



Matthew Lourey State Trail Master Plan Amendment

(Formerly known as Willard Munger State Trail East, and Boundary Trail Segment)

**Addition of All Terrain Vehicle
and Off Highway Motorcycle Use**

May 2012



MINNESOTA DEPARTMENT OF
NATURAL RESOURCES
DIVISION OF PARKS AND TRAILS

Matthew Lourey State Trail Master Plan Amendment

The Minnesota Department of Natural Resources, Parks and Trails Division, would like to thank all who participated in this planning process.

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State of Minnesota Department of Natural Resources Division of Parks and Trails

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**Minnesota Department of Natural Resources
Division of Parks and Trails**

May 2012



Minnesota Department of Natural Resources

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Division of Parks and Trails Approval of the Master Plan Amendment for the Matthew Lourey State Trail

The Division of Parks and Trails develops plan amendments to update master plans to reflect current development and operational proposals for state trails. The plan amendment process assists in formulating, evaluating and documenting these proposals.

This amendment to the Minnesota-Wisconsin Boundary Trail Master Plan (1982) and The Gandy Dancer Trail Plan (1994) addresses the addition of new trail uses, all-terrain vehicle (ATV) and off-highway motorcycle (OHM), to what is now known as the Matthew Lourey State Trail. The additional uses are proposed over four separate segments for a total of 23 miles, connecting other existing trail segments open for these uses for a combined total of approximately 47 miles of continuous ATV and OHM use along this 80-mile trail. This will provide a sustainable, high quality motorized recreational opportunity along an existing state trail corridor, and provide additional connectivity to other existing motorized trails by creating trail linkages and connections to loop trail systems within the Nemadji and St. Croix State Forests.

This amendment received input and comment both within the Department of Natural Resources and from the public. The planning process included a public review period and a public open house was held in Rutledge. All comments received were reviewed and carefully considered by DNR staff. The amendment addresses the comments received and the Northeast Region has recommended approval of this amendment.

A handwritten signature in blue ink, appearing to read "Courtland Nelson".

Courtland Nelson, Director
Division of Parks and Trails

A handwritten date in blue ink, "3 May 12".

Date



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Purpose

The purpose of this master plan amendment is to add Class I- and Class II-All Terrain Vehicle (ATV) and Off Highway Motorcycle (OHM) use to four separate segments of the Matthew Lourey State Trail, formerly known as the Minnesota-Wisconsin Boundary Trail. The four segments have a combined length of approximately 23.3 miles, joining trail segments already open to such uses, for a combined total of approximately 47 miles of continuous ATV/OHM use along this 80-mile trail. This amendment will amend the Master Plan for the Minnesota-Wisconsin Boundary Trail (1982), the original master plan for this trail corridor, as well as an amendment that was included in the Gandy Dancer Trail Plan (1994).

This amendment also proposes the addition of winter ATV use along the Matthew Lourey State Trail in the Nemadji and St. Croix State Forests, sharing the groomed trail corridor with snowmobiles. There has been an increase in demand for winter ATV (Class I and Class II) trails and this trail provides a unique opportunity to develop a loop system by connecting with the Gandy Dancer Trail to the east. The Gandy Dancer Trail also connects to a trail system in Wisconsin where year-round ATV use is currently allowed, including shared use with snowmobiles during the winter.

This amendment will provide a sustainable, high quality motorized recreational opportunity along an existing state trail corridor, and provide additional connectivity to other existing motorized trails by creating trail linkages and connections to loop trail systems within the Nemadji and St. Croix State Forests. Fully implemented, the Matthew Lourey Trail will provide connections to over 245 miles of motorized trails in the area.

No ATV or OHM use is proposed for Matthew Lourey Trail segments within St. Croix State Park.

No new trail segments are proposed for development as part of this amendment.

Background

The Matthew Lourey State Trail is a multi-use, natural and gravel surface trail, with approximately 80 miles developed from County Road 145 in Holyoke Township, southern Carlton County, to Pine County State Aid Highway (CSAH) 8 in Chengwatana Township in southern Pine County. The trail is primarily located on DNR-administered lands units, including Nemadji, St. Croix and Chengwatana state forests, and St. Croix State Park. Non-DNR administered portions of the trail occur on county and township

The *Matthew Lourey State Trail* has been previously known by several different names:

- **Minnesota-Wisconsin Boundary Trail**
- **Boundary Trail**
- **Boundary Trail Segment of the Willard Munger Trail**
- **Willard Munger Trail East**
- **Munger Trail East**



Class-I and Class-II ATVs:

- **Class I - ATVs** are defined to have a total dry weight of less than 1,000 pounds.
- **Class II - ATVs** have a dry weight between 1,000 and 1,800 pounds. (MN Statutes 2010, Chpt. 84.92, Subd. 8-10)
- Motor-driven recreational vehicles exceeding 1,800 pounds are considered **off-road vehicles (ORVs)**. (MN Statutes 2010, Chpt. 84.797, Subd. 7)

administered parcels. This trail may eventually extend north to Duluth. Primary uses of the developed trail include hiking and snowmobiling, with portions used for horseback riding, mountain biking, ATV and OHM use.

The Matthew Lourey State Trail has been known by several different names. In 1973, this trail was authorized as the Minnesota-Wisconsin Boundary Trail. Several years later, in 1988, it became a trail segment within the Willard Munger Trail System, and was then referred to as the Willard Munger State Trail East, or the Boundary Segment of the Willard Munger State Trail. It was also known simply as the Boundary Trail.

In 2010, the trail name was changed to the Matthew Lourey Trail, in honor and memory of Chief Warrant Officer Matthew S. Lourey, who died in 2005 while supporting Operation Iraqi Freedom; additionally, its statutory authorization was moved from the Willard Munger Trail System (Subd. 11) to the Arrowhead Region Trails (Subd. 13).

Legislative Authorization

Current authorization for the Matthew Lourey Trail is included within the Arrowhead Region Trails in Minnesota Statutes 85.015, Subdivision 13. This statute indicates that the Matthew Lourey Trail originates in Duluth and extends southerly to the St. Croix State Forest. However, the existing trail, formerly known as the Willard Munger State Trail East or Boundary Trail, extends further south, through St. Croix State Park and Chengwatana State Forest, in Pine County. Prior authorization indicated that the trail would span from Chisago County to Duluth, in St. Louis County (Minnesota Statutes 2006).

Minnesota Statutes, 2011, 85.015, 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 Grand Marais to International Falls Trail shall originate in Grand Marais in Cook County and extend northwesterly, outside of the Boundary Waters Canoe Area, to Ely in St. Louis County, thence southwesterly along the route of the Taconite Trail to Tower in St. Louis County, thence northwesterly through the Pelican Lake area in St. Louis County to International Falls in Koochiching County, and there terminate;*
 - (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.*

Figure 1. Minnesota State Trails System. Map exhibits all legislatively authorized state trails in MN Statutes 85.015, developed and undeveloped.



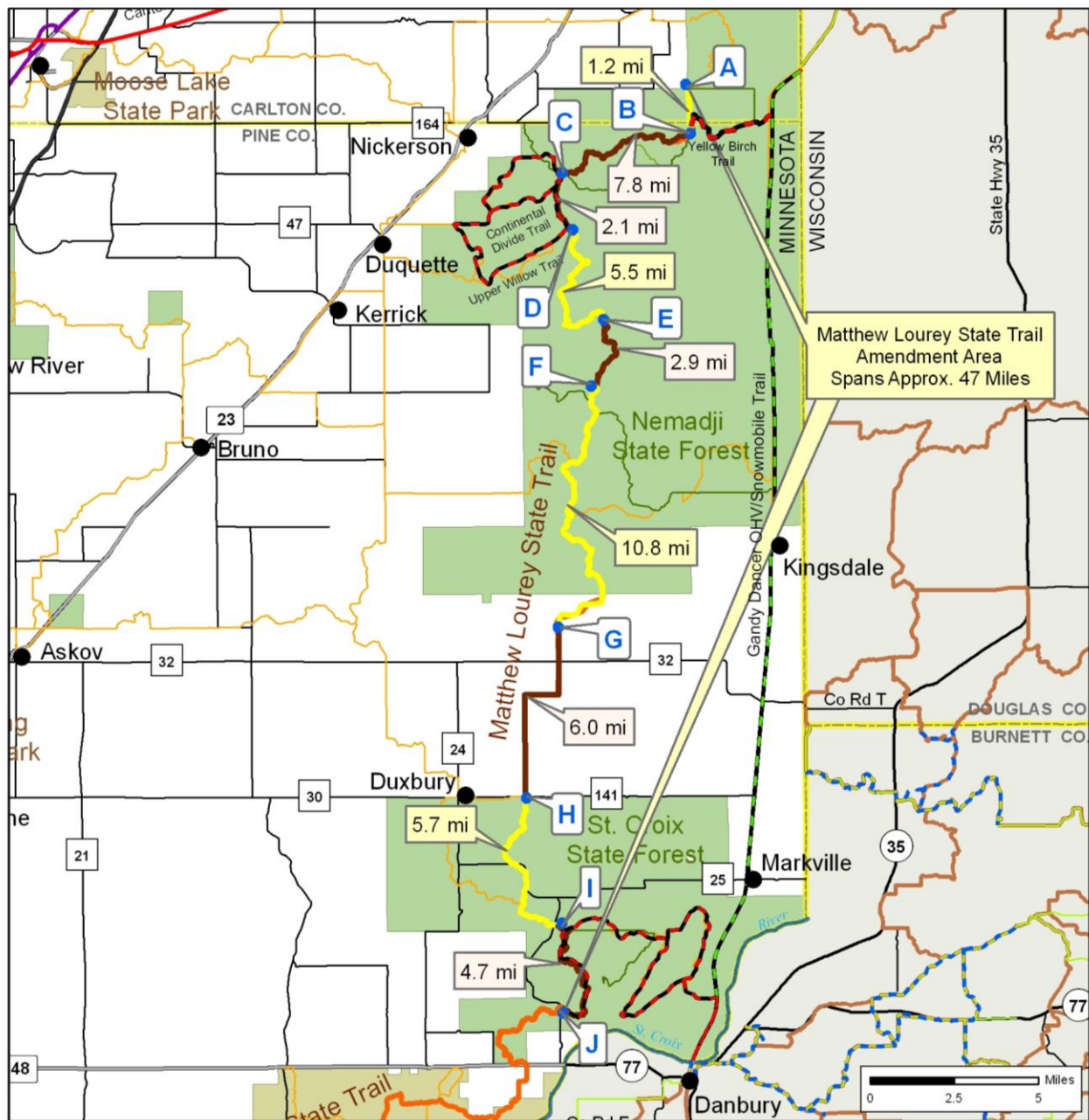


Figure 2: Matthew Lourey State Trail Amendment Overview - Planning Segments

Legend

Proposed Addition of ATV / OHM Use	Snowmobile Trail (MN GIA 2011-12)
Currently Open to Non-Motorized / Snowmobile	State Forest Roads
Currently Open to Non-Motorized/Snowmobile and ATV / OHM	System Roads
ATV / OHM / Snowmobile Trail	Minimum Maintenance
OHV / Snowmobile Trail	State Park
Other State Trails	State Forest
ATV Trail (GIA)	Burnett Co. Frozen Ground ATV Trail
Planning Segment Endpoint	WI Co. ATV Trail - Summer
	WI Co. ATV/Snowmobile Trail - Winter

North arrow (N, S, E, W) and Wisconsin Department of Natural Resources logo.

Wisconsin Data provided by Burnett County; Douglas County; and WI DOT, 2011-12.

Inset map of Minnesota showing the location of Pine County.

MN DNR PAT 12/22/11 MLT_SegOvrnw.mxd

History

1973 - Trail Authorized

In 1973, the state legislature authorized development of Minnesota-Wisconsin Boundary Trail extending from the Twin Cities to Jay Cooke State Park. The statutory language indicated that the “trail shall be developed primarily for riding and hiking.”



1980 – Abandoned Railroad Acquired

MN DNR purchased two abandoned railroad lines from Burlington Northern Inc. for a western addition to the Minnesota Wisconsin Boundary Trail. One segment is between Hinckley and Moose Lake and the other is between Carlton and West Duluth. These segments are now part of the Willard Munger State Trail, paved for 70-miles from Hinckley to Duluth.

1982 - Master Plan for Minnesota-Wisconsin State Trail

A master plan for the Minnesota-Wisconsin Boundary Trail was prepared in 1982, with nearly 80 miles of trail developed mostly on public lands, in Pine County. The primary use of the developed trail was for snowmobiling. The master plan also included hiking, cross-country skiing and horseback riding as suitable uses of this trail. Portions of the trail located within the Nemadji State Forest were already known to support “off-road motorcycling,” which we now refer to as off-highway motorcycling, or OHM. The master plan also mentions an annual motorcycle ride/race, which still takes place annually in the Nemadji State Forest. The master plan recommended that the motorcycling use be permitted to continue, but to also watch for its impacts to the natural resources.

This master plan also proposed a western addition to the Minnesota-Wisconsin Boundary Trail to include railroad abandonments, acquired by the DNR in 1980, for future trail development between Hinckley and Moose Lake, and between Carlton and West Duluth. As the plan recognized that not all uses could be accommodated along all portions of the trail, a series of trails consisting of six major segments, was identified that would create a system that could accommodate a variety of uses.

1988 – Trail Name Change from Minnesota-Wisconsin Boundary Trail to Willard Munger Trail

In 1988, the Minnesota-Wisconsin Boundary Trail name was changed to the Willard Munger Trail (Laws of MN 1988, Chpt. 436, section 1). The newly developed trail from Hinckley to Barnum was referred to as the “Willard Munger Trail West” (newly developed trail segment) and the segment previously known as the Minnesota-Wisconsin Boundary Trail was then referred to as the “Willard Munger Trail East.”

1990 - Master Plan Amendment

The master plan was amended in June 1990, to add the 17 mile Barnum to Carlton Segment to the Willard Munger State Trail West. This segment was recommended to accommodate bicycling, hiking, snowmobiling and cross-country skiing. The trail formerly known as the Minnesota-Wisconsin Boundary Trail was then recognized as the Willard Munger Trail East (currently known as Matthew Lourey Trail), but was also commonly referred to as the Boundary Trail.

1994 – Gandy Dancer Trail Plan & Amendment to Minnesota-Wisconsin Boundary Trail Plan

In 1990, the MN DNR purchased the abandoned Soo Line railroad grade that parallels the Minnesota - Wisconsin boundary in Pine and Carlton counties for development as a recreational trail and State Forest Road. The Wisconsin DNR purchased portions of the railroad grade in Wisconsin and an interstate

recreational trail was created. The trail in Minnesota and Wisconsin was named the Gandy Dancer Trail. The Gandy Dancer Trail Plan (DNR 1994) established the classification and permitted uses of the portion for the Gandy Dancer Trail in Minnesota. Portions of the grade near Harlis and between Belden and Kingsdale are classified as both State Forest Road and recreational trail. The remainder of the grade is a recreational trail. Primary winter uses are snowmobiling and ATV riding. Primary spring, summer, and fall uses are ATV riding with secondary uses being OHM riding, horse riding/driving, mountain-biking, and hiking. Off Road Vehicles (ORVs) are allowed on the segment from Kingsdale to Belden. The road/trail can be used for timber hauling by permit.

The Gandy Dancer Trail Plan also amended the 1982 Minnesota-Wisconsin Boundary Trail Master Plan to include ATVs and OHMs as permitted summer and fall uses on specific segments of the Boundary Trail, including what is referred to as Segment B – C in this amendment. Previously allowed uses on that portion of trail included hiking and horseback riding in the summer/fall and snowmobiling in the winter. There has been considerable work on the trail to reroute it around wet areas to make it easier to maintain and to increase its usability in the summer. Still, summer hiking use is quite light due to very dense mosquito population and other more scenic hiking alternatives.

1998 – Off Highway Vehicle System Plan, Not Adopted

The *Off-Highway Vehicle System Plan for Pine and Southern Carlton Counties Public Review Draft* (DNR, 1998) was intended to guide the DNR Off-Highway Vehicle (OHV) management activities in Pine and southern Carlton counties. The draft plan was developed by the DNR with the advice and assistance of a 17-member OHV System Planning Team. It proposed designating 24 miles of Willard Munger State Trail East for ATV/OHM use. This plan was never adopted.

2005 – 2006 – Off Highway Vehicle Forest Classification and Motor Route Designation Plans

Off-Highway Vehicle Trail Designation Plans were completed for St. Croix, Nemadji and Chongwatana state forests in 2005 - 2006. The three forests were evaluated under 2003 legislation (Minnesota Statutes 2003) requiring the Department of Natural Resources (DNR) to examine all state forests and determine where motorized recreation and access can be accommodated while conserving natural resources. They are all officially classified as “limited” for motorized access. Under the “limited” classification, motorized access is restricted to forest roads and trails where signs specifically indicate that a particular type of motorized access is allowed. OHVs include all terrain vehicles (ATVs), off-highway motorcycles (OHMs) or “dirt bikes,” and off-road vehicles (ORVs), such as Jeep CJs and four-wheel drive trucks.

The designation of the St. Croix and Nemadji State forests as limited represents the culmination of several years of work. During that time, all forest trails and roads were inventoried and mapped, environmental concerns were evaluated and public comments were gathered.

This Forest Classification Plan did not address the types of recreational trail uses on the Willard Munger State Trail East (currently known as Matthew Lourey Trail). An Environmental Assessment Worksheet (EAW) was court-ordered (State of MN Court of Appeals) to be completed before any changes could be made to the motorized use profile of this trail (DNR 2006).

2007 – Trail Name Change from Willard Munger Trail East to Boundary Trail Segment of the Willard Munger Trail System

Additional name clarification in statute (2007 c 131, art 1, s 15) – changes to 85.015, Subd 14 “Gateway Trail” changed to “Willard Munger Trail System” and included the names of six trail segments: Gateway, Boundary Trail, Browns Creek Trail, Munger Trail, Alex Leveau Trail, and one segment to include cities of Proctor, Duluth and Hermantown.

2010 – Boundary Trail Name Change to Matthew Lourey Trail

The state legislature amended Minnesota Statutes 85.015, Subd 13., Arrowhead Region Trails, in Cook, Lake, St. Louis, Pine Carlton, Koochiching, and Itasca Counties to add (a)(4), “The Matthew Lourey Trail shall originate in Duluth in St. Louis County and extend southerly to St. Croix State Forest in Pine County,” and deleted text from Subd 14. Willard Munger Trail System pertaining to the Boundary Trail (Minnesota Session Laws 2010). This action renamed the Willard Munger State Trail East, or “Boundary Trail” segment as the “Matthew Lourey Trail” in honor of Chief Warrant Officer Matthew Lourey, who was killed in Iraq in 2005. This action also moved the trail authorization from the Willard Munger Trail System to the Arrowhead Region Trails system (Minnesota Statutes 2010).

2011 – Environmental Review

An Environmental Assessment Worksheet (EAW) was completed for the Matthew Lourey Trail that examined the proposed designation of portions of the trail for all-terrain vehicle and off-highway motorcycle use on approximately 23 miles of trail occurring within the Nemadji and St. Croix State Forests. This EAW also examined winter ATV use in conjunction with snowmobile use of the trail. The DNR, which served as the Responsible Government Unit for the environmental review of the proposed project, concluded that an Environmental Impact Statement is not required because the project does not have the potential for significant environmental effects.

2012 – Amendment

Amendment to the Minnesota-Wisconsin Boundary Trail Master Plan (1982) and The Gandy Dancer Trail Plan (1994) to address proposed changes in uses to trail currently known as the Matthew Lourey Trail. These proposed changes include adding ATV and OHM use to four separate segments of the existing trail for a combined length of approximately 23 miles, resulting in approximately 47 miles of continuous trail open for ATV and OHM use. Also proposed, through the public review and comment period, is to allow Off Road Vehicle (ORV) use to approximately 0.25 mile of the Matthew Lourey Trail, providing ORV access from the Harlis Road parking lot to other existing forest trails and roads. This trail also connects to multiple forest roads and other motorized trails, providing a system or network of routes on public lands. This amendment also includes an opportunity for winter ATV use along the Matthew Lourey Trail.



Proposed Changes in Use

This amendment adds Class I- and Class II-All Terrain Vehicle (ATV) and Off-Highway Motorcycle (OHM) use to four separate segments of the Matthew Lourey State Trail. The four segments have a combined length of approximately 23 miles, joining trail segments already open to such uses, for a total of approximately 47 miles of continuous ATV/OHM use along this 80-mile trail.

These segments of the Matthew Lourey Trail will be open to ATV and OHM use during the spring, summer and fall seasons, generally extending from May 1 to November 1. (Recreational riding opportunities for off-highway vehicles (OHVs) are closed during the firearms hunting season, which generally begins the first week of November.) Additionally, Class I- and Class II-ATV use may extend into the winter season, sharing the groomed trail with snowmobiles from December 1 to March 31, as conditions warrant. This amendment does not pertain to Grant-In-Aid (GIA) trails.

Winter ATV use is also intended to extend onto other existing state or forest unit trails or roads, in order to provide a connection with the Gandy Dancer Trail, which currently allows winter ATV use in conjunction with snowmobile use. Providing winter ATV connections between the Matthew Lourey State Trail and the Gandy Dancer Trail will develop a new loop trail opportunity for winter ATV use, extending approximately 80 miles in Minnesota. Additional suitable and sustainable routes may be necessary to provide adequate connections to services and amenities.

During the public review process, a proposal was submitted to add Off Road Vehicle (ORV) use from the Harlis Road parking lot to the Northeast Extension forest trail, for a distance of approximately 0.2 mile. An additional short stretch of the Matthew Lourey State Trail, approximately 300 feet, will also be necessary to provide a connection from the southern end of the Northeast Extension Trail to the Yellow Birch Trail. These connections would provide ORV access from an existing parking facility to existing forest trails and roads without creating a new corridor in the forest. Proposed routes and seasonal use for ORVs will be reviewed and designated through separate processes, including the state forest trail and management revisions and/or Grant-In-Aid, as appropriate.

Trail segments included in this amendment are discussed in linear order, from north to south, in **Table 1**, and displayed in **Figures 3.1 to 3.5**. The Matthew Lourey Trail is currently allows multiple non-motorized uses including hiking, biking along its entire length, and horseback riding on selected portions. Motorized uses currently allowed include snowmobiling along its entire length, and portions are open for ATVs and OHMs. Where the trail corridor is shared with a road, (i.e. forest or township roads – such as with segment G - H), all motor vehicles are allowed, including highway licensed vehicles (HLVs), unless restrictions are posted.



Justification

Demand for ATV/OHM trails has continued to increase over the last decade. ATV registrations show a steady increase through 2008. Currently, new ATV registrations are above 260,000. OHM registrations also show a steady increase, with its highest numbers showing in 2006. Currently, new OHM registrations are over 13,700. Not all vehicles are purchased for recreational purposes, as many of them are purchased for utilitarian purposes and will not be used on recreational trails. For instance, ATVs registered solely for private or agricultural work are not included in these registration numbers. However, these numbers still reflect the popularity of this activity and demand for recreational trails. (Registration figures for ATVs, OHMs, ORVs and snowmobiles through 2010 are included in the **Appendix**.) ATV and OHM riding continues to be a popular outdoor recreation activity and the need for more areas to ride closer to large populations centers remains in demand.

The “Additional Guidelines for Improving Trails of State and Regional Significance” section of the *Parks and Trails Legacy Plan - Parks and Trails of State and Regional Significance, A 25-year long-range plan for Minnesota* (MN DNR 2011), includes priorities for specific trail use systems, including OHVs. The *Parks and Trails Legacy Plan* is intended to guide investment decisions for parks and trails of state and regional significance. The priorities identified for OHV trail systems are:

- Connecting existing roads and trails into a system within state forests;
- Acquire and develop riding opportunities near regional population centers;

- Connecting riding opportunities to communities, support facilities, and other trails;
- Continue to invest in user education that supports safe and appropriate riding behaviors; and
- Partner with other trail groups to make acquisitions that benefit multiple user groups.

This amendment addresses multiple priorities from the *Parks and Trails Legacy Plan*. The Matthew Lourey State Trail, with the proposed changes included in this amendment, will:

- Connect existing roads and trails into a system within the Nemadji and St. Croix state forests;
- Provide additional riding opportunities near regional population centers (the Harlis Road parking lot and northern trailhead in the Nemadji State Forest is approximately 40 miles south of Duluth and the southern terminus in St. Croix State Forest is about 100 miles north of St. Paul); and
- Connect to other riding opportunities nearby, including into Wisconsin, where additional riding opportunities exist.

Management and operation of this trail and its connecting system of trails will also include additional investments in user education and support safe and appropriate riding behaviors, including the utilization of the Trail Ambassador Program.

Including ATV/OHM use on a contiguous portion of the Matthew Lourey Trail will allow the trail system in these forests to function more effectively and help address the popularity of ATVs and OHMs by providing additional opportunities. Currently, the ATV and OHM use is primarily concentrated in the northern part of the Nemadji State Forest. Opening these segments of the Matthew Lourey State Trail to ATV and OHM use will help alleviate some of this concentrated use by providing key connections to other existing trails throughout the Nemadji and St. Croix state forests, as well as providing a connection to other trail systems in Wisconsin via the Gandy Dancer Trail.

Additionally, including ORV use for approximately 0.25 mile along the Matthew Lourey State Trail will also provide key ORV connections from an existing parking facility to other state forest roads and trails. Additional segments for ORVs could be identified in the future for short, key connections, typically one mile or less, needed to develop trail systems or loop trails for ORV users in this area. These ORV opportunities are intended to be part of other ORV route proposals where ORV use along the Matthew Lourey State Trail is not the primary route and where ORV use will not displace other existing uses. Conversely, if there are no connecting roads or trails suitable for ORV use off of the Matthew Lourey State Trail, then ORV use will not be necessary and would not be open to such use. ORV use is not being proposed as a primary use of the Matthew Lourey State Trail.

Continuous trail systems or loop trails provide a better recreational experience, and improve management, maintenance and enforcement capabilities. The proposed project will also enable additional treadway improvements, maintenance, and monitoring opportunities to sustain the additional trail uses.

Winter ATV riding is growing in popularity and MN DNR has experienced an increase in requests for winter ATV trails, especially during “brown” or winters lacking snow. Currently, Minnesota offers limited routes for winter ATV use, including the Gandy Dancer Trail, which then continues north and south into Wisconsin, where there are additional winter riding opportunities.

In Wisconsin, neighboring Douglas and Burnett counties currently provide summer and winter ATV use, where most of the winter ATV routes coincide with snowmobile trails. In both of these counties, maintenance funding is provided by ATV and snowmobile user groups, as well as shared labor efforts,

which has had an overall positive impact on the quality and conditions of these multi-use, multi-season trails.

Douglas County, Wisconsin (accessed to the north from the Gandy Dancer Trail), manages approximately 300 miles of winter ATV trails and over 100 miles of summer ATV trails. The ATV trails are open when they are deemed safe for use, including in the winter whether or not there is snow or frozen ground.

Burnett County, Wisconsin (accessed from the south end of the Gandy Dancer), manages approximately 100 miles of winter ATV trails and 50 miles of summer ATV trails. Burnett County has two categories for winter ATV use – frozen ground trails and ATV/snowmobile trails. “Frozen ground” trails are those that may be open whether there is a snow base or not, so long as the ground is frozen. “ATV/snowmobile” trails are those that must have at least a 4-inch snow base before being open for use by ATVs and snowmobiles.



Table 1: Matthew Lourey State Trail (MLT), Segment Details and Descriptions.

	Map Segment	Description	Length (Miles)	Proposed Changes (Amendment)	Existing Amenities	Intersections
Figure 3.1	A – B	Harlis Road to Yellow Birch Trail	1.2	Add Class-I and Class-II ATV and OHM use; Allow ORV use on 0.25 mile of the MLT, from Harlis Rd parking lot to forest trail; Non-winter use will be routed to 1.5 miles of forest trail west of MLT; Winter ATV use to share corridor with snowmobile use	Parking lot	Harlis Forest Road; Trail-head for MLT; Forest trails; Yellow Birch Trail (ATV/OHM)
	B – C	Yellow Birch Trail to Net Lake Forest Road	7.8	Add winter Class-I and Class-II ATV use (currently open to ATVs and OHMs)	Trail access to Gafvert Campground and Day Use Area	Multiple forest roads and trails; Hinkle Creek
	C – D	Net Lake Road to Adventure Trail West	2.1	Add winter Class-I and Class-II ATV use (currently open to ATVs and OHMs)	Trail shelter	Net Lake Forest Road; Net River; Continental Divide Trail (ATV/OHM); Upper Willow Trail (ATV/OHM); Adventure Trail West (ATV – class 1 only/OHM)
Figure 3.2	D – E	Adventure Trail West to Nemadji H Trail/Potlatch Road	5.5	Add Class-I and Class-II ATV and OHM use; Include winter ATV use - Winter ATV use to share corridor with snowmobile use		Adventure Trail West (ATV – class 1 only/OHM) Grouse Road; forest trails (ATV class 1, OHM); Nemadji H Trail
	E – F	Nemadji H Trail to Matthew Lourey Trail (shelter on Potlatch Road)	2.9	Add winter Class-I and Class-II ATV use (currently open to ATVs and OHMs)	Potlatch Forest Road; Trail shelter (south end)	Nemadji H Trail
Figure 3.3	F – G	Matthew Lourey Trail (shelter on Potlatch Road) to Keen Creek crossing	10.8	Add Class-I and Class-II ATV and OHM use; Non-winter use will be routed to 0.5 miles on Potlatch Forest Road and 0.36 mile on Park Forest Road; Winter ATV use to share corridor with snowmobile use	Trail shelters (Potlatch Road, Kingsdale Trail)	Park Forest Road; Northern Pine GIA Snowmobile Trail; Kingsdale GIA Snowmobile Trail; Keene Creek (twice)
Figure 3.4	G – H	Keen Creek crossing to County Road 141	6.0	Add winter Class-I and Class-II ATV use (currently open to ATVs and OHMs)	Township Road Segment	County Hwy 32; Ox Creek (new bridge needed); County Road 141/Northern Pine Riders Snowmobile Trail
Figure 3.5	H – I	County Road 141 to Graces Lake (parking lot)	5.7	Add Class-I and Class-II ATV and OHM use; Include winter ATV use	Trail shelter; parking lot (Graces Lake)	County Road 141; County Hwy 25/McDermott Creek; County Hwy 25/ Lower Tamarack River; County Road 173
	I – J	Graces Lake (parking lot) to County Road 173 (parking lot)	4.7	Add Class-I and Class-II winter ATV use (currently open to ATVs and OHMs)	Parking lots (Graces Lake and at Co Rd 173)	Tamarack Forest Road; County Road 173

(At this time, there are no proposed changes south of endpoint 'J'.)

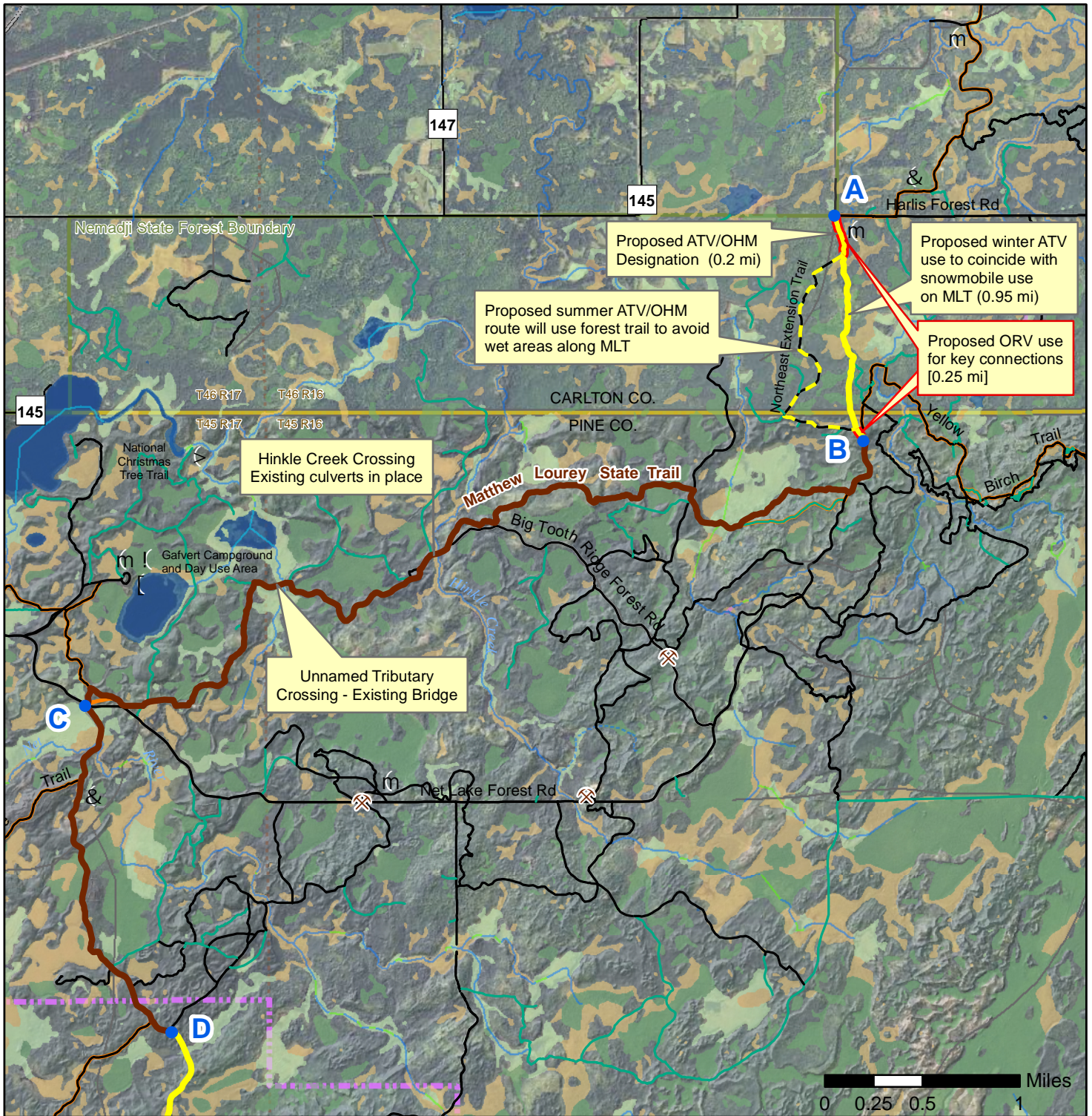
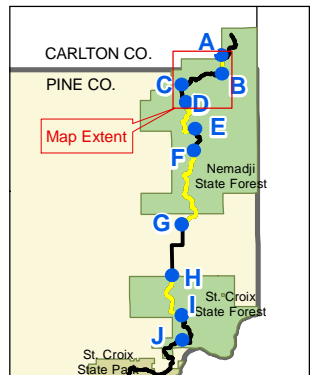


Figure 3.1: Matthew Lourey State Trail - Segment Points A - D; Nemadji State Forest

Legend		Forest Road and Trail Designation	National Wetlands Inventory
	Proposed for Adding ATV/OHM Use		Motor Vehicles Allowed
	Non-Motorized/Snowmobile		Non-Motorized
	Non-Motorized/Snowmobile/ATV/OHM		Access Route
	Proposed ORV Use		Minnesota Snowmobile Trails
	Segment End Point		Klondike Trail Grouse Mgmt Unit
	Parking		DNR Gravel Pits
	Campground		State Forest Boundary
	Picnic Area		Aquatic Bed
	Shelter		Emergent Vegetation
	Boat Ramp		Forested
			Scrub-Scrub Forest
			Unconsolidated Bottom



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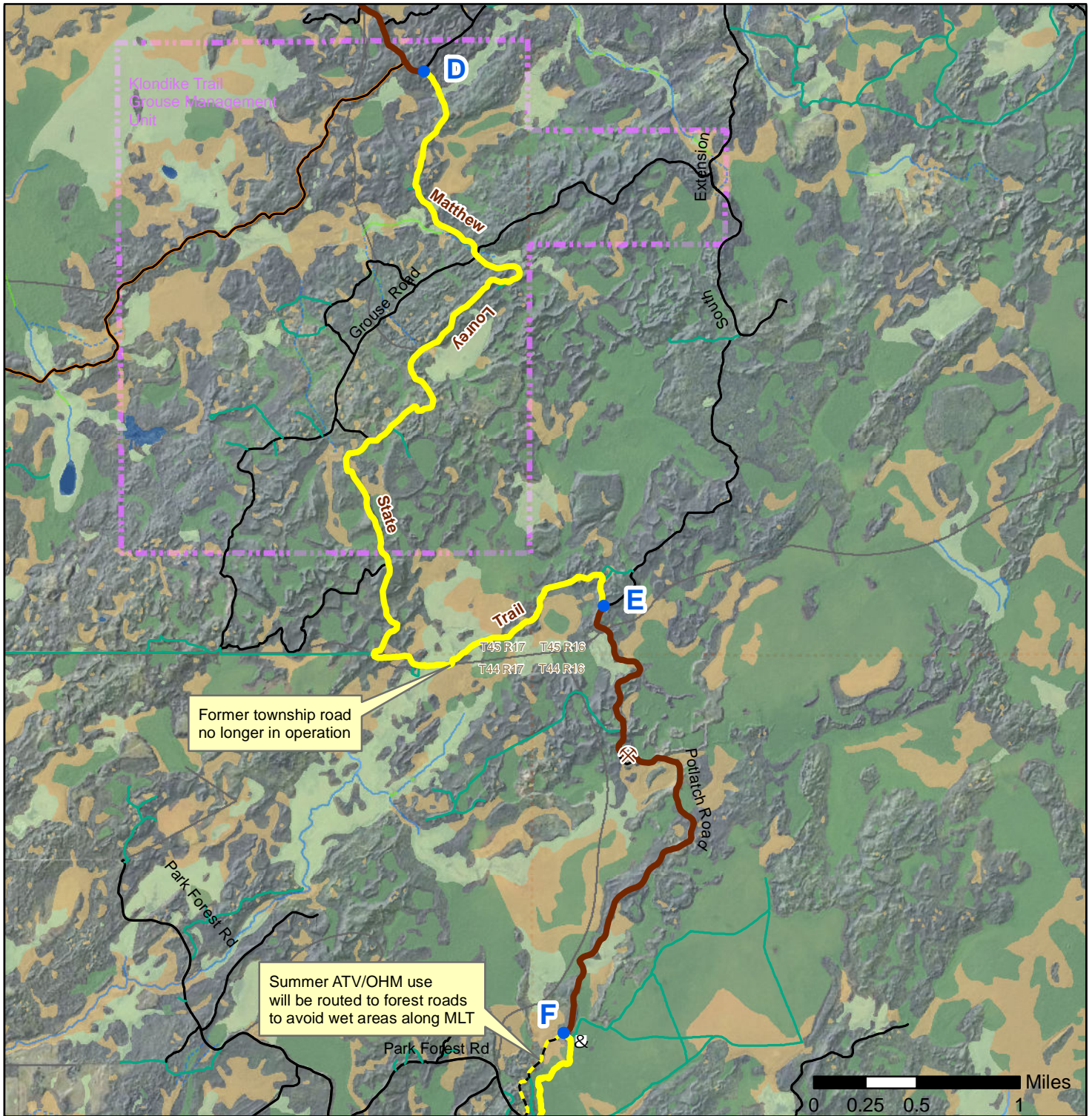
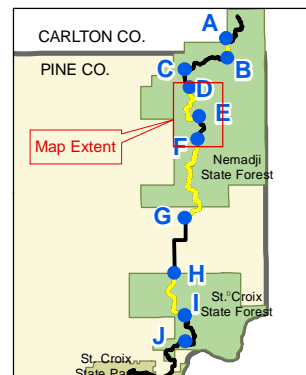
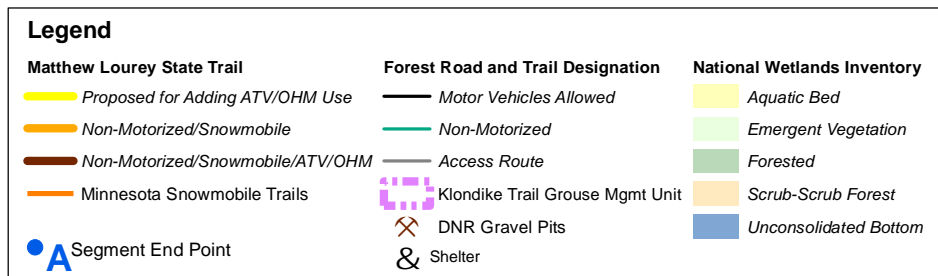


Figure 3.2: Matthew Lourey State Trail - Segment Points D - F; Nemadji State Forest



MN DNR PAT 1/10/12
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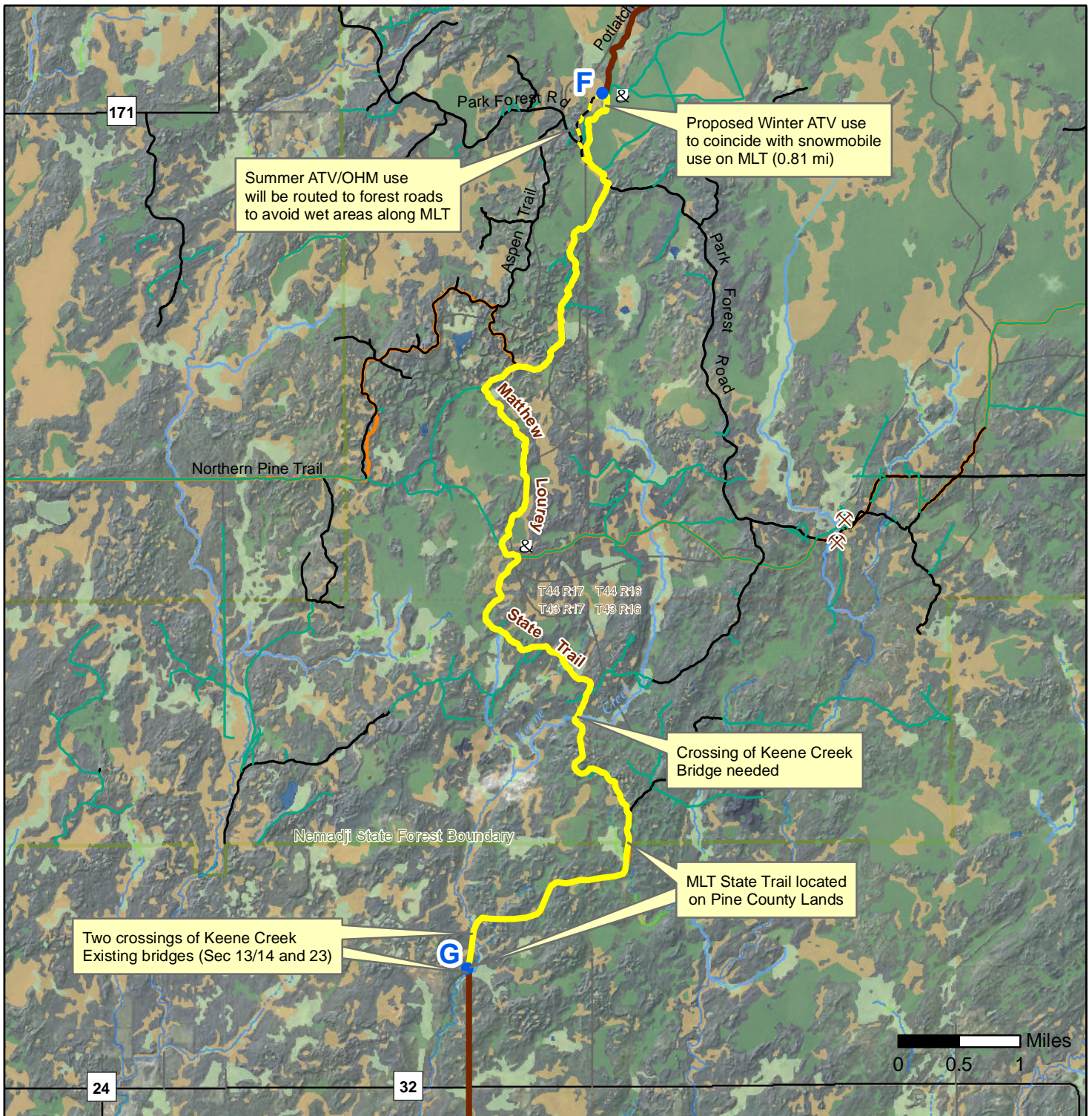
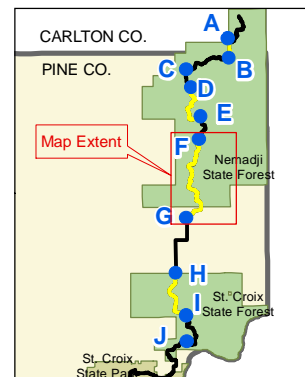
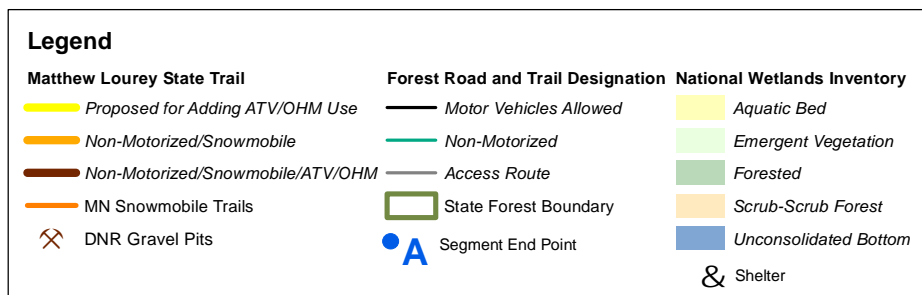


Figure 3.3: Matthew Lourey State Trail - Segment Points F - G; Nemadji State Forest



MN DNR PAT 1/10/12
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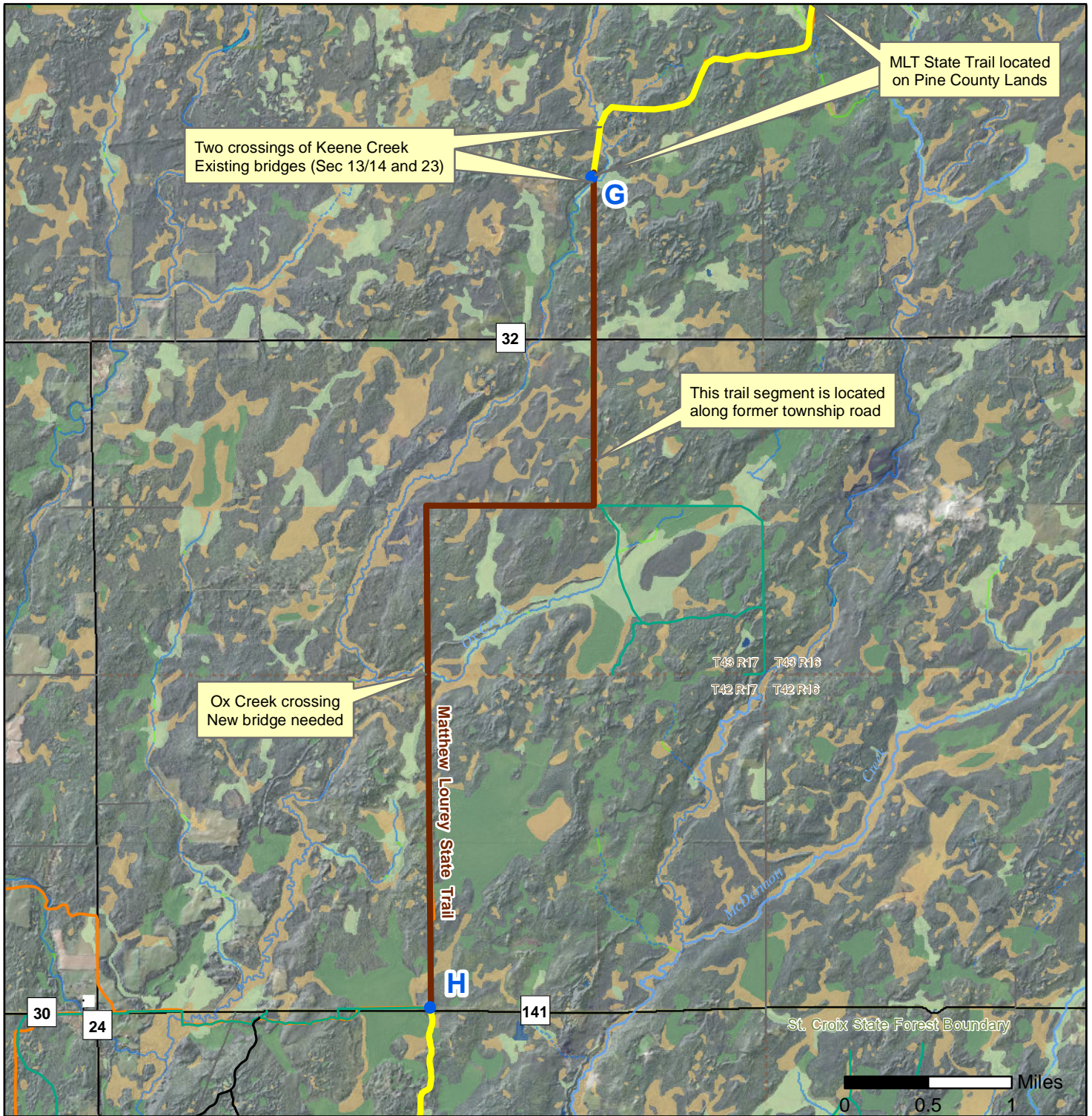
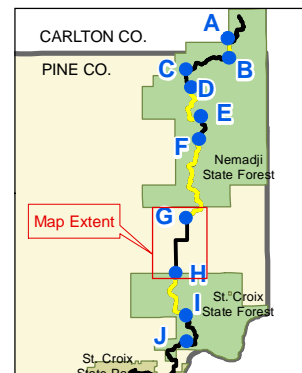


Figure 3.4: Matthew Lourey State Trail - Segment Points G - H; County Land

Legend		
Matthew Lourey State Trail	Forest Road and Trail Designation	National Wetlands Inventory
Proposed for Adding ATV/OHM Use	Motor Vehicles Allowed	Aquatic Bed
Non-Motorized/Snowmobile	Non-Motorized	Emergent Vegetation
Non-Motorized/Snowmobile/ATV/OHM	Access Route	Forested
State Forest Boundary	Segment End Point	Scrub-Scrub Forest
	Forestry Office	Unconsolidated Bottom



MN DNR PAT 1/10/12
MLTAmend_NemG_H.mxd

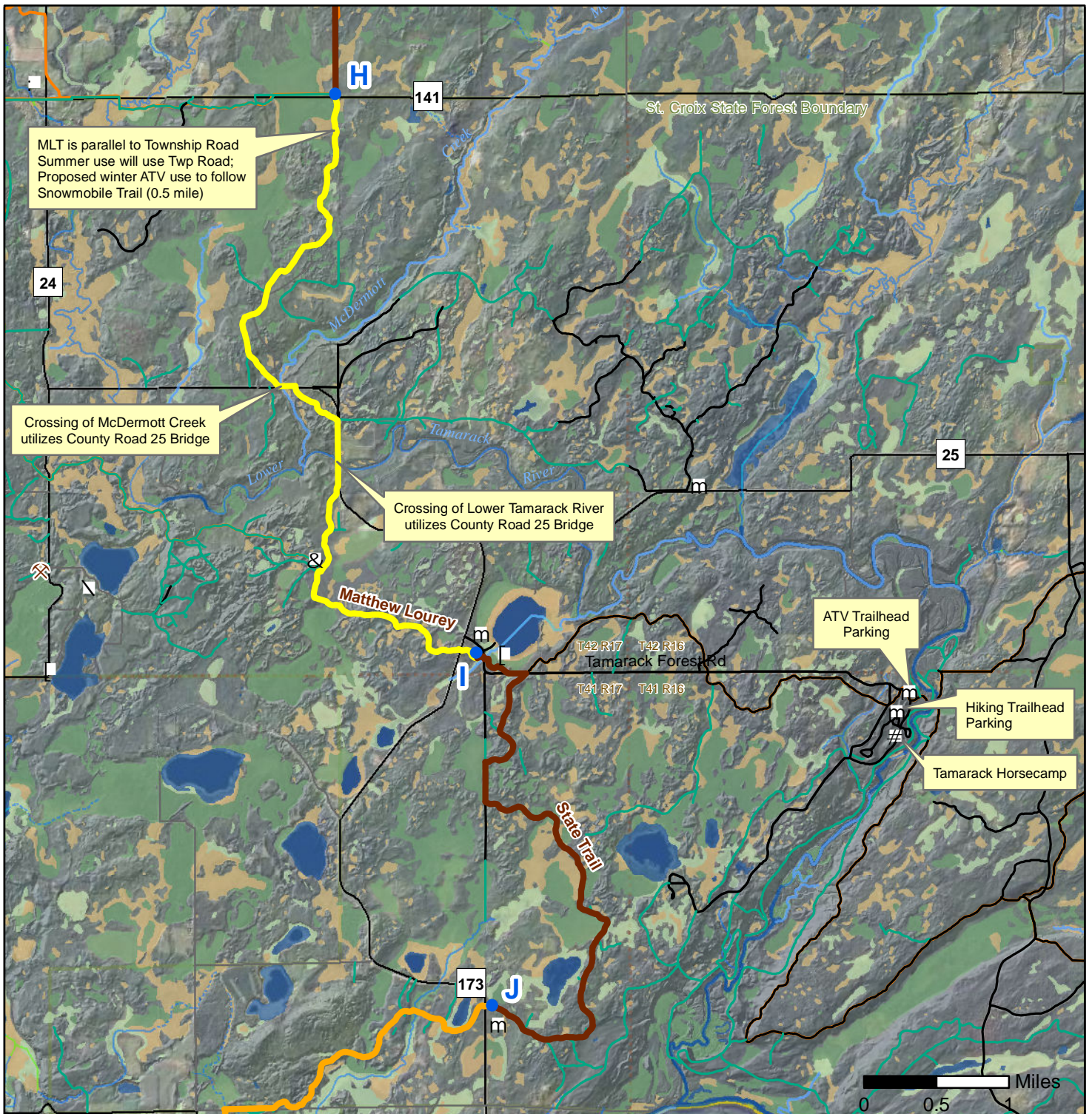
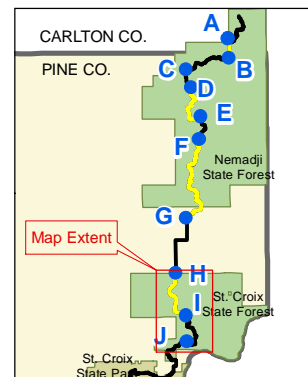


Figure 3.5: Matthew Lourey State Trail - Segment Points H - J; St. Croix State Forest

Matthew Lourey State Trail		Forest Road and Trail Designation		National Wetlands Inventory	
	Proposed for Adding ATV/OHM Use		Motor Vehicles Allowed		Aquatic Bed
	Non-Motorized/Snowmobile		Non-Motorized		Emergent Vegetation
	Non-Motorized/Snowmobile/ATV/OHM		Access Route		Forested
	State Forest Boundary		Parking		Scrub-Scrub Forest
	DNR Gravel Pits		Forestry Office		Unconsolidated Bottom
	Segment End Point		Shelter		Boat Ramp
					Carry-In Access
					Horsecamp



MN DNR PAT 1/10/12
MLTAmend_SegH_J.mxd

Trail Management

Existing Trail Conditions

The present trail occupies an existing corridor, which has a clearance zone that averages 20-feet wide and ranges from about 18-feet to 26-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. Clearing height (e.g., sub-canopy clearing) is typically 10-12 feet above average snow depth. Current condition of the treadway along segments proposed for new motorized use designation varies as a function of site-specific factors and historic vehicle use patterns. All four segments proposed for new uses have had some motor vehicle use for recreational (ATV, OHM), silvicultural and trail maintenance purposes (ATVs, 4x4 trucks, hauling trucks), which influences treadway conditions.

Grades along the corridor are gently sloping, with some ranging up to 10 percent, while the trail base is generally an obstacle-free natural surface that typically maintains grass-type vegetation over the non-winter months. Water crossings along the trail alignment generally use existing culverts or bridges. One of the Keene Creek crossings is an at-grade ford, where a new bridge will be constructed. A new bridge or culvert is also proposed at Ox Creek, where the trail uses an existing road that currently does not have a suitable crossing structure.

The Nemadji and St. Croix state forests are both classified as “limited” in regards to OHV use, meaning all trails are closed to motor vehicles unless posted open for such use. In addition, forest roads are open to motor vehicle use unless posted closed.

Currently, state forest unit trails and roads allow for ATV/OHM use year round, except for when it is groomed for snowmobiles. For example, if the trail corridor is without snow (or a groomed treadway), ATVs and OHMs are still permitted to use the trail or road. This amendment proposed to allow shared ATV and snowmobile use along the trail when it is groomed.

Trail segments located between those included in the proposed changes are currently open to ATV and OHM use. No changes in use are proposed for these segments, however, a change in ATV seasonal use is proposed to provide a continuous winter ATV route, including during groomed conditions.

Once the proposed changes are implemented, the Matthew Lourey State Trail will provide approximately 47 miles of continuous ATV and OHM use and will also provide connections to over 245 miles of existing ATV and OHM trails in the area.

Nemadji State Forest and **St. Croix State Forest** are both classified as “*limited*” in regards to OHV use.

State Forest Motor Vehicle Classification

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.

Trail Improvement and Rehabilitation

Portions of the existing trail can sustain motorized use with little construction, while other parts will need modification to sustain new or additional motorized use.

Most of the existing trail alignment is currently capable of sustaining motorized use. Approximately 76% of the proposed segments, or about 17 miles, is considered capable of sustaining future motorized use with little or no remedial action.

Portions of trail needing modifications or improvements to sustain motorized use may exhibit ruts or soft, wet treadway. Limited construction will be necessary to improve treadway conditions. When necessary, these modifications will be limited to the existing footprint, averaging about 20-feet wide throughout the corridor. Approximately 24% of the proposed segments, or about 6 miles, is estimated to require construction to be able to sustain additional or future recreational motorized use.

Improvement and rehabilitation activities will be consistent with recommended design and best management practices (BMPs) detailed in DNR's *Trail Planning, Design, and Development Guidelines* (DNR Trails & Waterways, 2007).

Trail Operations and Maintenance

Seasonal or temporary road and trail closures may be imposed at any time due to treadway repairs, wet soil conditions, logging operations, or other natural resource protection or public safety concerns. Seasonal closures most often occur during spring thaw or following heavy summer rainfall events. All segments are proposed to be open to both Class I and Class II ATVs and OHMs.

Trail users may only operate their vehicles on forest roads, state trails and DNR-administered unit trails designated for OHV use, or on permitted Grant-in-Aid (GIA) trails. Travel on trails not specifically signed for ATV/OHM use is prohibited. ATVs and highway licensed vehicles (HLVs) are afforded an exception to this prohibition for certain big-game hunting- and trapping-related activities in accordance with Minnesota Statutes Section 84.926.

State Trails are subject to ongoing trail condition monitoring and maintenance which includes physical inspections and determinations of any specific maintenance needs or conditions-related closures. DNR staff will conduct inspections three times per year or more, as conditions warrant. Volunteer Trail Ambassadors, organized by trail user clubs, will assist the DNR in monitoring trail use and conditions, including invasive species.

Sustainability is being able to retain the desired functional shape of the treadway over time.

Characteristics of Sustainable Natural Surface Treads

- **Stable, compacted tread material.** *Tread material should exhibit moderate to high stability in both wet and dry conditions.*
- **Limited displacement.** *Tread material, tread shape, usage restrictions and/or maintenance minimizes and/or accommodates displacement.*
- **Tread drainage with limited erosion.** *Tread shape and location frequently drain surface and subsurface water to the side or somewhere lower than the tread itself.*
- **Narrow tread.** *To concentrate compaction and reduce impacts, the tread and bare soil width are as narrow as feasible.*
- **Minimal hydrologic impact.** *Tread shape, location, and drainage minimize changes in local hydrology.*
- **Trail maintenance and management.** *Concentrate on proactive, frequent, small actions.*

Source: "Trail Planning, Design and Development Guidelines." State of MN, DNR Trails & Waterways, 2007.

Volunteer Trail Ambassador Program

The Minnesota DNR Division of Enforcement administers the Minnesota Off-Highway Vehicle Safety and Conservation Law (Minnesota Statutes Chapter 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 Division of Enforcement, Safety/Education section with funding provided by the state legislature.







Trail Ambassadors are specially trained volunteers, who must also be an active Certified MN 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 and Education

Trail users must have good, accurate 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 route. This type of information should be displayed on information boards at parking areas, shelter locations, and at trail junctions. It should 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.





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 Signs

-  All-Terrain Vehicle (Class I & II allowed)
-  Off-Highway Motorcycle
-  Off-Road Vehicle
-  Hiking
-  Horseback Riding
-  Snowmobiling




Nearby Services

-  Food
-  Gas
-  Lodging
-  Restroom

Duquette: 

Duxbury: 

Nickerson: 

Danbury, WI: 

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.

Enforcement

Enforcement activities are a vital aspect of maintaining a safe and secure trail environment. User conflicts, 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.

Trail Management Recommendations

Trail Improvement and Rehabilitation

Recommendation: *Construction practices, operations and maintenance of the Matthew Lourey State Trail will be consistent with recommended design, guidelines and best management practices detailed in the "Trail Planning, Design, and Development Guidelines" manual (MN DNR, 2007).*

Recommendation: *Provide support amenities including designated parking, water, toilets, and shelter/rest areas along the trail.*

Trail Operations and Maintenance

Recommendation: *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.*

- The Matthew Lourey State Trail is part of an interconnected trail system. Not all uses are allowed on all segments of the trail system. For example, many GIA Snowmobile trails intersect with the Matthew Lourey Trail. ATVs and OHMs are not allowed on most of these GIA Snowmobile trails. Trail users need clear and accurate signage to understand where and when they are allowed.

Recommendation: *Seasonal and temporary trail closures will be imposed due to wet trail conditions, active logging or resource operations, wildfire dangers, or maintenance and repair activities. Periods of heavy precipitation and the spring thaw could result in trail closures.*

Recommendation: *Consider additional policies for when the trail should be closed to winter ATV use for safety of trail users and to protect the integrity of the treadway.*

- Temporary closures will be posted on the DNR webpage for snowmobile and ATV trail conditions at least weekly, or more frequently, as necessary.

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

- The northern trail system in the Nemadji State Forest has implemented this strategy for enhanced user safety and orientation.

Recommendation: Additional gates or barriers will be installed as necessary to manage multiple recreational uses along the Matthew Lourey Trail.

- For example, additional gates or barriers are recommended at intersections with GIA Snowmobile trails that do not allow other types of uses during certain times of the year.

Recommendation: Utilize Volunteer Trail Ambassadors, organized by trail user organizations and overseen by the DNR division of Enforcement, to assist in monitoring trail use and conditions.



Information and Education

Recommendation: Community services information, trail orientation, trail rules and trail courtesy information should be developed and installed on kiosks at the same time the trail changes are implemented.

Recommendation: Interpret the natural and cultural features along the trail. Interpretive signs and information will be developed in consultation with other DNR Divisions and programs pertaining to the features being interpreted.



Enforcement

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

Recommendation: Develop on-site information that targets important trail courtesies (etiquette) and rules necessary for a safe and enjoyable experience, specific to uses of a particular segment and problems and conflicts occurring there.

Recommendation: Continue to coordinate with local law enforcement, local first responder and/or emergency medical services personnel to insure public safety.

Recommendation: Increase visibility of DNR staff, and utilize Volunteer Trail Ambassadors, during peak use times for public information and enforcement effect.

Maintenance Recommendations

Recommendation: Additional maintenance funds will be required to maintain the trail for the proposed additional motorized uses. Additional funding should be from ATV and OHM sources.

Natural Resources

The original master plan was completed in 1982, which provided a thorough review of the natural resources located in the trail area. The following information provides project related information or updates to resources based on more current data or recent surveys of the area.

Geology and Soils

The Matthew Lourey State Trail is located within the Mille Lacs Uplands Subsection. The dominant landforms in this eco-region include gently rolling till plains and drumlin fields. The depressions between drumlin ridges contain peatlands with shallow organic material.

According to the Mille Lacs Uplands Subsection description, at the eastern end of the subsection, the end moraines and ground moraines have loamy soils. Typically, there is dense glacial till underlying most soils in this subsection. This dense till impedes water movement throughout the soil profile. The soils are described as acid, stony, reddish sandy loams, and loamy soils.

The topography of the Nemadji State Forest varies from gently rolling upland with large swamp areas in the south to steep stream valleys and elongated swamps protruding into the forest in the northeast. The soils vary from sand to sandy loam to red clay and organic peat. Clay soils in the northern part of the forest (lacustrine deposits of Glacial Lake Duluth) are highly susceptible to erosion and soil slumping. These soils are generally unsuited to (any type of) vehicular travel along un-surfaced routes.

Water Resources

A new bridge is proposed over Keene Creek (Section 36, T44N, R17W) to replace an existing hardened low-water crossing. The bridge will be designed to avoid / minimize potential impacts, especially from sedimentation. The project will comply with all DNR Protected Waters Permit requirements.

New culverts are needed in multiple locations, and several culverts need replacement to protect the beds and banks of small drainage ways from trail traffic. These drainage ways carry water during seasonal runoff periods and following major precipitation events. All culverts will be sized and installed according to established water quality best management practices (BMPs).

Fisheries

The Nemadji Upper segment is within one mile of two trout streams designated under *Minnesota Rules*, part 6264.0050 subpart 4; they are an unnamed tributary of the Net River and the Little Net River. Within the Little Net River watershed, the segment crosses an intermittent stream, which is referred to as a protected tributary. The General Construction Stormwater Permit, as administered by the MPCA, regards trout streams as special waters and specifies that additional BMPs be implemented when the discharge point from a construction area occurs within one mile of a designated trout stream. Although the Nemadji Upper segment traverses the watersheds in proximity of these streams, no construction work or repairs are proposed along this segment. No construction will be necessary because wet portions of this segment are avoided during summer ATV/OHM use. Instead an existing forest trail will be used to avoid the wetlands. The winter route will use the Matthew Lourey State Trail alignment used by snowmobiles when the ground is frozen.

The project crosses several small streams and rivers. The contributing watershed contains mixed hardwood-conifer stands upland intermingled with large, peaty wetland complexes. Watercourses crossed by the project include: Keene Creek; Ox Creek; McDermott Creek; and Little Tamarack River. Typically brown-stained and moderately acidic, these are warm-water fisheries containing a variety of

fish species, including game fish and minnows. The Ox Creek crossing, proposed to be improved along a stretch of the Matthew Lourey State Trail that is on Pine County lands (New Dosey Township) is already open to motor vehicles. The proposed structure will require Township approvals prior to construction.

Table 2: Matthew Lourey State Trail Public Water Crossings with Fisheries Information.

Stream	Crossing/ Position	Type of Stream	Principal Fish in Stream	Comments
Keene Creek (T43N, R17W, Sec 1)	New Bridge Needed	Warm water	White sucker, blacknose & pearl dace, creek chub, common shiner, central mudminnow, johnny darter, slimy sculpin, brook stickleback, burbot	May run dry during periods of drought; current crossing is on stream bed.
Keene Creek (T43N, R17W, Sec 13/14 and 23)	Two crossings - Existing bridge at both crossings			
Ox Creek (T43N, R17W, Sec 34, 35)	New Culvert or Bridge Needed	Warm water	Likely similar to Keene Creek	On boundary w/ Sec 35; currently open to ATV/OHM use
McDermott Creek (T42N, R17W, Sec 27, 22)	Existing Bridge (County Rd 25)	Warm water	Similar to Keene Creek, plus northern pike, longnose dace	
Lower Tamarack River (T42N, R17W, Sec 26, 27)	Existing Bridge (County Rd 25)	Warm water	Similar to above; blackside darter, chestnut lamprey, redhorse, hornyhead chub, logperch, northern hogsucker, rock bass, slenderhead darter, smallmouth bass, muskellunge young of year	

Wildlife

Wildlife resources in the project area are typical for those occurring in undeveloped areas of east central Minnesota. Both large and small game and non-game bird and mammal species can occur; examples include: bear; timber wolf; deer; bobcat; beaver; red squirrel; striped skunk; woodland deer mouse; bald eagle; ruffed grouse; red-shouldered hawk; northern goshawk; wild turkey; wood duck; whip-poor-will; red-headed woodpecker; indigo bunting; and American goldfinch. A number of species of amphibians and reptiles occur in these types of habitats, including: Blanding’s turtle; wood turtle; four-toed salamander; blue-spotted salamander; western chorus frog; spring peeper; leopard frog; snapping turtle; painted turtle; redbelly snake; and common garter snake.

The surrounding vegetation would generally provide ample cover and suitable escape habitat for many common wildlife species. Leafy vegetation that is typically present throughout the operating season helps to moderate sound propagation and wildlife disturbances. Given the current habitat conditions adjoining the existing state trail corridor, there are not likely to be any species that will be affected on a population level for this project. Since no new corridors are being developed and similar-to-only-slightly increased levels of use are expected, existing conditions of biodiversity, habitat and forest fragmentation are not expected to change substantially as a result of this project.

Mussel Species

Records for mucket, *Actinonaias ligamentina*, and elktoe mussel, *Alasmidonta marginata*, both of which are state-listed threatened species, have been documented in the Lower Tamarack River. Mussels are particularly vulnerable to deterioration in water quality, especially increased siltation. The proposed St. Croix State Forest segment includes an existing crossing of this river. However, no change is proposed for this trail crossing, so no project-related effects are anticipated.

Reptiles and Amphibians

Blanding's turtles (*Emydoidea blandingii*), a state-listed threatened species, and four-toed salamanders (*Hemidactylium scutatum*), a state-listed species of special concern, have been reported in the vicinity of the existing trail.

Blanding's turtle

Blanding's turtles are present in the project area and are listed as a state threatened species. These turtles average 15-25 centimeters in length and are most easily identified by its domed upper shell and bright yellow chin and throat. Important habitat for the species includes wetland complexes and adjacent sandy upland areas, with calm, shallow waters preferred. The turtles are found on land from March to November, but overland movement peaks in June and July and again in September and October.



Four-toed Salamanders

Records for *Hemidactylium scutatum*, or the Four-toed salamander, are present in the project-vicinity in both the Nemadji and St. Croix State Forests. These animals are listed as a special concern species. They are secretive and can be up to 4 inches long. As the name implies, it has only four toes on both its front and hind feet. Two areas within the Nemadji State Forest and one area in the St. Croix State Forest have been identified as important habitat for this species. The existing Matthew Lourey Trail corridor enters and crosses all three of these habitat zones (in both forests). Measures available to minimize any impacts include, but are not limited to: avoidance of routing trails through northern hardwood forest communities; rerouting trails around northern hardwood forest communities and wetlands that have been identified as significant habitat for this species; avoid routing all trails through wetlands; maintaining the treadway near or slightly-above forest floor elevation; and selecting/implementing trail alignments with the least amount of wetland impact.



Birds

Three state-listed birds of special concern have been documented within the project area. Bald eagles (*Haliaeetus leucocephalus*) have been documented nesting in the area, but there are no known occurrences of the nests within ¼-mile of the existing trail. Although there are no known nests near the trail, both bald eagles and red-shouldered hawks (*Buteo lineatus*) have the potential to nest near the trail and could be affected if increased vehicle traffic causes disturbances or abandonment during the nesting season. The Louisiana waterthrush (*Sieurus motacilla*) has been documented in the vicinity of the trail. This species depends on mature riparian forests adjacent to streams. The trail corridor occurs in large blocks of mature forest of the types used by Goshawks and Red-shouldered hawks to maintain nesting territories. Because the project involves minimal clearing of mature trees, little direct effect is

anticipated. Any project related disturbance resulting from noise or human intrusion is considered negligible.

Vegetation

Several members of the plant genus *Botrychium*, that includes moonworts and grapeferns, are listed as endangered, threatened or special concern, species in Minnesota. These plants typically are found in small numbers, and records indicate that some of these plants occur in the project vicinity. The short reroute section will be surveyed to ensure that this construction will not harm members of this plant genus. It is possible that existing specimens of *Botrychiums* along the proposed routes could be adversely affected if non-native invasive plant species become established along the trail. Although their life histories are not well understood, typically grapeferns and moonworts are thought to be sensitive to competition with other plant species. Because OHVs are a potential transport vector for non-native invasive plant species, it is possible that individual plant viability may be reduced. DNR will monitor the trail corridor for non-native invasive plant species and implement control strategies as appropriate.

Species of Greatest Conservation Need (SGCN)

SGCN are identified by consideration of several criteria: 1) their populations are identified as being rare, declining, or vulnerable in Minnesota; 2) the species depend on rare, declining, or vulnerable habitats; 3) the species are subject to other specific threats, or exhibit certain characteristics that make them vulnerable; or 4) the species have Minnesota populations that are stable, but are declining in a substantial part of their range outside of Minnesota. Species in Greatest Conservation Need (SGCN) in the vicinity of the project were assessed using *Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife* (DNR, 2006).

The Mille Lacs Uplands Subsection includes 128 known or predicted SGCN species. Of these species, 57 are federal or state endangered, threatened or of special concern. The extensive forest lands, riparian forests and open waters of this subsection support bald eagles, common terns, sandhill cranes, ospreys, wood turtles, trumpeter swans, yellow rails, and sharp-tailed sparrows. Sand terraces and rock outcrops along the St. Croix River provide habitat for bullsnakes. This subsection is a major migratory corridor for waterbirds and one of the most important subsections for forest-dwelling salamanders, such as the four-toed and spotted salamanders, which use fishless, seasonal wetlands as breeding habitat. Important areas for SGCN include the Nemadji, St. Croix, and Chengwatana State Forests as well as St. Croix State Park.

Key habitats, considered important to conserving SGCN species populations, are defined for the Mille Lacs Uplands Subsection. Several key habitats are located near the project area: 1) Upland deciduous mixed hardwood-pine forest; 2) Upland coniferous red-white pine forest; 3) Lowland coniferous forest; and 4) Stream habitats. Priority actions are focused on conserving these key habitats. The proposed trail improvements near the key habitats would not encroach into adjacent vegetated areas.

Invasive Plant 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 this happening, the trail would be monitored for invasive species during the first year after construction and periodically thereafter by DNR staff as well as by Volunteer Trail Ambassadors.

Operational Order #113 describes the DNR policies for invasive species management and control. The Operational Order contains procedures specific to trail management necessary for reducing the spread

of invasive species. The policy was established to prevent or limit the introduction, establishment and spread of invasive species and to implement site-level weed management.

Prevention strategies include the following:

- Identify and map invasive plants on the trail and adjacent lands;
- Minimize vegetation and soil disturbance during trail construction and maintenance;
- 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 project corridor, but specific sites and species are not inventoried. Design and construction activities will provide opportunities to identify and inventory infested areas and improved treadway surfaces will improve access for DNR staff to treat these areas. 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.

Natural Resource Recommendations

Vegetation

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

Recommendation: 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 natural species abundance and biodiversity for enhanced user experience.

Water Resources

Recommendation: 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 followed.

Recommendation: Avoid impacting wetlands. However, if impacts are unavoidable, a wetland mitigation plan will be prepared to address and identify impacted wetlands.

Recommendation: 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.

Fisheries

Recommendation: *Minimize trail operation and maintenance impacts to 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.*

Recommendation: *Bridges should span the river bankfull dimensions and should not have structures in the water channel that would catch debris and require frequent maintenance.*

Wildlife

Recommendation: *Provide interpretation, educational information and demonstration areas for habitat management/landscaping and special wildlife features. Develop and provide check lists or other guides for plants and animals to engage trail users with wildlife resources.*

Recommendation: *Maintain regular consultation with DNR Resource Managers, Natural Heritage Program and Research staff for current information on occurrences of sensitive or rare species or natural communities in the corridor. Many occurrences change through time, remain unknown or undocumented.*

Public Review Process

DNR Parks and Trails staff met with representatives of various trail user stakeholders prior to drafting the amendment to seek input and feedback on the proposed project. Three separate meetings were held in October – December, 2011, with small sub-groups of representatives from motorized and non-motorized trail interests, which provided insights and valuable comments, suggestions and observations about the proposed changes.

ATV and OHM groups were very supportive and eager for this amendment to be implemented. ATV and OHM groups suggested expanding the trail ambassador program to include winter season assistance. Snowmobile group representatives expressed some support and some opposition, being generally supportive of the summer use changes, but opposed to the proposed winter ATV use. Non-motorized trail interests expressed general support and had similar questions and concerns as the other groups. Concerns or questions from all groups were raised regarding the need for additional and improved trail signage, adequate access to amenities and facilities from the trail, safety on the trail, and enforcement.

Snowmobile user representatives primary concern is unauthorized trail use of GIA snowmobile trails and trespassing on private property, especially off of connecting GIA trails, which would likely jeopardize GIA snowmobile contracts for their existing trails connecting to the Matthew Lourey State Trail. Additional questions were raised regarding funding for grooming and maintenance needs to accommodate the new uses. A suggestion for additional gates at certain trail intersections was also requested.

Implementing a temperature gauge for closing the trail to winter ATV use was suggested, citing rules being used in Wisconsin for their winter ATV trails. DNR already has the means to close trails due to trail conditions, safety concerns or weather conditions, as necessary. Trail closures are reported and posted on the DNR website and signs are posted at trailheads and intersections, as appropriate.

The information gathered through these meetings has been incorporated into the amendment in various ways, and is primarily reflected through the recommendations in the trail management section.

Additional comments collected during EAW public review process were also considered during the development of this amendment. These comments were passed on to the Parks and Trails Division for consideration since they did not pertain to the environmental issues under review. These comments addressed whether the commenter was generally in support of, or opposed to, the proposed changes to the Matthew Lourey State Trail.

The draft master plan amendment was available for public review from February 27 to March 30, 2012. Documents were available on the DNR website, along with hard copies available at DNR offices in Sandstone, Moose Lake and St. Paul. An open house meeting was held in Rutledge, Minnesota, on March 8, 2012 and was attended by approximately 15 people.

A total of 31 written and verbal (one via phone) comments were received during the public review period. All comments were reviewed and carefully considered. Most of the comments were generally supportive of the proposed project and confirm or agree with the recommendations, while some comments expressed concerns or general opposition. A majority of the comments and concerns echoed those received during the stakeholder meetings and are largely addressed through the set of recommendations included in the amendment. A specific request regarding the addition of ORV use to a short segment of the Matthew Lourey State Trail was received from multiple comment letters. This specific request has been incorporated into the amendment. A summary of comments received from the public review period is provided in Appendix B.

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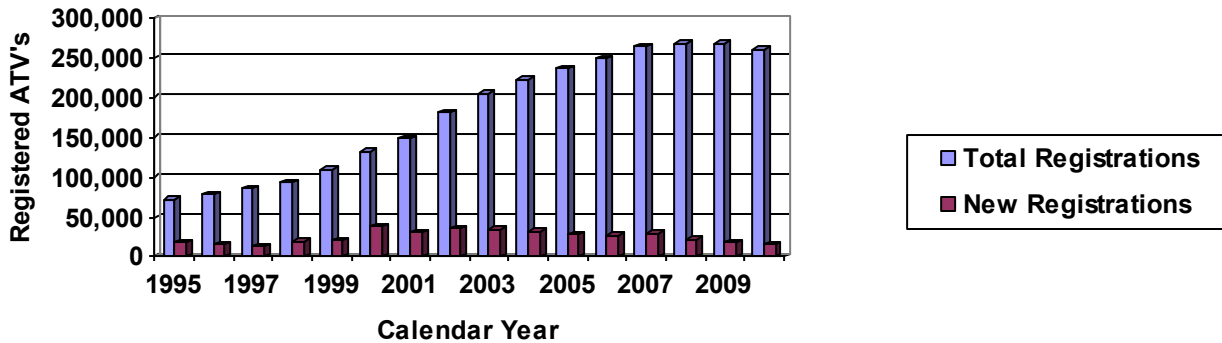
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Appendix A

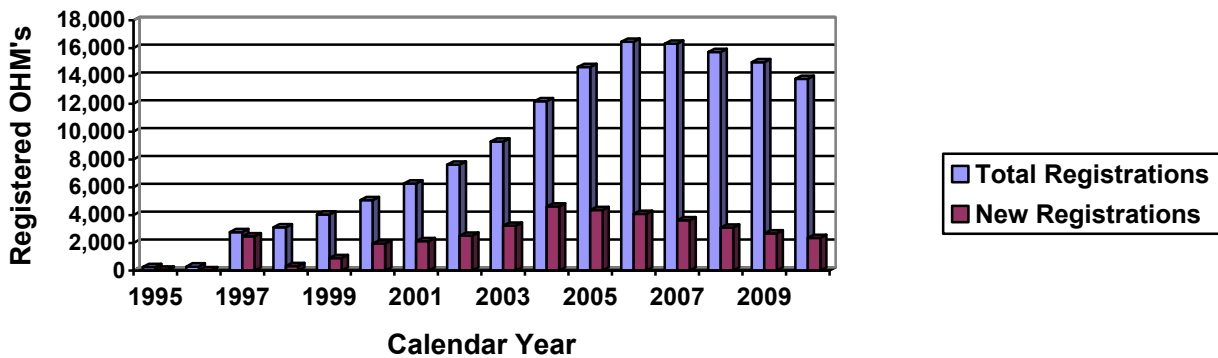
Minnesota DNR registration figures from 1995 to 2010 for All-Terrain Vehicles (ATV), Off-Highway Motorcycles (OHM), Off-Road Vehicles (ORV), and Snowmobiles. (MN DNR, Parks and Trails. 2011. Unpublished data. Bureau of Info., Educ.& Licensing, St. Paul, MN 55155.)

All-Terrain Vehicle Registrations, 1995-2010*

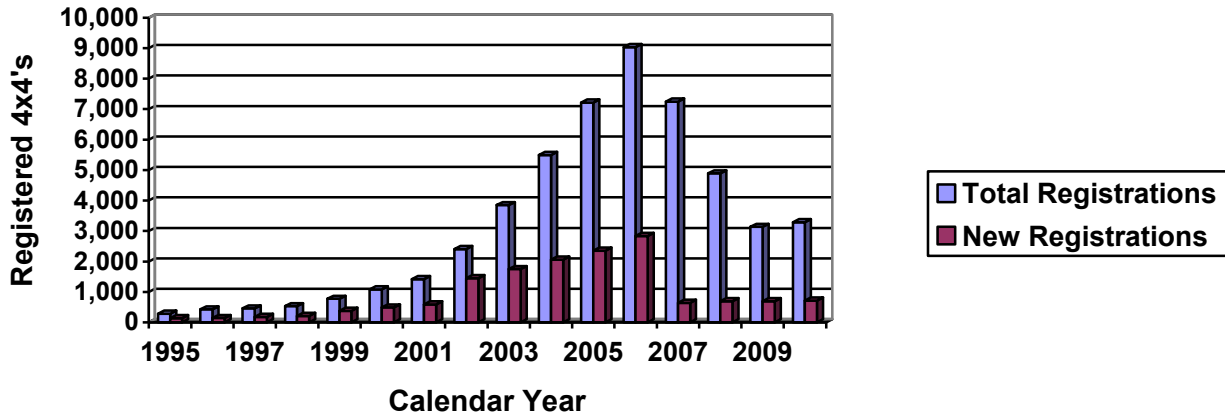


*Total does not include ATV's registered for solely agricultural or private land use.

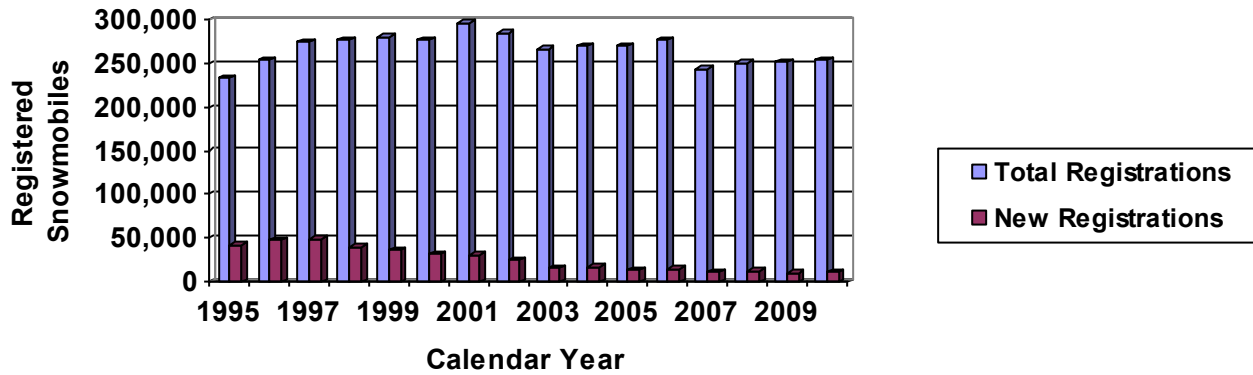
Off-Highway Motorcycle Registrations, 1995-2010



Off-Road Vehicle (4x4) Registrations: 1995-2010



Snowmobile Registrations, 1995-2010



Appendix B

Summary of Public Comments

The Matthew Lourey State Trail Draft Master Plan Amendment was available for public review from February 27 to March 30, 2012. Documents were available on the DNR website, along with hard copies available at DNR offices in Sandstone, Moose Lake and St. Paul. A total of 31 written and verbal comments were received during the public review period. The comments summarized here are representative of all the comments received, but the summary does not include all of the comments submitted.

General Support

Many of the comments received expressed general support for the proposed amendment. Additional comments included statements regarding the enjoyment of riding trails [ATV, OHM] in state forests and riding with friends and family; enjoy riding ATVs year round and will appreciate the opportunity to winter ride in Minnesota; will enjoy the connections to other ATV/OHM trails within the state forests and to Wisconsin trails; and additional trail users may help support small, local businesses in the area. Supportive comments also mentioned that the trails in state forests are great ways to enjoy the outdoors, nature; opening portions of the Matthew Lourey Trail for ATV/OHM use will be safer for trail users and will reduce amount of recreation traffic on forest roads.

Concerns/Opposition/GIA Route Proposal

The most recurring concern is the potential for trespass and unauthorized trail use by ATVs, particularly unauthorized use of GIA snowmobile trails, both winter and summer seasons, which could jeopardize GIA snowmobile contracts with private landowners in the area. This concern is often paired with comments regarding the lack of enforcement capacity or presence. Other concerns include the general opposition to motorized recreation; general opposition to winter ATV use on the groomed snowmobile trail; safety concerns regarding sharing the trail with multiple motorized uses; the need for increased fines for ATV/OHM-related violations; and the lack of campground facilities accessible off of the motorized trails, particularly in the St. Croix State Forest.

One of the comments also included a proposed change to a connecting GIA snowmobile trail to prevent potential trespass issues off of the Matthew Lourey State Trail and onto private property that would result in the loss of a GIA contract. This proposal is not directly on the Matthew Lourey State Trail, so no change due to this request is reflected in the amendment. DNR staff will work with the landowner and trail association to address their concerns and accommodate this request as feasible.

Request for ORV use

Multiple requests (form-letter format) were submitted to allow ORV use on short segments of the Matthew Lourey State Trail where it would provide a key connection to other ORV trails or routes within the Nemadji State Forest. This request was included with additional proposals regarding the "State Forest Trail and Management Revisions Project", a separate process currently being conducted for four state forests, including the Nemadji and St. Croix. In response to this request, additional language to the amendment has been included to address ORV use along the Matthew Lourey State Trail where it may provide a short, key connection to other ORV trails or routes that would be reviewed and approved through a separate DNR process or program.