was not created as part of this planning process due to the distances and differences between trail communities and variety of jurisdictions along the length of the trail. Trail user groups and organizations were consulted and updated throughout the planning process.</p>
Regular discussions with partners maintains the integrity of the trail.	<p>We agree. The DNR will maintain existing partnerships, build new partnerships, and continue to coordinate and communicate with stakeholders.</p> <p>Partnerships are discussed on Pages 4-5, 11. Also see Appendix H, Recommendations: IEIS 2, 5; OM 2, 3; WR 5; WILD 4; FISH 5; VM 5, 6, 8, 9; ENF 3.</p>
<p>It is not appropriate for the DNR to use master plans to advocate for the changing of rules and laws that protect natural resources. Changing rules should be discussed separately on a state government level where the general public can weigh in fully.</p> <p>Revise the plan and remove references to rule changes in the plan.</p>	<p>This plan does not advocate to change any rules or laws, nor did any part of the planning process.</p> <p>Rulemaking and master planning are separate public processes and both include public input.</p> <p>DNR Parks and Trails Division is actively engaged in the process of updating rules (MN Rules Chpt. 6100). However, draft rule language remains under development (at the time of this writing) and specific changes to rules have not been decided. It is prudent for the master plan to acknowledge this fact. Referenced on Page 24.</p>
<p>The plan “conflicts with the ORA and the DNR’s number one guiding principle for sustainable trail development.”</p> <p>Revise the plan to comply with the ORA.</p>	<p>The master plan is in compliance with the Outdoor Recreation Act (ORA), meets state trail classification and criteria of the ORA (M.S. 86A.05, Subd. 2, b.1.), master plan requirements of the ORA (M.S. 86A.09 Development and Establishment of Units), and guiding</p>

	principles for sustainable trail development. No changes are necessary. See Pages 7, 23, and Appendix A.
<p>Revise how motorized recreation trends are characterized (Draft page 3). There is a misleading statement about the growth of motorized activity.</p> <p>“Snowmobiles, OHMs and ORVs have experienced drastic <i>decreases</i> in use. Motorized recreation is at best stable, and at worst declining.”</p> <p>Reference the DNR report called, “Observations on Minnesota’s off-highway vehicle trends using registration information from 1995 to 2013.”</p>	<p>Vehicle registration data is used as a proxy for use. However, registration numbers do not capture the amount or level of use by individual riders or user populations in general.</p> <p>Snowmobile registrations are slightly declining, as stated in the plan. However, vehicle registration data for other motorized recreation is on currently rising. For example, ATV registrations experienced an all-time high in 2015, and new data shows an increase in 2016.</p> <p>Both OHM and ORV registration numbers peaked in 2006, and sharply decreased in years after. However, the OHM and ORV registration numbers have been fairly consistent for the last five years, showing a slight increase in 2016.</p> <p>Clarifying language was provided on Page 3 and updated vehicle registration data and trends are provided on Page 78 and in Appendix C (2016 data were not available at the time of the public review).</p>
<p>Iron Range Resources and Rehabilitation Board (IRRRB) involvement and funding should be recognized in the plan. IRRRB provided the first centerline route and early trail maintenance until the 1980s. The International Snowmobile Association (ISA) helped to establish the trail via legislation and the first DNR staff to work on it.</p>	<p>DNR appreciates the additional trail history and clarifications. References applied to the trail development history on Page 10.</p>

Public Comment – TRAIL USE	DNR Explanation/Response
<p>Maintain current policies and make no changes to trail uses. Keep the trail for snowmobiles and non-motorized travel only.</p>	<p>The Taconite State Trail will continue to provide and support snowmobiling and non-motorized uses. However, new uses, including motorized OHV uses, are being considered due to growing demand, interest, and the potential for connecting to other opportunities. New uses should not displace existing uses.</p> <p>See Pages 14-17; 23-24, segment details 25-76, 77; and Appendix H, Recommendation TA-2.</p>
<p>Support snowmobiling; it has a low impact on resources.</p>	<p>The Taconite State Trail will continue to provide and support snowmobiling. See Page 14.</p>
<p>Support OHV use. Adding ATV use would help tourism and economy in the area. The tourism industry relies on a variety of</p>	<p>The plan supports OHV use where it would be sustainable, safe, practical and feasible.</p>

Public Comment – TRAIL USE	DNR Explanation/Response
different outdoor activities. The trail connects to communities and businesses.	Local businesses and communities may benefit from increased use or year-round use of the trail. See Pages 10; 14-17; 23.
I support year-round trail use and would enjoy using the trail during non-winter months. It is a great way to enjoy the beauty of Minnesota and spend time with family.	The previous master plan identified year-round uses, as this plan does, too. Snowmobiling is recommended as a primary use in winter. Hiking, biking, horseback riding, and OHV riding are recommended summer season uses. Non-motorized uses of the Taconite State Trail during snowmobile season is not recommended, but it is not prohibited. See Pages 14-17.
Oppose mixing motorized use with non-motorized use. Provide separate trails instead.	Proposed new uses, whether non-motorized or motorized, are not intended to displace other trail users. Compatibility and safety with existing trail use is included in the criteria and must be considered prior to making changes. Alternate or separate routes may be considered, if necessary. See pages 21-22; Recommendations TA-2 (Page 77); OM-4 (Page 81); ENF-1 and ENF-2 (Page 85) and Appendix H.
Oppose snowmobile use. Snowmobiles travel at high speeds and are dangerous on the trail. I can't walk/use the trail in winter unless on a snowmobile. Snowmobiling is incompatible with cross-country skiing. Snowmobiles ruin ski trails/tracks and may hurt skiers. Don't allow the trail to go through state parks. Don't let small numbers of snowmobilers ruin the parks for large numbers of people who visit them for peace and quiet.	The Taconite State Trail is primarily a snowmobile trail. The state speed limit on state trails is 50 miles per hour. Pedestrian use of the Taconite State Trail during snowmobile season is not recommended, but it is not prohibited. See Page 15. Cross-country ski trails are typically separate from snowmobile trails. Snowmobiles are not permitted on groomed cross-country ski trails. The Taconite State Trail is managed and developed for snowmobile use. While the Taconite State Trail is not managed for cross-country skiing, it is not prohibited. <i>See page 14-17. Several different groomed ski trails are located nearby or may intersect with the Taconite State Trail, such as: Big Aspen Trails; Bear Head Lake State Park; McCarthy Beach State Park; and Stony Ridge.</i> Snowmobiles are required to follow equipment and noise laws and rules while on public lands (MN Rules 6100.5700). Snowmobiling is a primary use of the Taconite State Trail. However, it is not a primary winter use at either Bear Head Lake or McCarthy Beach state park. If changes to recreational uses within a park are inconsistent with the unit's management plan, an amendment would be required. See Pages 32, 35, 58, 61, 109.

Public Comment – TRAIL USE	DNR Explanation/Response
<p>Opposed to OHV use. OHVs impair my use of the trail.</p> <p>OHV use disrupts the enjoyment of natural areas for silent/non-motorized forms of recreation. We enjoy using the Taconite State Trail in Side Lake to pick blueberries and hike with our dogs.</p> <p>We are averse to OHVs. We avoid areas where OHVs are commonly used.</p> <p>Support/retain natural areas that do not allow OHVs. It is “important to me to have some public land kept free of motorized recreational vehicles.”</p>	<p>DNR understands there are different preferences for outdoor recreational activities, and not all trail uses or activities are compatible with one another and conflicts can occur.</p> <p>DNR is responsible for providing a variety of recreational opportunities, including non-motorized and motorized forms of recreation. Both non-motorized and motorized uses may be considered where the trail corridor is wide enough to safely accommodate multiple uses without unacceptable social or environmental impacts. See Pages 23, 24 and Trail Alignment Recommendations on Page 77, and in Appendix H.</p>
<p>Opposed to OHV use on/in: public lands; state trails; state parks; and state forests.</p> <p>Opposed to the expansion of trails for OHVs (e.g., on the Taconite State Trail, in state parks, in state forests).</p> <p>Oppose OHVs in state parks. Allowing them would open the door to allowing OHVs in other parks.</p> <p>Introducing OHVs into state parks would perpetuate a disproportionate use of resources. “State parks occupy less than half of one percent (0.42%) of the state’s total land area”; “only 5% of Minnesotans own an OHV compared to the 30% who visit state parks.”</p> <p>OHVs have other lands they can ride on, including all state forests.</p>	<p>DNR supports and manages multi-use trails, including motorized uses. “MN DNR is committed to managed use on managed trails for OHV recreational opportunities as part of the Department’s outdoor recreation mission.” - <i>Program Manual, Minnesota Trail Assistance Program – OHV GIA Manual (2017).</i></p> <p>OHVs are prohibited in state parks per MN Rules 6100.1900, as identified in the master plan. See Pages 15, 31, 34, 35, 41, 57, 58, 60, 61.</p> <p>State forests are actively managed to provide a range of goods and services, including outdoor recreation. State forests include roads and have traditionally hosted a mix of motorized and non-motorized recreational opportunities. See Pages 11-12, 20, 30, 46, 57.</p> <p>State forests are classified as managed, limited, or closed to motor vehicle recreational use. Off-trail travel in state forests is prohibited except for big game hunting or furbearer trapping (M.S. 84.926). Designated Areas with Limitations (AWL) prohibit off-trail travel at all times. See Pages 11-12, 56.</p>
<p>Park rules and state laws prohibit OHV use in state parks.</p> <p>“Does the plan intend to change the [state park] rules?”</p> <p>“...are you trying to change the law or do you intend to just ignore it?”</p> <p>Remove ambiguous language in the [draft] plan on pages 33, 39 and 55 that causes unnecessary and avoidable confusion about the potential for OHV use in state parks.</p>	<p>Master plans are guidance documents and do not supersede, change or replace statutes, laws and rules. The master plan references applicable laws and rules in multiple locations.</p> <p>OHVs are prohibited in state parks per MN Rules 6100.1900, as identified in the master plan. See Pages 15, 31, 34, 35, 41, 57, 58, 60, 61.</p> <p>Clarification is provided when discussing potential OHV use on the trail. Rules are cited in appropriate locations,</p>

Public Comment – TRAIL USE	DNR Explanation/Response
Make it clear that OHVs are not permitted in state parks.	see above. Clarification was added to pages 15, 31, 34, 35, 57, 58, 60, 61.
<p>The state park visitor survey shows state park “visitors overwhelmingly don’t want OHVs in state parks.”</p> <p>“Include data from [the] 2012 Minnesota State Parks Visitor Survey, as it provide[s] valuable insights from 9 million annual state park visitors” that directly relate to OHV use.</p>	<p>The 2012 State Park User Survey included a list of possible changes in state parks, including one item regarding OHV use: “Provide more opportunities to ride off-highway vehicles (e.g. ATVs).” Responses collected indicated 60% mildly or strongly opposed providing more opportunities to ride OHVs in state parks. While 21% were neutral, neither supported nor opposed; 12% mildly or strongly support; and 8% did not know. These responses are consistent with previous surveys conducted in 2007 and 2001.</p> <p>Text added regarding park visitor survey, see Pages 12-13, 34, 60.</p>
<p>Plan should include DNR studies on OHV impacts on wetlands, other sensitive natural areas, and OHV noise impacts.</p> <p>Studies will provide valuable information that should be considered when deciding where OHVs are compatible with the DNR’s guiding principles on sustainable development.</p> <p>OHV studies document the impact of OHVs on land, soil, vegetation, fauna, and microbes.</p>	<p>The DNR applies wetland sequencing to all trail developments and complies with all laws regarding wetlands.</p> <p>OHVs are required to follow equipment and noise laws and rules while on public lands, as stated in MN Rules 6102.0040.</p> <p>Specific studies were not identified by commenters. The guiding principles identified in this master plan are cited from the 2003 DNR publication, <i>Trail Planning, Design, and Development Guidelines</i>. These principles will be followed when implementing the plan. See Page 7. Additional guidance is also referenced from the <i>Voluntary Site-Level Forest Management Guidelines for Landowners, Loggers and Resource Managers</i>, prepared in 2013 by the Minnesota Forest Resources Council (MFRC).</p> <p>Also see References, Page 111-112.</p>
Include information in the plan about where ATVs are currently allowed in state parks and why/how. Add history regarding Tettegouche and Lake Vermilion state parks.	<p>In the only exception to the rule, ATVs are allowed in Tettegouche State Park on 6.5 miles of ATV trail because of special legislation and terms of the purchase agreement for the land. The ATV trail was developed on the land prior to the land being added to the state park. The purchase agreement included keeping the trail in operation. Brief description added to Page 15.</p> <p>The 2010 master plan for Lake Vermilion State Park and Soudan Underground Mine State Park (two parks that have since been combined into one park) recommends the park establish a separate campground that could accommodate ATVs. This campground has not yet been developed See Pages 39-41.</p>

Public Comment – TRAIL USE	DNR Explanation/Response
Equine-only trails should remain as equine-only trails. OHVs can use more miles of trail in recent years, leaving very few trails for horse-only use.	The Taconite State Trail is a multi-use trail. Trails within state forests that allow horse use are also multi-use trails, including other non-motorized and/or motorized uses. In some cases, motorized uses may be prohibited.
Equestrians are happy and willing to share the trails with others. Trail etiquette/communication (verbalize approach or passing, etc.) between trail users is needed. Equestrians should have the right-of-way on the trail.	The DNR's horseback trail safety, rules and etiquette are available online at: http://www.dnr.state.mn.us/horseback_riding/safety.html
OHVs have damaged trails in Itasca County. Since those trails opened to OHVs, I no longer walk or hunt grouse there. I hunt grouse along Segment 5 of the Taconite State Trail. Do not damage grouse habitat on the trail. OHVs can ride in other areas nearby.	Protection of grouse hunting is important to the DNR. The Taconite State Trail crosses two Ruffed Grouse Management Areas (RGMA), Peloquin and Stoney Ridge. RGMA description added on Page 21. Also see Pages 54, 56, 60.

Public Comment - TRAIL ALIGNMENT	DNR Explanation/Response
May need to develop a dual treadway.	The flexibility provided by this master plan allows for dual treadways to be considered, as needed.
Don't allow the trail to go through state parks.	The Taconite State Trail connections to state parks are intentional. These are also important connections that satisfy the Outdoor Recreation Act criteria. See Appendix A.
Provide horse trail connection from Itasca County Fairgrounds to North Country Hiking Trail, Arbo trails, and forest roads. Provide natural surface dual treadway along paved segments for horses.	The paved trail from Itasca County Fairgrounds is a shared corridor with the Mesabi Regional Trail. The easement for the Taconite State Trail is relatively narrow and not wide enough to provide for a dual treadway (second trail) within the easement. See Segment 8 description, Pages 71-74.
Any trail reroutes and major reconstructions should follow existing DNR policies and procedures.	The DNR follows current and applicable policies and procedures.
Potlatch lands used to be open to public use; now they are closed. This seems contrary to the goals of the DNR to increase public access to the state's natural areas.	Potlatch is a private landowner. The DNR does not have authority to allow or provide public access to private lands without the landowner's permission.

Public Comment - TRAIL ALIGNMENT	DNR Explanation/Response
<p>Would support OHV use in Grand Rapids if it could be on a separate treadway from the paved segment.</p>	<p>The existing state trail right-of-way is too narrow for a dual treadway in this area. The right-of-way agreement also involves multiple landowners, including limitations that do not currently allow for OHV use. See Segment 8 description, Pages 71-74.</p>
<p>If the current trail alignment is not good for summer use, then find another alignment and reroute the trail. Or, develop separate winter and summer routes to do it right, following sustainable trail guidelines.</p> <p>The DNR does not need to try to find a year-round alignment. The plan should be up-front about different alignment needs (summer and winter, snowmobile, and other uses).</p>	<p>This plan allows for flexibility in seeking alternative routes, re-routes, or improvements to the existing route per management decisions, project proposals, and available resources.</p> <p>Sustainable trail guidelines and criteria will be followed for any changes to the trail. See Pages 23-24.</p> <p>Treadway designs and needs for various uses are referenced in the plan. See Pages 18, 23-24, 28, 78-81, 106. Also see Appendix H: Recommendations TA-1, 2, 3, 4; and OM-2, 3, 4.</p>
<p>Include discussion of the Border to Border (B2B) ORV trail project.</p> <p>The Taconite State Trail could connect Chippewa and Superior national forests.</p>	<p>The Border to Border ORV Touring Trail is currently in the early scoping stage for planning at this time. An alignment has not been proposed or determined. However, interest in a connection to the Taconite State Trail is being discussed. A brief description was added to Page 50.</p>
<p>According to the plan, only 3% of the trail is privately owned and 97% is on public lands. Use this as opportunity to build a new alignment.</p>	<p>DNR must first decide if a new alignment is necessary. Reroutes may be considered as an option, if/when needed. Since the trail has been developed, numerous reroutes and new alignments have occurred to accommodate mining, forestry, landowner and other needs.</p>
<p>The feasibility discussion is irrelevant. A 20-30-foot wide snowmobile trail has a low feasibility for sustainable summer use.</p>	<p>Several sections of the trail are located on upland and currently support summer uses including hiking, biking and horseback riding. Some portions of the trail are considered highly or moderately feasible for additional summer uses, including motorized uses, as discussed for each planning segment. Using the feasibility approach allows for flexibility in managing changing conditions, priorities and issues affecting trail uses and alignment. See Pages 24, 25-77, 78-81.</p>
<p>The plan identifies “challenges” such as natural resources, wetlands, trout streams and forest management activities. Are these really issues? All of them can be overcome. I don’t see any real issues.</p>	<p>Existing state laws, DNR policies, processes, evaluations and best management practices must also be followed. Some issues are more complicated than others, but they can be challenging and not always simple or quick to resolve. Using the term “challenges” seems most appropriate for the master plan.</p>

Public Comment - TRAIL ALIGNMENT	DNR Explanation/Response
<p>The segment of trail that connects Stony Brook Horse Campground to Togo Horse Campground should be for <i>horses only</i>. Many equine events take place on the trail and in the area.</p>	<p>The particular trail mentioned in this comment is not part of the Taconite State Trail, so it is not specifically addressed in the master plan. A section of this trail is located along the Tim Corey Trail and a short portion may follow the Circle T Trail, both of which are snowmobile trails in the winter. These are state forest unit trails and are currently open to multiple uses, including horseback riding, hiking, biking. Stony Brook and Togo Horse Campgrounds are mentioned on Pages 54-56, 60.</p>
<p>Over-emphasis of importance of the Tomahawk Trail in the plan. Many other grant-in-aid trails are important such as the Laurentian Trail.</p>	<p>All active/current direct trail connections (federal, state, local, and grant-in-aid) to the Taconite State Trail are identified in the plan, including the David Dill/Tomahawk and Laurentian snowmobile trails. DNR believes all trails are important and contribute to the greater statewide trail system. <i>(Tomahawk Trail is mentioned on Pages 28-29, Laurentian Trail is mentioned on Page 49-50.)</i></p>

Public Comment - TRAIL MANAGEMENT	DNR Explanation/Response
<p>Improved access and parking will increase use of the trail.</p> <p>All parking areas with access to the trail where horses are allowed should be able to accommodate parking for three to five horse trailers and space for trailers to turn around.</p> <p>Add horse tie lines or hitching posts at parking areas along with toilets.</p>	<p>DNR will provide adequate access and parking facilities along the trail. Specific trail user facilities and amenities will be evaluated and additional needs will be considered as appropriate and as funding allows. Parking and trail access locations may be improved or added as needed. However, not all locations will be able to provide the same capacity or amenities.</p> <p>Added Operations and Maintenance Recommendation, OM-7: <i>Provide support amenities and facilities including designated parking, water toilets, rest areas/shelters, and other amenities along the trail, as appropriate and as funding allows. See Page 81 and Appendix H.</i></p>
<p>The DNR needs to address changing demands for recreational activities.</p>	<p>This master planning process has included involvement and consultation with interested trail user groups, land administrators, elected officials, communities and other interested parties as well as consideration of recreation trends.</p>
<p>Riding on wet trails causes ruts, making the trail difficult to use.</p>	<p>The DNR temporarily closes trails due to poor conditions as needed. DNR encourages trail users to report poor conditions to the local DNR office so they can assess the trail and respond accordingly.</p> <p>If part of the trail is always wet, eroding or developing ruts, it is likely not sustainable for summer use. The trail</p>

Public Comment - TRAIL MANAGEMENT	DNR Explanation/Response
	must meet sustainability criteria to accommodate summer uses. See Pages 78-81.
<p>Will the increase in usage diminish wildlife along the trail?</p> <p>Concerned that as more people use the trail, more off-shoot trails will be created and more trash will destroy habitat.</p>	<p>This trail has been developed and in operation for over 30 years. Potential changes in summer uses on the trail are not expected to result in significant impacts to wildlife populations or habitats.</p> <p>Litter or trash has not been proven to be a significant problem along state trails.</p>
<p>Adding uses will increase maintenance and costs. Each user group should be responsible for the cost of maintenance required by their specific type of use and level of use.</p> <p>Doubt that extra funds can be secured to mitigate the effects of OHVs [in parks].</p> <p>Will there be a user fee or sticker (i.e. another tax)?</p> <p>Changing and evolving uses of the resources will require intense review of the costs associated with the proposed changes.</p>	<p>Snowmobile and OHV registrations are required for using public trails. The Minnesota Horse Pass is required for horse riding on DNR facilities, including trails, horse campgrounds and day use areas.</p> <p>Registration and pass fees help provide funding for the user group's trail systems and facilities. See Page 78-81, OM-6, and Appendix C.</p> <p>Costs associated to particular trail maintenance and development needs will be assessed to the appropriate accounts. See Page 78-81, and Appendix H, Recommendation OM-6.</p>
<p>Annual work plans are needed to identify major maintenance and reconstruction needs.</p>	<p>We agree. However, work plans and specific projects are not included in master plans.</p>
<p>Need to update land right-of-way agreements along the trail.</p>	<p>We agree. See Appendix H, Recommendations TA-1, OM-2, OM-3.</p>
<p>Confused by trail signage. What is allowed and what isn't?</p> <p>Are there hunting season exceptions for OHV use?</p>	<p>Clear and accurate signage is important to ensure users understand how the trail is being used. All trail users must obey trail signs (MN Rules 6100.3400, Subp. 6).</p> <p>See Page 12, 14-17, 23, 74, 78-85, 107; Appendix H, Recommendations TA-4 and IEIS-4, 6.</p>
<p>The trail remains a priority to the DNR and is very important to tourism and recreation in northeastern Minnesota.</p>	<p>We agree. The Taconite State Trail is an important part of the statewide trail system. See Pages 5, 10, 61, 87, 103.</p>
<p>Good discussion of guidelines, but the plan doesn't really say how this will be applied to the trail.</p>	<p>DNR staff use these guidelines to help make decisions and determine the best course of action for a variety of circumstances and day-to-day management and operation of our trails and related facilities. See Pages 23-24, 78-80, 105-108.</p>

Public Comment - TRAIL MANAGEMENT	DNR Explanation/Response
<p>I am concerned about the enforcement of OHV use. Enforcement capacity is stretched thin and will likely be thinner due to ongoing politics.</p> <p>OHV users inevitably bypass barriers. Trespassers will be able to act with impunity.</p>	<p>The DNR Enforcement Division works closely with other law enforcement agencies, most notably with County Sheriffs' Offices, on OHV-related issues, safety training and field enforcement.</p> <p>All trail users must obey trail signs (MN Rules 6100.3400, Subp. 6).</p>

Public Comment - NATURAL RESOURCES	DNR Explanation/Response
<p>Be a responsible steward of the land and protect sensitive natural areas within our parks.</p>	<p>We agree. The DNR Parks and Trails Division's vision is "to create unforgettable park, trail, and water recreation experiences that inspire people to pass along the love for the outdoors to current and future generations."</p>
<p>Very concerned about the introduction of invasive species.</p> <p>OHVs will spread invasive species through terrestrial plant seeds.</p>	<p>DNR recognizes that trail use could contribute to the spread of invasive species. A combination of department policies, guidelines and best management practices are included in this plan. See Pages 78-80, 91-93; and Recommendations VM-6, 7.</p>
<p>Clarify terms discussed in the description of Bear Head Lake State Park, such as "rarest species" and the forest classification "FDn43a". These terms cause confusion.</p>	<p>This is a reference to native plant communities and sites of biodiversity significance. Clarification has been provided on Pages 32, 58, 91-93; Recommendations VM-2, 3.</p>
<p>If the snowmobile season shrinks due to climate change, then who will fund the trail in the future?</p> <p>OHV summer riders can help fund the maintenance of the trail and reduce funding needs from snowmobile accounts. However, the plan doesn't recommend a longer OHV season.</p>	<p>DNR is working on strategies to adapt to the changing climate and changing needs or demands for recreation. See Pages 88-89, and 93, Recommendations VM-4, 5.</p> <p>If snowmobile use and registrations decline, so will the dedicated funding account. Funding sources would likely shift as needed to accommodate the prevailing trail use(s) and locations.</p> <p>OHV funding may help or augment the maintenance of the trail where there is shared alignment/use. If a separate alignment is developed for OHV use, then the maintenance and funding will also be separate, or specific to each alignment. See Page 81, Recommendation OM-6 and Page 108.</p> <p>Year-round OHV use was discussed during planning, but it was not determined to be a high priority for the present or near future. See Page 15, and Plan Modification Process, Pages 109-110.</p>

Public Comment - IMPLEMENTATION	DNR Explanation/Response
<p>The implementation section covers engineering and design. Urge caution about using engineering to design the actual trail. When that happens we end up with roads. Engineering is needed for structures like bridges, not trails.</p>	<p>The DNR consistently includes information about engineering and design in its state trail master plans. The term ‘engineering’ may be used in different contexts as DNR engineers participate in the design of trails, including structures such as bridges and culverts, as well as incorporating techniques and expertise as needed for areas with steep slopes or sensitive resources. See Page 107.</p>
<p>Will DNR procedures be followed for project proposals for trail improvements and changes? Can requests come from inside or outside of the DNR? Will the DNR be the lead in working on addressing changes to the trail?</p>	<p>Yes, DNR policies and procedures will be followed for implementation of this master plan. Requests for projects may come from the DNR or the public. Trail user groups and organized clubs may also propose projects through a variety of funding sources, as described in the plan. See Implementation Section, Pages 105-108.</p>
<p>Sections of the trail deemed sustainable should be immediately opened to ATV use upon completion of the master plan. The DNR is shifting responsibility to the public to request, map, plan, construct, and maintain the trail through the grant-in-aid program, which will delay use for several years.</p>	<p>The DNR follows implementation policies and processes. Management decisions will determine if, when, and where trail changes will occur and must consider statewide and regional staff and funding resource priorities. Specific project proposals must be reviewed, assessed and approved before being implemented. Funding and staff resources must also be available to implement changes. See Implementation Section Pages 105-108.</p>
<p>Disappointed by the lack of direction provided in the master plan. Can’t tell what the DNR plans to do next year or in five years. Recommendations lack urgency and leave the impression that nothing is going to happen or change. Not sure what is driving recommendations, when they will happen, or who will make them happen.</p>	<p>Master plans are designed to be high-level, long-term plans and do not include strategic plan benchmarks, short-term goals, and project-level details. This will allow for flexibility and adaptability to local, regional, and statewide priorities and resources. See Recommendation OM-3, Page 80 and Pages 106-107. Master plans are guidance documents and are intended to be high-level planning documents serving as a vision for future, long-term (10-20 years) management of the trail. Specific timelines, benchmarks, or development projects are not typically included in master plans. DNR annual work-plans and/or project proposals include timelines and specific development goals.</p>
<p>Provide timeline for changes to the trail and trail work. Which segments are the highest priority based on demand, funding, and funding sources, and which segments could be funded with Legacy Amendment funds?</p>	<p>While there may be priorities specific to the Taconite State Trail, statewide priorities must also be considered in the greater context of the state trail system. DNR will work with stakeholders to help determine priorities, funding, timelines, and staff resources in context with other needs and demands. See Page 106.</p>

Initial Public Open House meetings, held February 24 and 25 and March 5, 2015

Three open house meetings were held to collect initial input from the public on developing a new master plan for the Taconite State Trail. Each meeting was well attended with approximately 40 people in attendance in Grand Rapids, 30 people in Side Lake and 25 people in Tower. People in attendance represented various trail-use interests, such as snowmobiling, all-terrain vehicles (ATV) riding, off-highway motorcycles (OHM), off road vehicles (ORV/UTV), horseback riding, mountain biking, and hiking/walking. Additional interests, such as nearby or adjacent land owners, local business owners, and tourism representatives, were also in attendance and/or provided comments.

Comments received during this initial phase of planning express a wide range of opinions on future trail use. Suggestions range from keeping the trail uses and seasons the same as it currently is (no changes), to adding new motorized uses along the entire trail, year round. A majority of support was expressed for maintaining the trail primarily as a snowmobile trail during the winter months, and generally positive interest was shared to expand summer use of the trail for multi-use.

Many commenters expressed interest for the trail to allow more motorized use, particularly for ATV and OHV/UTV, including some suggestions for specific locations and not necessarily along the entire trail. Equine trail users expressed an interest in additional miles of trail to ride, particularly during the spring and fall “shoulder seasons,” and are open to sharing the trail with other users (motorized and non-motorized) as long as appropriate trail etiquette is maintained. Additional interests from the equine users did not specify that additional miles needed to be on the Taconite State Trail, but they were mainly seeking more loops, connections, and access to/from nearby horse camping sites. Comments from bicycle and pedestrian users (hikers/walkers) seem more split on whether sharing the trail with motorized users was acceptable or not. Both support and opposition to motorized use in state parks was expressed by commenters.

It is clear that the Taconite State Trail is a main corridor for connecting multiple trail systems for snowmobilers and has potential to offer a similar opportunity for other uses during the spring, summer and fall seasons. There were several comments suggesting different ways the Taconite State Trail could connect to trails and communities to create additional loops or true systems for various trail users.

Comments on the trail conditions ranged from “excellent” to “needs improvement or repairs.” Some suggestions included smoothing corners, widening the trail in sections, filling in ruts and preventing erosion. A common suggestion was for improved or additional signage along the trail to provide mileage markers, maps, speed limit signs and caution signs. Most shelters were reported in good condition but some trail users would like toilets at shelters. Interest was also expressed for interpretive signs about the history of the CCC, mining, railroad and logging camps in the area. Allowed trail uses and trail etiquette signage is also desired throughout the trail.

Many commenters believe that trail-related tourism would increase for surrounding communities if the Taconite State Trail was open to additional uses in the summer, particularly motorized uses. There is a strong desire for the trail to connect to communities for lodging, food and fuel, as well as interest in trail-side campsites. Several commenters also shared personal experiences, memories, family traditions, and history of this popular and well-loved trail.

Approximately 95 people attended the first series of public open house meetings held in Grand Rapids (February 24, 2015), Side Lake (February 25, 2015) and Tower (March 5, 2015). Nearly 100 comment forms and emails were received during the meetings or in the days and weeks afterwards. The comments

included below are representative of all of the comments received. This summary does not include all of the comments submitted as many were duplicative.

Questionnaire with Collective Responses:

1. **Trail use (existing):** How do you currently use the Taconite State Trail? How often do you use the trail? What segment(s) of the trail do you use?

65 Responses:

- Snowmobile
- Horseback Riding
- Hiking/Walking
- Biking/Mountain biking
- ATV (Class I, Class II, and Side-by-side/UTV) – Specific segments
- Hunting (Grouse)
- Do not use

How often/Frequency:

Responses vary from 1-3 times per year to daily

Segments:

All (segments 1-8) identified

2. **Trail use (expanding):** Are there any current trail uses that you would like to see expanded to include additional locations or segments along the trail?

39 Responses:

- Expand for more snowmobile connections and destinations (connect to CJ Ramstad North Shore ST, Canada, Winton, Shannon Lake area, Shoe Pack Lake, Mesabi Forest Road, Chisholm, Side Lake, forest roads, etc.)
- Add more parking places/access sites
- Expand to include OHV use and connect to other OHV trails (ATV, OHM and ORV)
- Expand ATV, OHM use, avoid wetlands
- Expand horseback riding
- Expand summer use (summer use is under-utilized)
- Expand to connect to fire trails and logging roads
- Snowmobile only
- No, like the way it is/No change

3. **Trail use (future):** Are there any different or additional trail uses that you would support or would like to allow on this trail? If so, please identify the use types, preferred locations, and seasons.

96 Responses:

- All-Terrain Vehicle (ATV) (Class I & II)
- Biking/Mountain Biking
- Cross-country skiing
- Hiking/Walking (also dog-walking)
- Horseback riding

- Multi-use (multi-season)
- Off Highway Motorcycle (OHM)
- Off Road Vehicle (ORV), including “over-landing”
- Snowmobile (and snowmobile only)
- Utilitarian Vehicle (UTV; Side-by-side vehicle)

Locations:

- Connections to municipalities, other trails, parks, camping, parking/access points
- Multi-use, avoid wetlands
- No expanding, leave trail “as-is”
- No motorized use [OHV use/trails] in state parks
- OHV use along entire trail, including through state parks
- OHV use in specific segments (suggestions provided)

Seasons:

- Year round, multi-use
- Summer use OHV (ATV, UTV, OHM, ORV)
- Restrict ATV use on groomed snowmobile trails (winter)
- Snowmobile only

4. **Trail Connections (systems, connections):** Do you currently use the Taconite State Trail to connect to another recreational trail, trail system or facility? If so, please identify the locations if you can. Are there any trail, trail system or facility connections that you would like to see developed in the future?

56 Responses:

- Campgrounds, Lodging
- Connect to gas, food, lodging, camping
- Connect to state parks (horseback riding, snowmobiling)
- Local communities, businesses (Ely, Babbitt, Tower, Soudan, Side Lake, Chisholm, Grand Rapids, etc.)
- Connect to snowmobile trails (numerous trails identified)
- Connect to horseback riding trails and campgrounds [multiple: Togo, Cutfoot, Stony Brook, etc.]
- Trails to Canada, North Shore, state parks
- Connect to cabin
- Should connect to OHV trails, systems, camping
- Should connect to Chisholm ATV Trail
- Bypass swamps

5. **Trail Conditions:** How would you rate the existing conditions of the trail where you use it? (Excellent, Good, OK, Needs Repair or Needs Improvement.) If the trail segment you use “Needs Repair or Needs Improvement,” please tell us what needs repair or improvement and why.

60 Responses:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Excellent; Good; Great; very good...to OK • More maintenance • Trail needs upgrades for year-round use • Areas need repair | <ul style="list-style-type: none"> • Bridges, culverts needed • Itasca County needs improvements • Could be wider, keep brushing as wide as possible • Smooth out curves, straighten |
|---|--|

- Ruts, erosion, rocks
- Wash-outs on hills

6. **Trail amenities:** Are the trail signs, shelters, parking/access points and restroom facilities along the trail satisfactory? If not, please explain or provide a suggestion where an amenity or facility is needed or could be improved.

41 Responses:

- Signage:
 - More trail signs needed to direct people to facilities
 - Trail signs explaining multi-use and that it welcomes all activities
 - Bigger signs
 - Speed limit signs
 - Mile markers need to be maintained
 - Signage is adequate
 - Damaged or faded signs should be replaced
- Need more shelters and toilets
 - Parking access points should have toilet facilities (e.g. at 169 west of Tower, and Hwy 53)
- All amenities need some work; can always use improvement
- Winter – satisfactory; good
- More amenities will be needed with year-round use
- Get trail spurs away from residential areas

7. **Cultural/Natural Resources:** Are you aware of any natural or cultural resource issues related to the trail?

23 Responses:

- Railroad grades
- Logging camps
- Mine history, interpretation
- Civilian Conservation Corps (CCC) Camps
- More things to see/visit in summer months
- Open [mining]dump lands from tailings, need to open for recreation/motorized vehicles

8. **Information and Education:** Are there any informational or educational messages that you recommend be included in the development of trail information and education signs, brochures, and the trail website?

33 Responses:

- Horse signage [trail uses]
- Do not litter (messages/signs)
- **Tread Lightly** and **Play-Clean-Go** messages
- Mileage signs [distance to facilities, amenities, gas, food, etc.]
- Post rules at trail-heads
- Keep local clubs informed, website connections
- Interest points, such as Wolf Center, Bear Center, overlooks, historical sites, Tower-Soudan Mine, river crossings, lakes, roads, trail intersections, etc.

- Need more Conservation Officers to enforce rules
- Education on CCC Camps, logging camps, routes, mining, etc.
- Have maps available in many locations

9. Miscellaneous: Do you have any other comments or questions about planning for the Taconite State Trail?

54 Responses:

- A well-marked, well maintained trail will attract more users, helping local economies
- Opening the trail to more year round use will help local economies, communities
- Open trail to ATV summer/fall use; support for year-round use
- Would like to see state parks open to ATV use
- Would like to have camping sites along trail
- Hope trail will be open for horseback riding into the future – best place to ride
- Emphasis should be given to the input from local citizens
- Belong to a club to get your stickers
- Keep ATV (OHVs) Off trails near Side Lake, Pine Tree Road
- Leave the trail system alone!
- Snowmobile only
- To enhance summer use, new alignments may be needed
- Try to make it better – it is the gateway to the north woods
- Spend more money on maintenance, grooming, and equipment. Spend less money on planning and definitely less law enforcement.
- Would like to see ATV and side-by-side use allowed
- Keep the trail for snowmobiling, hiking, walking and non-motorized biking
- More multi-use would be nice. We need more ATV/UTV trails in the area. (connect to USFS trails)
- Better signage
- Could be used for charity events (organized special events)
- No ATVs, too many wetlands
- No fat bikes in winter

10. Mailing list (future meetings, updates): If you wish to be included on the Taconite State Trail contact list for future updates and meeting notices, please provide your name and contact information (print clearly).

First and Last Name: _____

[150+ Names provided] _____

Email or Mailing Address: _____

Please submit comments to: Diane.k.Anderson@state.mn.us

Or, Mail to: Diane Anderson, DNR Parks and Trails Division, 500 Lafayette Rd., St. Paul, MN, 55155-4039.

Appendix C. Registration Data for Snowmobile, OHV and Horse Pass

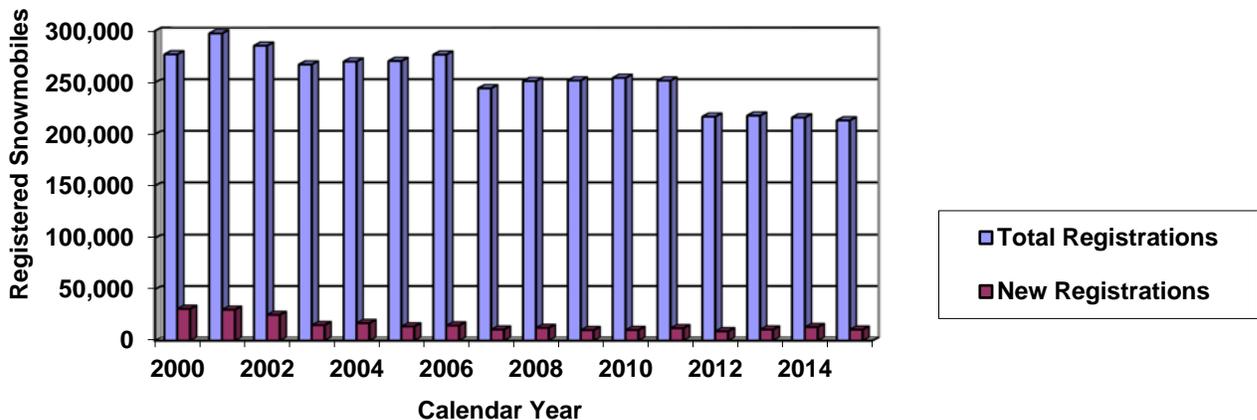
Snowmobile, ATV, OHM, ORV Registrations 2000-2015, and Horse Pass Sales

While registration data may be used as a proxy for use, it does not capture the amount or level of use by individuals or user populations in general. Snowmobiling remains a popular winter outdoor recreation activity in Minnesota, even though total registrations have been in decline since its peak in 2001. Demand for snowmobiling has been declining over the last fifteen years, but seems to be holding steady since 2012. New snowmobile registrations have recurrently been below 15,000 since the early 2000's, with 2015 new registrations at 10,770. In 2015, there were 213,298 registered snowmobiles in Minnesota. (Complete snowmobile data for the 2016-17 season was not available at the time of printing.)

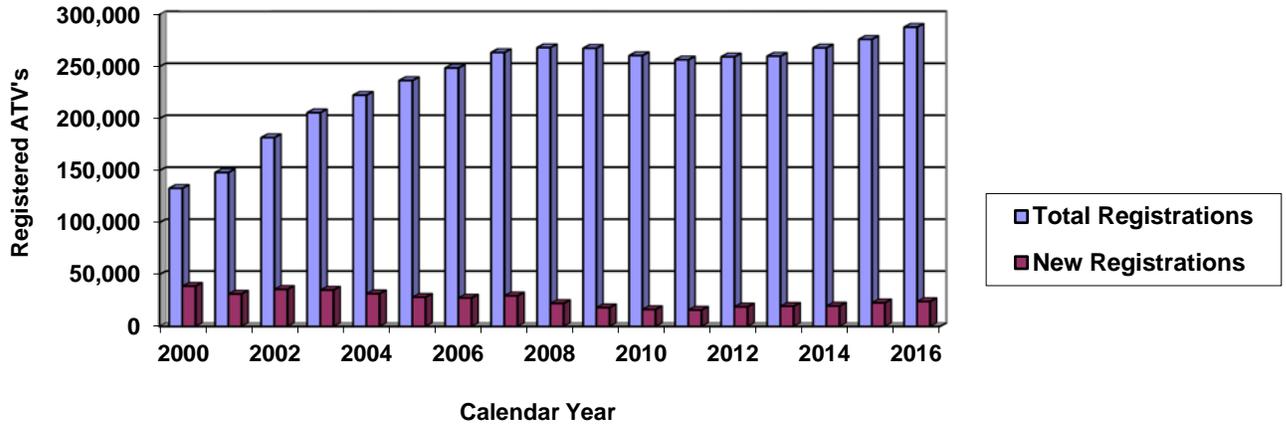
In contrast, ATV total registrations are experiencing all-time highs the past two years in a row, with 287,995 total registrations in 2016, breaking the previous all-time high of 276,311 set in 2015. While new registrations declined in the mid 2000's, they have been holding steady to slightly increasing during the past few years. Both OHM and ORV registration numbers peaked in 2006, then experiencing a sharp decline in the following years. However, the new registration numbers have remained fairly consistent over the last five years.

Horse Pass Sales also remain steady over the past few years, averaging around 6,000 passes per year. Registration figures for Snowmobiles, OHVs and Horse Pass Sales through 2016 are provided below.

Snowmobile Registrations, 2000-2015

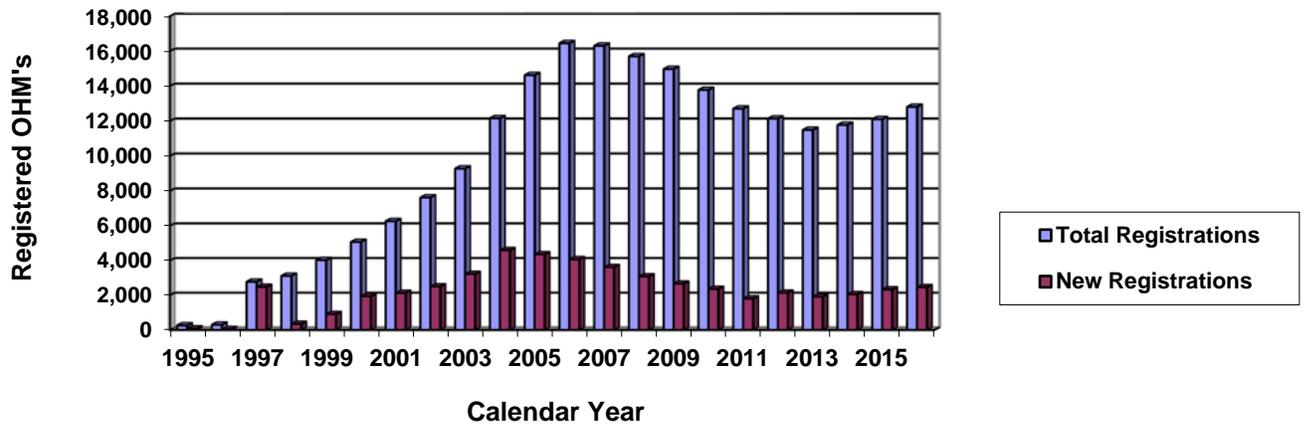


All-Terrain Vehicle Registrations, 2000-2016*

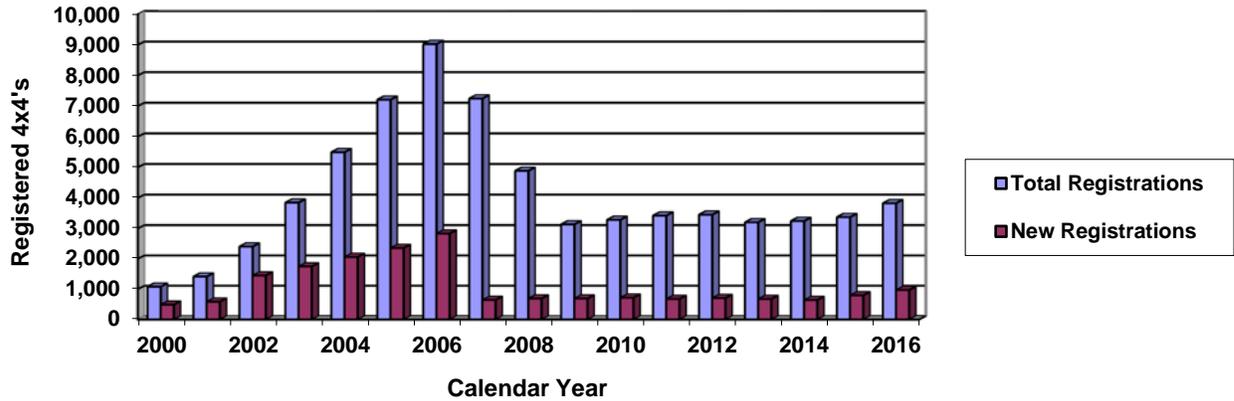


*Total does not include ATV's registered for solely agricultural or private land use.

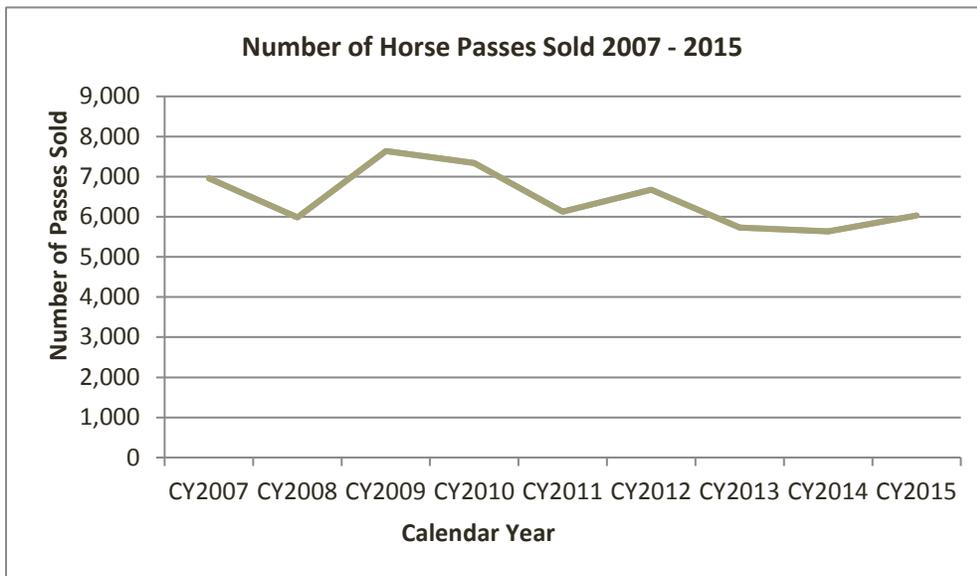
Off-Highway Motorcycle Registrations, 2000-2016



Off-Road Vehicle (4x4) Registrations: 2000-2016



Minnesota Horse Pass Sales 2007 - 2015



Source for data provided above: MN DNR, Parks and Trails Division. 2016 - 2017. Unpublished data. Bureau of Information, Education & Licensing, St. Paul, MN 55155.

Appendix D. Water Resources, Stream Crossing Summary

Table D.1. Taconite State Trail Stream Intersections. Geographic locations are represented in corresponding maps following the table.

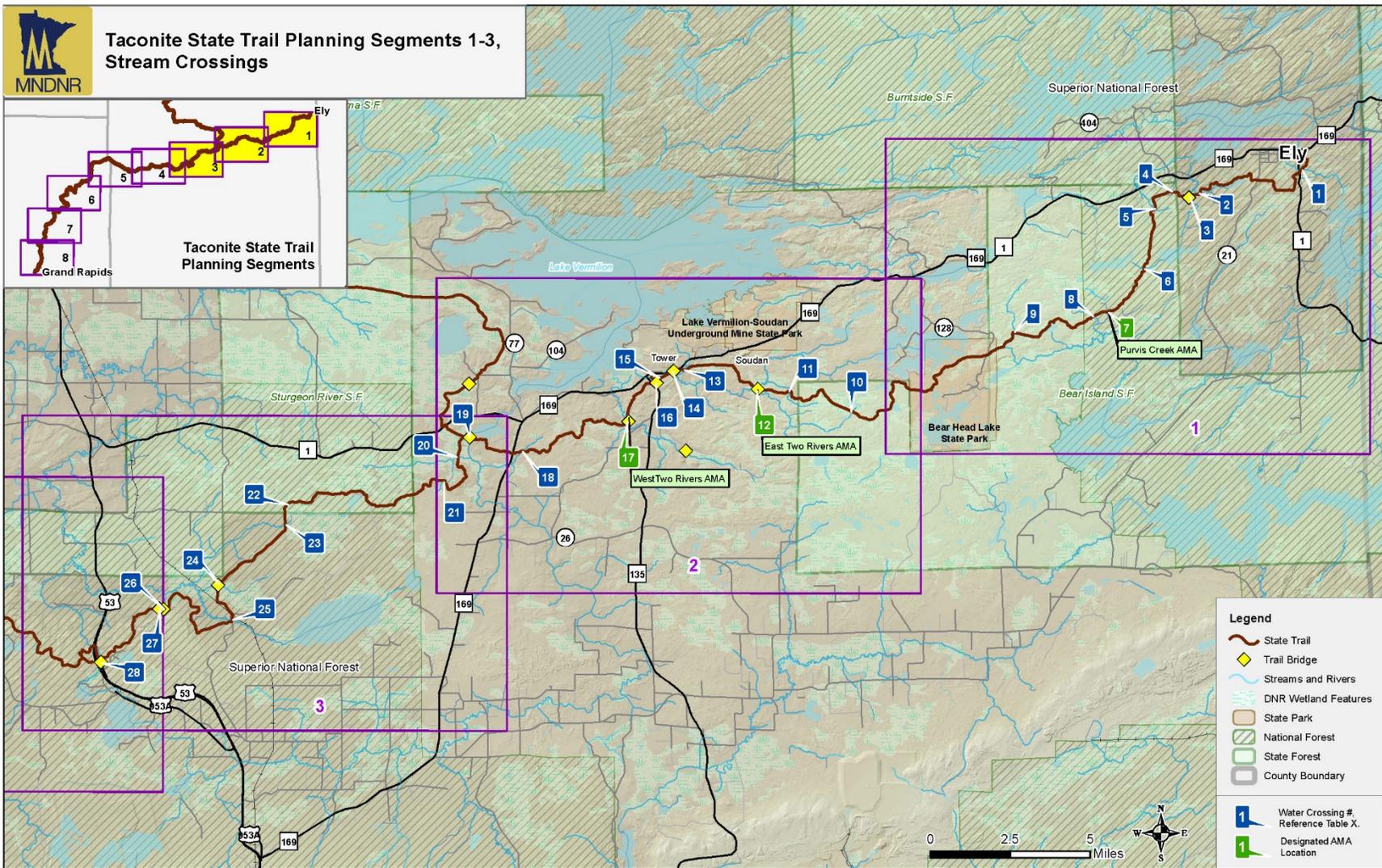
# (on Map)	Stream Name	Type	Kittle Number	Comments	Segment Map
1	Unnamed Intermittent Stream (1) (T63, R12, Sec. 35)		H-001-092-007 (Not a trout stream)	Rainy River Watershed	1
2	Unnamed Perennial Stream (2) (T62, R12, Sec. 6)	Culvert	H-001-092-004-003-001 (Not a trout stream)	Protected Tributary to Designated Trout Stream; Flows north to Shagawa Lake	1
3	Longstorff Creek (3) (T62, R12, Sec. 6)	Bridge (1), Wood Length 31 ft Width 11.4 ft	H-001-092-004-003	Trout Stream; existing bridge in satisfactory condition, may need improvements for year- round use	1
4	Unnamed Stream (4) (T62, R13, Sec. 1)		H-001-092-004-004-001 (Not a trout stream)	Flows to Armstrong Creek	1
5	Armstrong Creek (5)		H-001-092-004-004	Near David Dill/Arrowhead Trail intersection/Pike Flowage (flows north)	1
6	Longstorff Creek (2 nd crossing) (6) (T62, R13, Sec. 14)	Ford	H-001-092-004-003	This stretch is not a designated trout stream; improvements needed for summer use, may need culvert to reduce potential impacts	1
7	Unnamed Stream (7) (T62, R13, Sec. 27)		H-001-092-008-010	Purvis Creek AMA easement at trail intersection, County Tax Forfeit land	1
8	Unnamed Stream (8) (T62, R13, Sec. 27)		H-001-092-008-010-001		1
9	Bear Island River (9) (T62, R13, Sec. 30)		H-001-092-008		1
10	Owens Creek (10)		H-001-046-023-003	Vermilion River Watershed	2
11	Unnamed Stream (11)	Culvert	H-001-046-023-004	Protected Tributary to Designated Trout Stream (East two River)	2
12	East Two River (12) (T61N, R15W, Sec. 2)	Bridge (2), Steel Length 41 ft Width 11.35 ft	H-001-046-023	Trout Stream; East Two Rivers AMA easement at trail intersection	2

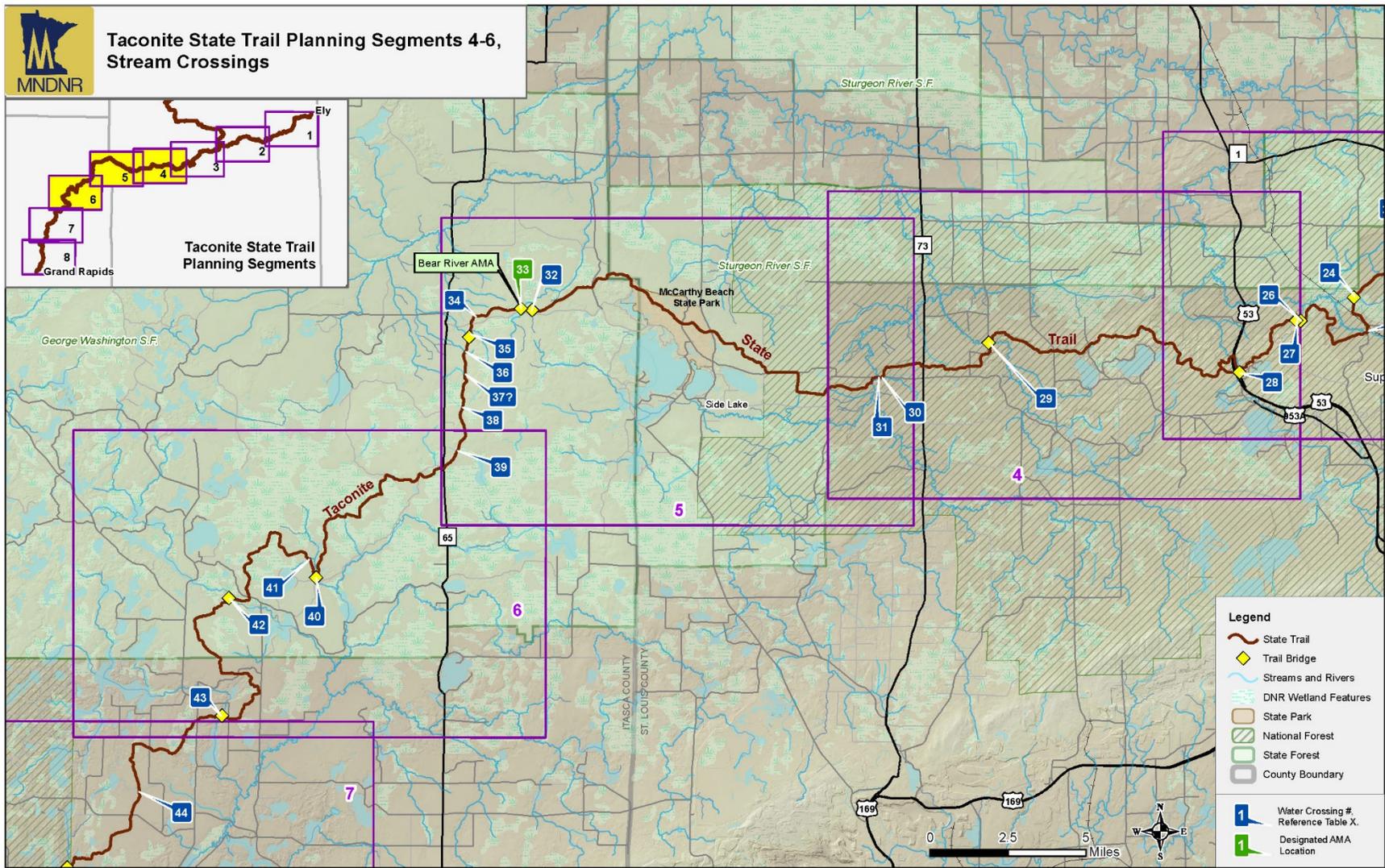
# (on Map)	Stream Name	Type	Kittle Number	Comments	Segment Map
13	Unnamed Stream (13)	Culvert	H-001-046-023-001	Protected Tributary to Designated Trout Stream (East Two River)	2
14	East Two River (14) (T61N, R15W, Sec. 2)	Bridge (3)	H-001-046-023	Trout Stream	2
15	East Two River (15) (T62N, R15W, Sec. 33)	Culvert	H-001-046-023	Trout Stream	2
16	East Two River (16) (T62N, R15W, Sec. 32)	Bridge (4), Wood Length 40 ft Width 11.5 ft	H-001-046-023	Trout Stream	2
17	West Two River (17) (T61N, R15W, Sec. 7)	Bridge (5), Wood Length 44.5 ft Width 11.5 ft	H-001-046-024	Trout Stream; West Two Rivers AMA easement at trail intersection; existing Bridge does not span full floodplain, would need improvement or alternative for year-round use due to wetlands on either side of bridge	2
18	Unnamed Stream (18)		H-001-046-026		2
19	Vermilion River (19) AKA "Pike River" (T61N, R16W, Sec. 8)	Bridge (6), Steel Length 140 ft Width 10 ft	H-001-046	Locally known as Pike River, also labeled in Bridge Report	2, 3
20	Lehtinen Creek (20)		H-001-046-025		2, 3
21	Unnamed Stream (21)		H-001-046-025-001		2, 3
22	Unnamed Stream MAJ_090355243 (22)		MAJ_090355243	Little Fork River Watershed	3
23	Puutio Creek (23)		H-001-030-026-006		3
24	Forsman Creek (24) (T60N, R18W, Sec.1)	Bridge (7), Wood Length 49 ft Width 11.5 ft	H-001-030-026-006.5		3
25	Rice River (25)		H-001-030-026		3
26	Unnamed Stream (26) (T60N, R18W, Sec. 10)	Bridge (8) wet area	H-001-030-026-005.5		3
27	Bridge – no stream (27) (T60N, R18W, Sec. 10)	Bridge (9)	N/A		3, 4
28	Johnson Creek (28) (T60N, R18W, Sec. 17)	Bridge (10), Wood Length 45 ft Width 11.3 ft	H-001-030-026-005	Trout Stream	3, 4

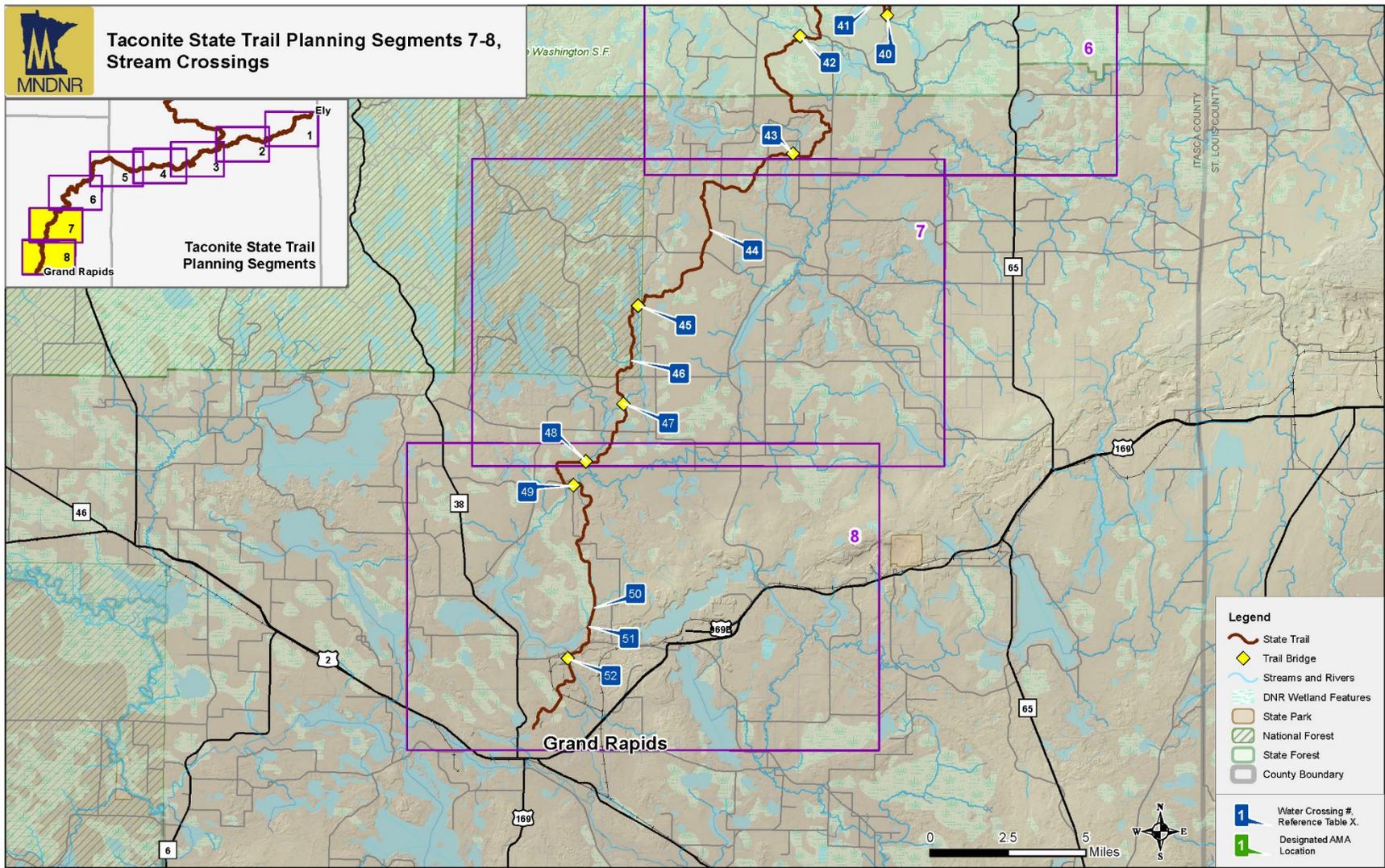
# (on Map)	Stream Name	Type	Kittle Number	Comments	Segment Map
29	Dark River (29) (T60N, R20W, Sec. 12)	Bridge (11) Steel Length 41.5 ft Width 11.5 ft	H-001-030-023-008	Trout Stream	4
30	Unnamed Stream (30)		H-001-030-023-009.6		4, 5
31	Sturgeon River (31)		H-001-030-023		4, 5
32	Unnamed Stream (32), AKA Link Creek	Bridge	H-001-030-023-002-003-003	Protected Tributary to Designated Trout Stream	5
33	Stony Brook (33)	Bridge, Steel Length 40 ft Width 11.5 ft	H-001-030-023-002-003	Trout Stream; Bear River AMA easement at trail intersection	5
34	Unnamed Stream, MAJ_090356890 (34)		MAJ_090356890		5
35	Unnamed Stream (35)	Bridge	H-001-030-023-002-010-001	Beaver Flowage, bridge south of stream	5
36	Unnamed Stream (36)		H-001-030-023-002-010-001- 0015		5
37	Unnamed Stream, MAJ_090355071 (37)		MAJ_090355071		5
38	Unnamed Stream, MAJ_090355268 (38)		MAJ_090355268		5
39	Unnamed Stream, MAJ-07016308_A (39)		MAJ-07016308_A	Upper Mississippi River Watershed	5, 6
40	Unnamed Stream (40) AKA Scooty Creek	Bridge	M-135-019		6
41	Unnamed Stream (41)		M-135-019-001		6
42	Prairie River, West Fork (42)	Bridge, Steel Length 50 ft Width 11.5 ft	M-135-017		6
43	Balsam Creek (43)	Bridge, Steel Length 43.75 Ft Width 11.5 ft	M-135-015		6
44	MAJ-07015439_A (44)		MAJ-07015439_A		7
45	Hanson Creek (45)	Bridge (North), Steel Length 60 ft Width 10 ft	M-135-005-001		7

# (on Map)	Stream Name	Type	Kittle Number	Comments	Segment Map
46	Unnamed Stream (46)	Ford	M-135-005-001-002	No bridge	7
47	Hanson Creek (47)	Bridge (South)	M-135-005-001	No bridge, trail temp closed; temp reroute on private property – seeking long term solution	7
48	Clearwater Creek (48)	Bridge, Steel Length 55.3 ft Width 11.5 ft	M-135-005		7, 8
49	Prairie River (49)	Bridge, Wood Length 32 ft Width 11.5 ft	M-135	2 bridges? (2 points in data)	8
50	Unnamed Stream, MAJ-07016186_A (50)		MAJ-07016186_A		8
51	Unnamed Streams (51) intersect of two streams		MAJ-07014350_A; MAJ-07014350_A	Near Keystone Trail (GIA Snow)	8
52	Prairie River (52)	Bridge, Steel Length 211 ft Width 18.5 ft	M-135	Near Bushwacker Trail (GIA Snow), paved surface bridge – Mesabi Trail, paved surface maintained by Itasca County	8

This Water Resources Data is available in alternative formats upon request. Reference maps on following pages.







Appendix E. Rare Species Summary, Natural Heritage Information System Biotics

The following list of species is drawn from the DNR Natural Heritage Information System (NHIS) Biotics in 2016. A data query was conducted using GIS and additional information from DNR resource specialists, for species located within one mile of the existing Taconite State Trail corridor. The species status in Minnesota is classified as the following:

- **END** **Endangered** (the species is threatened with extinction throughout all or a significant portion of its range within Minnesota)
- **THR** **Threatened** (the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range within Minnesota)
- **SPC** **Special Concern** (although the species is not endangered or threatened, it is extremely uncommon in Minnesota, or has unique or highly specific habitat requirements and deserves careful monitoring of its status)
- **NON** A species with **no legal status**, but about which the Natural Heritage and Nongame Research Program is gathering data for possible future listing

Common Name	Scientific Name	MN Status
Animal Assemblage		
Bat Concentration	<i>Bat Colony</i>	Blank
Colonial Waterbird Nesting Site	<i>Colonial Waterbird Nesting Area</i>	Blank

Fungus		
A Species of Lichen	<i>Cladonia pseudorangiformis</i>	SPC
Eastern candlewax lichen	<i>Ahtiana aurescens</i>	SPC
Peppered moon lichen	<i>Sticta fuliginosa</i>	SPC
Smooth lungwort	<i>Lobaria quercizans</i>	Watch List

Invertebrate Animal		
A Purse Casmaker Caddisfly	<i>Ochrotrichia spinosa</i>	END
Black Sandshell	<i>Ligumia recta</i>	SPC
Creek Heelsplitter	<i>Lasmigona compressa</i>	SPC
Esker (Quaternary)	<i>Esker (quaternary)</i>	Blank
Fault (Archean)	<i>Fault (archean)</i>	Blank
Fold (Archean)	<i>Fold (archean)</i>	Blank
Fold (Archean, Proterozoic)	<i>Fold (archean, proterozoic)</i>	Blank
Ice Erosion (Quaternary)	<i>Ice erosion (quaternary)</i>	Blank
Igneous Structure (Archean)	<i>Igneous structure (archean)</i>	Blank
Igneous Unit or Sequence (Archean)	<i>Igneous unit or sequence (archean)</i>	Blank
Laurentian Tiger Beetle	<i>Cicindela denikei</i>	SPC

Common Name	Scientific Name	MN Status
Metamorphic Structure (Archean, Lower Proterozoic)	<i>Metamorphic structure (archean, lower proterozoic)</i>	Blank
Mineral (Archean, Proterozoic)	<i>Mineral (archean, proterozoic)</i>	Blank
Nabokov's Blue	<i>Plebejus idas nabokovi</i>	SPC
Sedimentary Structure (Archean)	<i>Sedimentary structure (archean)</i>	Blank
Sedimentary Unit or Sequence (Archean)	<i>Sedimentary unit or sequence (archean)</i>	Blank
Stream Erosion (Archean, Proterozoic, Phanerozoic)	<i>Stream erosion (archean, proterozoic, phanerozoic)</i>	Blank
Tunnel Valley (Quaternary)	<i>Tunnel valley (quaternary)</i>	Blank

Terrestrial Community - Other Classification		
Lowland White Cedar Forest (Northern)	<i>Lowland White Cedar Forest (Northern) Type</i>	Blank
Native Plant Community, Undetermined Class	<i>Native Plant Community, Undetermined Class</i>	Blank

Vascular Plant		
American Shore Plantain	<i>Littorella americana</i>	SPC
Bog Rush	<i>Juncus stygius var. americanus</i>	SPC
Carolina Spring-beauty	<i>Claytonia caroliniana</i>	Blank
Clustered Bur-reed	<i>Sparganium glomeratum</i>	Blank
Cuckoo Flower	<i>Cardamine pratensis</i>	THR
Discoïd Beggarticks	<i>Bidens discoïdea</i>	SPC
Dragon's-mouth	<i>Arethusa bulbosa</i>	Blank
English Sundew	<i>Drosera anglica</i>	SPC
Floating Marsh Marigold	<i>Caltha natans</i>	END
Humped Bladderwort	<i>Utricularia gibba</i>	Blank
Lapland Buttercup	<i>Ranunculus lapponicus</i>	SPC
Lavender Bladderwort	<i>Utricularia resupinata</i>	THR
Leafless Water Milfoil	<i>Myriophyllum tenellum</i>	Blank
Least Moonwort	<i>Botrychium simplex</i>	SPC
Matricary Grapefern	<i>Botrychium matricariifolium</i>	Blank
Mingan Moonwort	<i>Botrychium minganense</i>	SPC
Montane Yellow-eyed Grass	<i>Xyris montana</i>	SPC
Narrow Triangle Moonwort	<i>Botrychium lanceolatum ssp. angustisegmentum</i>	THR
Northern Comandra	<i>Geocaulon lividum</i>	Blank
Pale Manna Grass	<i>Torreyochloa pallida var. fernaldii</i>	SPC
Pale Moonwort	<i>Botrychium pallidum</i>	SPC
Prairie Moonwort	<i>Botrychium campestre</i>	SPC
Ram's Head Orchid	<i>Cypripedium arietinum</i>	THR

Common Name	Scientific Name	MN Status
Robbins' Spikerush	<i>Eleocharis robbinsii</i>	THR
Small Green Wood Orchid	<i>Platanthera clavellata</i>	SPC
Small White Waterlily	<i>Nymphaea leibergii</i>	THR
Small Yellow Water Crowfoot	<i>Ranunculus gmelinii</i>	Blank
Soapberry	<i>Shepherdia canadensis</i>	SPC
Sooty-colored Beak-rush	<i>Rhynchospora fusca</i>	Blank
Spiny Hornwort	<i>Ceratophyllum echinatum</i>	Watch List
St. Lawrence Grapefern	<i>Botrychium rugulosum</i>	SPC
Torrey's Mannagrass	<i>Torreyochloa pallida</i>	SPC
Vasey's Pondweed	<i>Potamogeton vaseyi</i>	Blank
Western Jacob's-ladder	<i>Polemonium occidentale ssp. lacustre</i>	END
Woolgrass	<i>Scirpus pedicellatus</i>	Blank
Yellow Sedge	<i>Carex flava</i>	SPC

Vertebrate Animal		
American Bittern	<i>Botaurus lentiginosus</i>	Watch List
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Watch List
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	Watch List
Canada Lynx	<i>Lynx canadensis</i>	SPC
Loggerhead Shrike	<i>Lanius ludovicianus</i>	END
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	SPC
Northern Goshawk	<i>Accipiter gentilis</i>	SPC
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	SPC
Rock Vole	<i>Microtus chrotorrhinus</i>	Watch List
Smoky Shrew	<i>Sorex fumeus</i>	SPC
Trumpeter Swan	<i>Cygnus buccinator</i>	SPC

Appendix F. Species of Greatest Conservation Need, Summary List

Species of Greatest Conservation Need, Summary Table

The Taconite State Trail intersects with four ecological subsections, including the Littlefork Vermilion Uplands, Nashwauk Uplands, and Border Lakes Subsections. Each of these subsections contains at least 60 identified SGCN, with a combined total of 91 different species among SGCN, listed below.

*Status: END = Endangered; THR = Threatened; SPC = Special Concern; NL = No legal status (NON)

Taxa	Common Name	Scientific Name	State Status	Fed Status
Amphibians	Eastern Red-backed Salamander	<i>Plethodon cinereus</i>	NL	NL
	Four-toed Salamander	<i>Hemidactylium scutatum</i>	SPC	NL
Birds	American Bittern	<i>Botaurus lentiginosus</i>	NL	NL
	American Black Duck	<i>Anas rubripes</i>	NL	NL
	American Golden-plover	<i>Pluvialis dominica</i>	NL	NL
	American Woodcock	<i>Scolopax minor</i>	NL	NL
	Bald Eagle	<i>Haliaeetus leucocephalus</i>	SPC	THR
	Bay-breasted Warbler	<i>Dendroica castanea</i>	NL	NL
	Black Tern	<i>Chlidonias niger</i>	NL	NL
	Black-backed Woodpecker	<i>Picoides arcticus</i>	NL	NL
	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	NL	NL
	Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	NL	NL
	Bobolink	<i>Dolichonyx oryzivorus</i>	NL	NL
	Boreal Chickadee	<i>Poecile hudsonica</i>	NL	NL
	Boreal Owl	<i>Aegolius funereus</i>	NL	NL
	Brown Thrasher	<i>Toxostoma rufum</i>	NL	NL
	Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	NL	NL
	Canada Warbler	<i>Wilsonia canadensis</i>	NL	NL
	Cape May Warbler	<i>Dendroica tigrina</i>	NL	NL
	Common Loon	<i>Gavia immer</i>	NL	NL
	Common Nighthawk	<i>Chordeiles minor</i>	NL	NL
	Connecticut Warbler	<i>Oporornis agilis</i>	NL	NL
	Dunlin	<i>Calidris alpina</i>	NL	NL
	Eastern Meadowlark	<i>Sturnella magna</i>	NL	NL
	Eastern Wood-pewee	<i>Contopus virens</i>	NL	NL
	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	NL	NL
	Greater Yellowlegs	<i>Tringa melanoleuca</i>	NL	NL
	Le Conte's Sparrow	<i>Ammodramus leconteii</i>	NL	NL
	Least Flycatcher	<i>Empidonax minimus</i>	NL	NL
	Marsh Wren	<i>Cistothorus palustris</i>	NL	NL
	Nelson's Sharp-tailed Sparrow	<i>Ammodramus nelsoni</i>	SPC	NL
	Northern Goshawk	<i>Accipiter gentilis</i>	NL	NL
	Northern Harrier	<i>Circus cyaneus</i>	NL	NL
	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	NL	NL
	Olive-sided Flycatcher	<i>Contopus cooperi</i>	NL	NL
Ovenbird	<i>Seiurus aurocapilla</i>	NL	NL	
Peregrine Falcon	<i>Falco peregrinus</i>	THR	NL	
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	NL	NL	
Red-necked Grebe	<i>Podiceps grisegena</i>	NL	NL	
Red-shouldered Hawk	<i>Buteo lineatus</i>	SPC	NL	
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	NL	NL	

Taxa	Common Name	Scientific Name	State Status	Fed Status
	Ruddy Turnstone	<i>Arenaria interpres</i>	NL	NL
	Rusty Blackbird	<i>Euphagus carolinus</i>	NL	NL
	Sedge Wren	<i>Cistothorus platensis</i>	NL	NL
	Semipalmated Sandpiper	<i>Calidris pusilla</i>	NL	NL
	Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	NL	NL
	Short-billed Dowitcher	<i>Limnodromus griseus</i>	NL	NL
	Spruce Grouse	<i>Falcipennis canadensis</i>	NL	NL
	Swamp Sparrow	<i>Melospiza georgiana</i>	NL	NL
	Trumpeter Swan	<i>Cygnus buccinator</i>	THR	NL
	Upland Sandpiper	<i>Bartramia longicauda</i>	NL	NL
	Veery	<i>Catharus fuscescens</i>	NL	NL
	Virginia Rail	<i>Rallus limicola</i>	NL	NL
	Whip-poor-will	<i>Caprimulgus vociferus</i>	NL	NL
	White-rumped Sandpiper	<i>Calidris fuscicollis</i>	NL	NL
	White-throated Sparrow	<i>Zonotrichia albicollis</i>	NL	NL
	Winter Wren	<i>Troglodytes troglodytes</i>	NL	NL
	Wood Thrush	<i>Hylocichla mustelina</i>	NL	NL
	Yellow Rail	<i>Coturnicops noveboracensis</i>	SPC	NL
	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	NL	NL
Fish	Greater Redhorse	<i>Moxostoma valenciennesi</i>	NL	NL
	Lake Chub	<i>Couesius plumbeus</i>	NL	NL
	Lake Sturgeon	<i>Acipenser fulvescens</i>	SPC	NL
	Least Darter	<i>Etheostoma microperca</i>	SPC	NL
	Longear Sunfish	<i>Lepomis megalotis</i>	NL	NL
	Nipigon cisco	<i>Coregonus nipigon</i>	NL	NL
	Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	SPC	NL
	Pugnose Shiner	<i>Notropis anogenus</i>	SPC	NL
	Shortjaw Cisco	<i>Coregonus zenithicus</i>	SPC	NL
	Spoonhead sculpin	<i>Cottus ricei</i>	NL	NL
Insects	A Caddisfly	<i>Polycentropus milaca</i>	SPC	NL
	A Tiger Beetle	<i>Cicindela denikei</i>	THR	NL
	Bog Copper	<i>Lycaena epixanthe michiganensis</i>	NL	NL
	Disa Alpine	<i>Erebia disa mancinus</i>	SPC	NL
	Grizzled Skipper	<i>Pyrgus centaureae freija</i>	SPC	NL
	Macoun's Arctic	<i>Oeneis macounii</i>	NL	NL
	Nabokov's Blue	<i>Lycaeides idas nabokovi</i>	SPC	NL
	Tawny Crescent	<i>Phyciodes batesii</i>	NL	NL
Mammals	American Badger	<i>Taxidea taxus</i>	NL	NL
	Canada lynx	<i>Lynx canadensis</i>	NL	THR
	Eastern Spotted Skunk	<i>Spilogale putorius</i>	THR	NL
	Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>	NL	NL
	Gray Wolf	<i>Canis lupus</i>	SPC	THR
	Heather Vole	<i>Phenacomys intermedius</i>	SPC	NL
	Northern Bog Lemming	<i>Synaptomys borealis</i>	SPC	NL
	Rock Vole	<i>Microtus chrotorrhinus</i>	NL	NL
	Smoky Shrew	<i>Sorex fumeus</i>	SPC	NL
Mollusks	Black Sandshell	<i>Ligumia recta</i>	SPC	NL
	Creek Heelsplitter	<i>Lasmigona compressa</i>	SPC	NL
Reptiles	Common Snapping Turtle	<i>Chelydra serpentina</i>	SPC	NL
Spiders	A Jumping Spider	<i>Marpissa grata</i>	SPC	NL

Appendix G. Summary of Trail Use Feasibility

Feasibility Summary for Multiple Trail Uses

Feasibility for allowed uses on any trail segment may change over time due to changing conditions. Examples of changing conditions include: changes in landownership interest or administrator; changes in trail demand or seasons of use; reroutes or alternate trail routes for specific uses; or changes to rules or management policies that apply to underlying lands. Should the existing conditions change, specific project proposals or locations may be re-assessed and the feasibility of the proposed actions may be adjusted.

Each planning segment includes a brief description of existing and potential trail uses and feasibility of those uses on the existing trail corridor. The levels of feasibility are defined as the following:

Feasibility Level	Description
High Feasibility	<ul style="list-style-type: none"> • Little to no work (physical changes, improvements or rerouting) is needed to implement a new use or proposed uses; • The treadway is considered physically stable and sustainable for new/proposed use; and • Landowner agreements or land administration already allows the proposed use or landowner or administrator has agreed to the change in use.
Moderate Feasibility	<ul style="list-style-type: none"> • Existing treadway could sustain proposed use with some minor to moderate improvements, minor reroutes (< 1 continuous mile), or some design considerations; • The treadway may need relatively minor modifications to avoid or minimize impacts to sensitive natural resources (wetland, stream, plant community, etc.); and/or • The treadway may require an update, further coordination or agreement from landowner or administrator (landowner is agreeable to proposed use).
Low Feasibility	<ul style="list-style-type: none"> • Proposed use is incompatible or restricted by land management laws, rules or policies; or • Proposed use would require substantial construction, modifications, or other design changes (physical changes) in order to accommodate sustainable use on the existing treadway; or • The treadway includes landowner or administrator limitations or restrictions regarding proposed use (landowner or administrator does not agree to proposed use).

Challenges that are identified do not necessarily prohibit particular uses, but have issues that need to be worked through in order to accommodate the proposed change. In some cases, the trail alignment may need to be re-located. Permanent or temporary reroutes may be necessary to implement other uses.

Trail supervisors and managers may look to improve the alignment as issues arise or change over time. Opportunities to reduce potential conflicts with resource management issues or landowners should be taken into consideration and pursued.

DNR staff need flexibility to work with other land administrations and owners as necessitated, whether by external circumstances or by internal (DNR) management priorities and responsibilities.

Planning Segment 1

Trail Use	Activity/Interest	Feasibility*	Considerations
Biking	Mod – High, low current use	Varies, Moderate to High	Natural Resources – wetlands, trout streams, slopes, erosion; Land ownership limitations; Moderately feasible within state park
Horseback riding (Equestrian)	Low current use	Moderate	Many wet areas, wetlands; Land owner limitations; No horse facilities in vicinity
Hiking	Low current use	Moderate	Many wetlands limit use; Land owner limitations
OHV – • ATV • OHM • ORV	High interest; not previously allowed, high interest for future use	Varies: Low within state park; Low to Moderate outside state park	Natural Resources - wetlands, trout streams, slopes, erosion; State park rules and management plan; Land ownership/management limitations
Snowmobile	High, High current use	High	Existing use, well maintained

Planning Segment 2

Trail Use	Activity/Interest	Feasibility*	Considerations
Biking	Mod – High, Moderate use in Tower	Varies, Moderate to High	<ul style="list-style-type: none"> Natural Resources – wetlands, trout streams, slopes, erosion Land ownership limitations High feasibility on former rail corridor
Horseback riding (Equestrian)	Low current use	Moderate to Low	<ul style="list-style-type: none"> Natural Resources - Many wet areas, wetlands, trout streams, erosion Land ownership/management limitations
Hiking	Low current use	Moderate	<ul style="list-style-type: none"> Many wetlands limit use Land ownership/management limitations
OHV – • ATV • OHM • ORV	High interest; not previously allowed	Varies: Moderate west of BHLSP to Murray Forest Rd.; Low from Soudan to David Dill/Arrowhead ST	<ul style="list-style-type: none"> Natural Resources - wetlands, trout streams, slopes, erosion State park rules and management plan Land ownership/management limitations
Snowmobile	High, High current use	High	<ul style="list-style-type: none"> Existing use, well maintained

Planning Segment 3

Trail Use	Activity/Interest	Feasibility*	Considerations
Biking	Low interest	Low; Higher feasibility from Big Aspen to U.S. 53	<ul style="list-style-type: none"> Natural Resources – wetlands Land ownership/management limitations Existing use at Big Aspen Multi-Use Trails nearby/adjacent
Horseback riding (Equestrian)	Low interest	Low	<ul style="list-style-type: none"> Natural Resources – wetlands Land ownership/management limitations
Hiking	Moderate interest	Varies; High near Big Aspen system	<ul style="list-style-type: none"> Natural Resources – wetlands Land ownership/management limitations Existing use at Big Aspen Multi-Use Trails nearby/adjacent
OHV – <ul style="list-style-type: none"> ATV OHM ORV 	Moderate interest	Low from David Dill/Arrowhead ST to Big Aspen Trails; Moderate from Big Aspen Trails to U.S. 53	<ul style="list-style-type: none"> Natural Resources – wetlands Land ownership/management limitations Existing use at Big Aspen Multi-Use Trails nearby/adjacent
Snowmobile	High, High current use	High	<ul style="list-style-type: none"> Existing use, well maintained

Planning Segment 4

Trail Use	Activity/Interest	Feasibility*	Considerations
Biking	Low interest, low existing use	High	<ul style="list-style-type: none"> Natural Resources - Few sensitive resources in this corridor Primarily USFS and State land owners Shared corridor with forest roads Safety/Compatibility with other uses
Horseback riding (Equestrian)	Low interest, low existing use	High	<ul style="list-style-type: none"> Natural Resources - Few sensitive resources in this corridor Primarily USFS and State land owners Shared corridor with forest roads
Hiking	Low interest, low existing use	High	<ul style="list-style-type: none"> Natural Resources - Few sensitive resources in this corridor Primarily USFS and State land owners Shared corridor with forest roads Safety/Compatibility with other uses
OHV – <ul style="list-style-type: none"> ATV OHM ORV 	High interest; Current use along roads (shared corridor)	High, entire segment	<ul style="list-style-type: none"> Natural Resources - Few sensitive resources in this corridor Primarily USFS and State land owners Existing use on shared corridor with forest roads
Snowmobile	High, High current use	High	<ul style="list-style-type: none"> Existing use, well maintained

Planning Segment 5

Trail Use	Activity/Interest	Feasibility*	Considerations
Biking	Moderate use, interest	High	<ul style="list-style-type: none"> • Most use occurs within state park
Horseback riding (Equestrian)	High use, high interest	High	<ul style="list-style-type: none"> • Popular horseback riding area through state park and nearby, connections to horse campgrounds
Hiking	High use, high interest	High	<ul style="list-style-type: none"> • High use within state park
OHV – <ul style="list-style-type: none"> • ATV • OHM • ORV 	High interest; not previously allowed	Varies: Low within state park; Moderate to High outside park boundary	<ul style="list-style-type: none"> • Natural Resources – sensitive resources within state park, WMA, wetlands, trout stream • State park rules and management plan • Land ownership/management limitations • Potential connections in state forests
Snowmobile	High, High current use	High	<ul style="list-style-type: none"> • Existing use, well maintained

Planning Segment 6

Trail Use	Activity/Interest	Feasibility*	Considerations
Biking	Low use; Low interest	Low	<ul style="list-style-type: none"> • Natural Resources – extensive wetlands
Horseback riding (Equestrian)	Low use; Low interest	Low	<ul style="list-style-type: none"> • Natural Resources – extensive wetlands
Hiking	Low use; Low interest	Low	<ul style="list-style-type: none"> • Natural Resources – extensive wetlands
OHV – <ul style="list-style-type: none"> • ATV • OHM • ORV 	High interest; Existing use along Little Moose GIA ATV Trail nearby	Varies; Low to Moderate	<ul style="list-style-type: none"> • Natural Resources – extensive wetlands • County trails may expand use in vicinity/some overlap with Taconite • Potential trail connections • Limited to short sections share with forest road
Snowmobile	High, High current use	High	<ul style="list-style-type: none"> • Existing use, well maintained

Planning Segment 7

Trail Use	Activity/Interest	Feasibility*	Considerations
Biking	Low, no current use	Low	<ul style="list-style-type: none"> Natural Resource – wetlands Land ownership/management limitations
Horseback riding (Equestrian)	Low, no current use	Low	<ul style="list-style-type: none"> Natural Resource – wetlands Land ownership/management limitations
Hiking	Low, no current use	Low	<ul style="list-style-type: none"> Natural Resource – wetlands Land ownership/management limitations
OHV – <ul style="list-style-type: none"> ATV OHM ORV 	Low; Moderate interest	Low	<ul style="list-style-type: none"> Natural Resource – wetlands Land ownership/management limitations
Snowmobile	High, High current use	High	<ul style="list-style-type: none"> Existing use, well maintained

Planning Segment 8

Trail Use	Activity/Interest	Feasibility*	Considerations
Biking	High use on paved section; High interest	High – existing use; Low north of CR 61	<ul style="list-style-type: none"> Existing paved trail, shared corridor with Mesabi Trail for 6 miles from trailhead in Grand Rapids DNR partnership with Itasca County Natural Resources – sensitive resources, wetlands, WMA north of CR 61 Land ownership/management limitations
Horseback riding (Equestrian)	Low existing use; Moderate interest	Low – existing use; Low north of CR 61	<ul style="list-style-type: none"> Horse campground at trailhead/Itasca County Fairgrounds Natural Resources – sensitive resources, wetlands, WMA Land ownership/management limitations
Hiking	High use on paved section	High – existing use; Low north of CR 61	<ul style="list-style-type: none"> Natural Resources – sensitive resources, wetlands, WMA north of CR 61 Land ownership/management limitations (and existing uses)
OHV – <ul style="list-style-type: none"> ATV OHM ORV 	Low use; Moderate interest	Low	<ul style="list-style-type: none"> Natural Resources – sensitive resources, wetlands, WMA Land ownership/management limitations (and existing uses)
Snowmobile	High, High current use	High	<ul style="list-style-type: none"> Existing use, well maintained

Appendix H. Summary of Recommendations

<i>Master Plan Page 77</i>	Trail Alignment Recommendations
TA-1	Recommendation 1: Continue to work with willing landowners and administrators to secure the trail alignment for permanent or long-term recreational use.
TA-2	Recommendation 2: Consider additional, new, or year-round trail uses that meet sustainability criteria and are compatible with existing uses, treadway conditions, and local needs and preferences.
TA-3	Recommendation 3: Consider and pursue ways to reduce potential conflicts with landowners and avoid resource management issues.
TA-4	Recommendation 4: Provide consistent recreational trail use along shared corridors with forest roads and trails and appropriate signage indicating shared corridors and allowable uses.
TA-5	Recommendation 5: Use the trailhead building at Grand Rapids County Fairgrounds to its fullest potential. Allow more use of the building for public events, meetings, and recreation-related training activities or classes. Public and private funds were used to develop this building so the public can use it.

<i>Master Plan Pages 80-81</i>	Operations and Maintenance Recommendations
OM-1	Recommendation 1: Conduct year-round inspections to detect maintenance issues before safety is compromised.
OM-2	Recommendation 2: Continue to coordinate with other land administrators and agencies to maintain shared corridors and facilities (i.e. forest roads, county roads, other trails).
OM-3	Recommendation 3: Support flexibility for DNR staff to work with other land administrations and owners as needed, whether by external circumstances or by internal (DNR) management priorities and responsibilities.
OM-4	Recommendation 4: To consider expanding, changing or adding new uses to the trail will include specific evaluation and assessments to ensure that proposed changes meet compatibility and sustainability criteria prior to implementation.
OM-5	Recommendation 5: Seasonal and temporary trail closures will be imposed due to wet trail conditions, active logging or resource operations, wildfire dangers, and maintenance and repair activities. Heavy precipitation and spring thaws may lead to trail closures.
OM-6	Recommendation 6: Pursue additional maintenance funds as needed to maintain the trail for new or additional trail uses. Consider funding from dedicated accounts as appropriate, such as when and where motorized uses (OHV) are operating/in use.
OM-7	Recommendation 7: Provide support amenities and facilities including designated parking, water, toilets, rest areas/shelters, and other amenities along the trail, as appropriate and as funding allows.

<i>Master Plan Pages 83-84</i>	Information, Education & Interpretive Services Recommendations
IEIS-1	Recommendation 1: Develop/incorporate an interpretive plan for the trail so that users better understand the trail’s unique natural, cultural and recreational features.
IEIS-2	Recommendation 2: Use and expand partnerships with other organizations such as local municipalities, chambers of commerce, tribal nations, historical museums, and corporate land owners to develop content for interpretive displays.
IEIS-3	Recommendation 3: Improve existing—or develop new trail kiosks—that reflect the interpretive theme(s) for the trail that can be used at trailhead locations, key intersections, and rest areas. These include but are not limited to: Ely, Bear Head Lake State Park, Soudan, Tower, David Dill/Arrowhead State Trail intersection, Side Lake/McCarthy Beach State Park, and Grand Rapids.
IEIS-4	Recommendation 4: Follow Parks and Trails Division standards and best practices for wayfinding and orientation. Provide community services information, trail orientation, wayfinding signage, trail rules, and trail courtesy/etiquette information at key locations and intersections along the trail. Include universal trail use symbols to communicate shared uses along the trail.
IEIS-5	Recommendation 5: Use the Volunteer Trail Ambassador Program on trail segments that are open to OHV use (motorized recreational use) to help monitor trail use and conditions, particularly during peak motorized-use times.
IEIS-6	Recommendation 6: Provide trail orientation signs at junctions with other trails or roads, parking lots, trail shelters, and trailheads so that trail users understand allowable uses on each trail or trail segment. Not all uses are allowed on all segments of the trail system. For example, many grant-in-aid snowmobile trails intersect with the Taconite State Trail. Horses, ATVs and OHMs are not allowed on most of these grant-in-aid snowmobile trails. Trail users need clear and accurate signage to understand where and when they are allowed the trail.
IEIS-7	Recommendation 7: Continue and expand coordination with county 911 dispatch/enforcement agencies by posting Geographical/Global Positioning System (GPS) coordinates at trail junctions throughout the trail.
IEIS-8	Recommendation 8: Install additional gates or barriers as needed to manage multiple recreational uses along the Taconite State Trail. For example, additional gates or barriers are recommended at intersections with grant-in-aid snowmobile trails that do not allow other types of uses during other times of the year.

<i>Master Plan Page 85</i>	Enforcement Recommendations
ENF-1	Recommendation 1: Provide an adequate level of enforcement through a multifaceted approach to help maintain a safe and secure trail environment, to encourage trail users to understand and obey trail rules, and to respect other trail users and adjoining properties.

<i>Master Plan Page 85</i>	Enforcement Recommendations
ENF-2	Recommendation 2: Develop on-site information that communicates important trail courtesies (etiquette) and rules that lead to a safe and enjoyable experience for all. Information needs to be specific to the uses of each trail segment and any issues or conflicts that may occur at those locations.
ENF-3	Recommendation 3: Continue to work with local law enforcement, local first responder, and/or emergency medical services personnel to insure public safety.
ENF-4	Recommendation 4: Increase visibility of DNR staff during peak use times to provide information to the public and an enforcement effect.

<i>Master Plan Pages 92-93</i>	Vegetation Management Recommendations
VM-1	Recommendation 1: Use native plant species, from locally collected seed sources that are consistent with the native plant communities of the area, to re-vegetate areas disturbed by erosion, overuse and construction.
VM-2	Recommendation 2: Restore or, if necessary, establish native woodlands or wetland plantings along the trail to minimize maintenance and the use of pesticides, control noxious weeds, and increase the abundance of natural species and biodiversity in ways that enhance the user experience.
VM-3	Recommendation 3: Avoid or minimize impacts to Minnesota Biological Survey Sites of Outstanding or High Biodiversity Significance. If avoidance is not possible, then impacts to the features that make the site “of outstanding or high biodiversity significance” are minimized.
VM-4	Recommendation 4: Be adaptive to the changing climate and consider year-round, sustainable recreational uses of the trail corridor.
VM-5	Recommendation 5: Follow Operation Order #131 and current Parks and Trails Division guidelines developed for climate change adaptation, mitigation, and management approaches specific to state parks and trails.
VM-6	Recommendation 6: Follow Operational Order #113 and current Parks and Trails Division guidelines developed for preventing and controlling the spread of invasive species on Parks and Trails Division-administered lands.
VM-7	Recommendation 7: Monitor and control the spread of invasive species; trail corridors are especially vulnerable when land is mowed during routine maintenance of the trail.
VM-8	Recommendation 8: Regularly coordinate and communicate with land managers about trail management and operations to ensure and promote high quality recreational opportunities along the Taconite State Trail and connected recreational units and systems.
VM-9	Recommendation 9: Continue to coordinate with the U.S. Forest Service regarding management activities and recreational uses wherever the trail is located on, or adjacent to national forest property.

<i>Master Plan Page 96</i>	Water Resources Recommendations
WR-1	Recommendation 1: Trail bridges are preferred for stream crossings. Where culverts are used, the culvert width will, at a minimum, match the normal bank full width of the stream and be installed to match the natural gradient of the stream. Best management practices will be used for maintenance, repair and installation.
WR-2	Recommendation 2: Wetland sequencing must be followed. Avoid impacting wetlands if at all possible. If impacts are unavoidable, a wetland mitigation plan will be prepared to address and identify impacted wetlands.
WR-3	Recommendation 3: Minimize trail development and maintenance impacts to adjacent water features through the use of mulching, geo-textiles, silt screens, and other up-to-date best management practices.
WR-4	Recommendation 4: Use native plant materials appropriate to the locale to re-vegetate construction sites near water resources. Seek opportunities for in-stream habitat restoration or improvements.
WR-5	Recommendation 5: Coordinate with appropriate regulatory authorities and follow regulatory requirements that may apply to specific trail projects that may impact water resources.

<i>Master Plan Page 98</i>	Fisheries Recommendations
FISH-1	Recommendation 1: Trail intersections with public waters should minimize potential impacts as much as possible. Stream crossings should be properly designed for the trail use types, while also maintaining stream integrity.
FISH-2	Recommendation 2: Minimize the impact of trail operations and maintenance on water resources through the use of mulching, geo-textiles, silt screens, and seeding to establish vegetation. Appropriate erosion control measures should be taken to minimize the potential impacts on adjacent water resources.
FISH-3	Recommendation 3: Avoid construction or maintenance activities within the floodplain or below the banks during the prime spawning seasons of northern trout. Northern trout spawn from mid-September to June. (Exclusion dates will be part of the general waters permit.)
FISH-4	Recommendation 4: Bridges should span the river bank-full dimensions and should not have structures in the water channel that would catch debris and require frequent maintenance or diminish water quality or flow.
FISH-5	Recommendation 5: Avoid and minimize potential impacts to aquatic management areas (AMA) through best management practices and coordination with DNR fisheries staff.

<i>Master Plan Page 101</i>	Wildlife Recommendations
WILD-1	Recommendation 1: Avoid threatened, endangered, and special concern species. Data from the Natural Heritage database was used to assess the location of threatened, endangered, and special concern species. Parks and Trails Division staff will keep current with this data and perform on-the-ground surveys when changes or projects are proposed.
WILD-2	Recommendation 2: Minimize disturbances to habitats that support Species of Greatest Conservation Need. Maintain key habitats for SGCN that live along the trail corridor. Maintenance of these habitats within the trail corridor should be consistent with the management goals of surrounding lands including national, state, county and private forests, state parks, and wildlife management areas.
WILD-3	Recommendation 3: Provide interpretation, educational information, and demonstration areas for habitat management/landscaping and special wildlife features. Develop and provide checklists or other guides for plants and animals to engage trail users with wildlife resources.
WILD-4	Recommendation 4: Maintain regular consultation with DNR resource managers and Natural Heritage and Nongame Research Program staff for current information on occurrences of sensitive or rare species or natural communities in the corridor. Many occurrences change over time, remain unknown, or are undocumented.