July 2013 version

Environmental Assessment Worksheet

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's (EQB) EAW Process webpage. (EQB, 2020). The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project Title:

Voyageur Country ATV System

2. Proposer:

Contact Person: Bruce Beste,
Voyageur Country ATV Club
Title: Board Member
Address: PO Box 414
City, State, Zip: Crane Lake, MN 55725
Phone: 218-391-5108
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3. RGU:

Contact Person: Cynthia Novak-Krebs
Title: EAW Project Manager, Minnesota DNR
Address: 500 Lafayette Road
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4. Reason for EAW Preparation:

Required	Discretionary
EIS Scoping	Citizen petition
☒ Mandatory EAW	RGU discretion
	Proposer initiated

If EAW is mandatory, give EQB rule category subpart number(s) and name(s):
Recreational Trails, Minnesota Rules part 4410.4300, Subp. 37

5. Project Location:

County: St. Louis
City/Township: Cities of Cook and Orr, Townships of Beatty, Camp 5, Crane Lake, Field, Kabetogama, Leiding, Owens, and Portage and the unorganized territories of Gheen, Northwest Saint Louis and Lake Vermilion.

PLS Location (¼, ¼, Section, Township, Range): Attached, Table 5.1

Watershed (81 major watershed scale): Major Watersheds: Vermilion River (#73), Rainy River – Rainy Lake (#74), Little Fork River (#76)
GPS Coordinates: Northern most terminus: 48.414393, -93.048981, Southern most terminus: 47.846400, -92.681086
Tax Parcel Number(s): Multiple parcels within the project area. – Attached Table 5.2

At a minimum, attach each of the following to the EAW:

- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.

Figures and Attachments

- Figure 1: Project Overview Map
- Figures 2-1 thru 2-6: Project Area Map
- Figure 2-4 Inset: Project Area Map Winchester Lake
- Figure 2-6 Inset: Fire Tower
- Figures 3-1 thru 3-6: USGS 100k Topographic Map
- Figures 4-1 thru 4-6: Hydrology Map
- Figures 5-1 thru 5-45: Soils Map (SSURGO)
- Figures 6-1 thru 6-6: Land Cover Map (NLCD, 2016)
- Attachment A: Trail Design Typical Sections
- Attachment B: Soil Characteristics
- Attachment C: Minnesota Department of Natural Resources (DNR) Natural Heritage Information System (NHIS) Correspondence
- Attachment D: State Historic Preservation Office Correspondence

6. Project Description:

a. Provide the brief project summary to be published in the *EQB Monitor*, (approximately 50 words).

The Voyageur Country All-Terrain Vehicle (ATV) Club (the Club) is proposing approximately 386.51 miles of roadway and natural surface trail to be included in the Voyageur Country ATV System (the System) connecting communities in northern St. Louis County. The proposed system would include 383.97 miles of existing trails and 2.54 miles of newly proposed routes.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion, include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

Existing System

The proposed project would build and/or allow segments of the Voyageur Country ATV System for seasonal (spring, summer, fall) motorized ATV use on an estimated 386.51 miles of trails. The existing System connects communities in northern St. Louis County on natural surface trails, shared-use natural surface or gravel roads as well as some paved roads. The System (shown on Figure 1) connects the communities of Kabetogama on the north, Crane Lake on the east, Orr on the west, and Cook on the south with points in between.

Construction

The Club proposes that improved sections and new construction would take place during the summer dry period (July – September) or during winter outside of snowmobile season, that is to say generally avoiding January and February for those sections proposed to be co-located on snowmobile trails. Physical improvements to allow sustainable/non-erosive ATV travel could include fill/hardening, culverts, boardwalks, and/or bridges for sustainable trail surface at wetland and water crossings. See route categories below for more detail. The proposer would plan for the wider trail surface and corridor of existing snowmobile trails. Communication with local snowmobile clubs would be conducted to ensure trail design and compatibility with shared uses and accommodation of snowmobile grooming equipment where appropriate. Active construction is expected to take approximately 3-6 months for each segment, over a duration of 1-5 years, depending on complexity. Construction sequence would start with clearing and grubbing (if necessary), followed by installation of stormwater perimeter control, earthwork, structure construction (if needed), and ending with site stabilization.

Based on existing conditions, the routes will require varying amounts of work to prepare connections for inclusion in the System. Existing conditions are divided into four categories. Proposed work and trail design will vary by each of the categories. These categories are described in the following table (6.1). ATV use is incompatible under the existing State Trail master plan for the segment 'Tower to International Falls Trail' where the System shares a corridor with the David Dill/Arrowhead State Trail. However, this State Trail master plan is currently undergoing an update, and is anticipated to determine if this corridor is compatible with ATV use in the System. The use of new trail alignments was minimized, and the proposed routes have been chosen to avoid sensitive features (such as wetlands) to the greatest extent practicable. ATV-only trails will have a 12-14 foot wide drivable top surface within a maximum 26-foot wide cleared corridor for new trail segments.

Table 6.1 Route Categories

Route Category	Type	Landscape Position	Miles
1	Existing route, open to ATV use	On road/trail	301.32
2	Existing route, proposed new ATV use (no improvements needed)	On road/trail	12.82
3	Existing route, proposed new ATV use (improvements needed)	On road/trail	69.83
4	Proposed route, new construction proposed for ATV use	Off road	2.54
		TOTAL	386.51

Route Category 1

This category is currently open to ATV traffic and needs no physical road or surface work. Of the 301.32 miles in this category, 8.71 miles are shared corridors with snowmobile trails and the remaining 292.61 miles are roads. Some of the existing routes are included on current maps of the System. As proposed trails are developed, they would be added to future trail user maps. The EAW figures depict all routes. The only physical work that would be completed is adding signage, where not already in place, identifying the route as part of the System. The review area of this proposal includes the existing roadway/trail, an approximately 26-foot width, which is paved, gravel, native soil roadway or natural surface trail.

Route Category 2

This category includes existing roads and trails *not* currently open for ATV use. Of the 12.82 miles in this category, 0.41 miles are shared corridors with snowmobile trails and the remaining 12.41 miles are other state forest roads, one road that contains a hunter walking trail, and a private timber road (see figures 2.1-2.6). This category of existing route is sustainable for ATV use without physical road or surface work. The route would be included on future maps of the Voyageur Country ATV System. Signage identifying the route as part of the Voyageur Country ATV System will be installed, with approval by appropriate road authority/owner. No other physical work is anticipated, and the review area includes the existing roadway/trail, an approximately 26-foot width of paved, gravel, or native soil roadway, or natural surface trail.

Route Category 3

This category includes existing roads and recreational trails with areas *not* currently open for ATV use. These areas would require physical improvements to allow sustainable/non-erosive ATV travel. Of the 69.83 miles in this category, 45.82 miles are shared corridors with snowmobile trails and the remaining 24.01 miles are other roads or trails. Proposed improvements include fill/hardening, culverts, boardwalks, and/or bridges for sustainable trail surface at wetland and water crossings. Because these are existing routes, clearing of woody vegetation would generally be minor if needed. The routes would be included on future maps of the System if allowed for ATV use. The possible build area where improvements are necessary, is a 26-foot wide corridor. The review area to evaluate environmental effects is 100 feet on either side of a 26-foot wide corridor (for a total width of 226 feet). Although wider than the eventual build area, the purpose of considering a 226-foot wide corridor allows for flexibility in trail alignment, particularly where adjustments might allow avoidance or minimization of wetland impacts, otherwise sensitive surface areas, or alignment adjustments due to topography.

Route Category 4

This category includes areas without an existing road or trail corridor and would require new construction. These proposed routes would construct a 12-14 foot wide drivable top surface with a footprint no wider than 26 feet to accommodate shoulders and clearance on either side of the trail, depending on the specific design requirements. New construction includes clearing of vegetation, fill/hardening sections, boardwalk, culverts and/or bridges for sustainable trail surface. The review area considered in this EAW to evaluate environmental effects is 100 feet on either side of a 26-foot wide corridor, for a maximum review area of 226 feet wide. This would allow for flexibility in trail alignment, particularly where adjustments would avoid or minimize impacts to wetlands or other sensitive resources, or alignment adjustments due to topography. Upon completion, the routes would be included on future user maps of the Voyageur Country ATV System.

Trail design would follow guidelines in the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007) intended to construct and improve sustainable natural surface trails. For all trail improvements, construction would follow standard practices. Prior to ground disturbing activities, the contractor would install downgradient stormwater Best Management Practices (BMPs), and would apply other BMPs throughout construction. Specific BMPs would be selected during final design and incorporated into the Stormwater Pollution Prevention Plan (SWPPP). BMPs would include erosion control blankets on steep slopes, bioroll/filter logs to capture mobilized sediment, and/or rock construction entrances. Construction methods include earth moving with small excavators and/or skid steers. Where fill is needed, the trail would have geogrid placed as a base layer. Where needed based on soil characteristics, the trail would be excavated to 12 inch depth, backfilled with gravel, and covered with geotextile. All fill sections would have 12-18 inches of fill placed above the ground surface. The typical section will have approximately 2% slopes away from the centerline for appropriate drainage (Attachment A).

Connections

The proposed connections would provide designated, safe routes, sustainable for ATV use between these and other communities. Sustainable trails, as used throughout this document, are those that follow the guiding principles of ecological sustainability as outlined in the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007) as follows:

1. Avoid sensitive ecological areas and critical habitats.
2. Develop trails in areas already influenced by human activity.
3. Provide buffers to avoid/protect sensitive ecological and hydrologic systems.
4. Use natural infiltration and BMPs 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.

The proposed System would use existing corridors to the maximum extent practicable, including co-locating with existing snowmobile trails. The proposer does not anticipate conflict with snowmobile use or winter trail grooming given ATV use would only be seasonal (spring, summer, fall). The long-term Master Plan for the system, prepared by the Club (Benchmark 2018), envisions additional future connections into Koochiching and Itasca Counties.

The System connects ATV riders to communities and services. Intended connections that are foreseeable in the next five (5) years of planning, funding and construction are segments in the general vicinity of Elbow Lake Grade to Cook, Crane Lake to Elephant Lake to Lake Vermilion, several Orr area connections, and Elephant Lake to Ash River to Kabetogama connections.

All connections contribute to the access and usability of the larger System; however these connections are priorities of the System that the Club anticipates would be completed over the next 1-5 year timeframe as they are able to acquire funding for design, permitting, and construction.

Crane Lake to Elephant Lake to Lake Vermilion

The area of Crane Lake to Elephant Lake to Lake Vermilion includes a proposed 3.9-mile segment of existing route on the Voyageur Snowmobile Trail. A potential 0.6 mile reroute within this segment, which would be a proposed new route, is also under consideration. These segment improvements between Schuster Road and the community of Buyck are currently funded and planned for construction as soon as environmental review and permitting allow. Following construction, the Club would pursue Grant-in-Aid (GIA) funding for on-going administration. Remaining connections are planned to follow over the course of the next five years.

Completing these connections of the System will include mapping and signage for existing routes, required improvements to some existing routes, the addition of several miles of new routes and the construction of trail features such as bridges and trail access to two special features, Winchester Lake Overlook and Fire Tower at Shively Road as discussed below. The Club has also identified a potential opportunity in the Silver Lake reroute (Figure 2-3). The Club would sponsor projects to make connections to these special features, which would require coordination with and approvals from DNR Division of Forestry and Division Lands and Minerals potential lease agreements. These discussions are ongoing at this time.

Winchester Lake Overlook

The Club would coordinate with the DNR for approval of the Winchester Lake Overlook (Figure 2-4 Inset) as a System destination for spring, summer and fall (seasonal) use by ATV riders. The spacing at Winchester Lake would be designed to create an area to safely park ATVs on the spur road to the overlook, but off of the main System route. The overlook would be designed as a 16-foot x 16-foot platform (256 ft^2) to overview the lake, in which there would be sufficient space for a picnic table. The proposed structure would meet applicable zoning requirements, such as setbacks and any other standards required for the local Shoreland ordinance. The Club would coordinate with the DNR for approval of a seasonal portable toilet at the site, which the Club would maintain. A gate would allow seasonal ATV entry while excluding larger vehicles. The gate style would allow for service vehicle access. The existing access trail down to the lake, currently open to ATVs, would likely be impacted by this additional trail use. Besides following sustainable trail guidelines for design and maintenance, the Club would work with local, state and federal agencies to maintain and keep the trail sustainable as per the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007). The Club would consider pursuing future GIA funding to manage and maintain this potential System destination.

Fire Tower

The Club began discussions in 2019 with DNR Forestry about the potential for the fire tower at Shively Road (Figure 2-6 Inset) to become a System destination for spring, summer and fall (seasonal) use by ATV riders. As part of those discussions, the Club worked with a licensed professional engineer to evaluate the structural integrity of the fire tower, in which some repairs were recommended for safe recreational use of the fire tower and immediately surrounding area. These repairs include, at a minimum, new stair treads, safety fencing, and handrail support. If the site were allowed for a System destination, the Club would work with the DNR to receive approval for placing a picnic table at the site and a gate at the spur road entry. As with the proposed potential Winchester Lake Overlook destination, a gate would allow seasonal ATV entry while excluding larger vehicles and the gate style would allow for service vehicle access for the Club to manage upkeep and maintain sanitation. Minor maintenance is anticipated for the gravel driving surface of the existing road leading to the fire tower. The Club would consider pursuing future GIA funding to manage and maintain this potential System destination.

Silver Lake Reroute

Figure 2-3 identifies a portion of the proposed trail, the Silver Lake Reroute that was a former route of the David Dill/Arrowhead State Trail, just north of Elephant Lake. This trail portion includes a trail bridge and shelter and could provide potential for a stopping point and overlook but no distinct plans have been developed at this time.

Design

The System would be designed to accommodate ATV use, incorporating the following elements:

Trailhead maps, signage, and system kiosks

Newly prepared and installed maps and signage would provide way-finding and trail markers on new areas of the trail segments. These will also be maintained on existing routes. Signage on public roadways will meet standards as indicated in the "*Minnesota Manual on Uniform Traffic Control Devices"* (MnDOT) which can be found on the Minnesota Department of Transportation Traffic Engineering webpage.

Natural surface trail

The Club is proposing physical improvements to the System on existing or proposed natural surface trails that will support ATV use. Some areas would require fill and culvert or boardwalk crossings to create a sustainable trail surface as outlined in the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007). New/improved stream crossings are opportunities to ensure proper culvert size and placement for fish passage and stream stability. A recent culvert inventory in Ash/Blackduck watershed indicated a high number of inventoried culverts were undersized and/or fish barriers as indicated in the Rainy River Headwaters Stressor Identification Report (pgs. 27 and 49 -50. In order to ensure correctly installed culverts, the proposer should refer to the Minnesota Department of Transportation's (MnDOT) "*Minnesota Guide for Stream Connectivity and Aquatic Organism Passage Through Culverts*", as found on DNR's website. Trail design would also consider compatibility with shared uses. Trail segments co-locating with snowmobile use would typically have a 20-foot wide footprint to accommodate a 12-14 foot drivable top surface by ATVs. This guidance document considers a maximum width of 26 feet to accommodate shoulders and clearance on either side of the trail depending on the specific design requirements of any new construction, including accommodation of winter use by snowmobile groomers. Proposed ATV use or shared use along existing state trails would have a minimum 14-foot top surface, 5-foot minimum cleared corridor on either side of the top surface, although this might already be accomplished through regular maintenance on state trails maintained by the DNR. Routes not shared with snowmobiles are planned for a 12-14 foot wide footprint. Typical sections are included as Attachment A.

c. Project magnitude:

Type	Amount
Total Project Acreage	2,964.56 acres
Linear project length	386.51 miles
Number and type of residential units	__
Commercial building area (in square feet)	__
Industrial building area (in square feet)	__
Institutional building area (in square feet)	__

Type	Amount
Other uses – Winchester Lake Overlook	256 ft^2
Other uses – Shively Road Fire Tower Safety Repairs	__
Structure height(s)	__

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The purpose of the greater System is to provide safe access to ridable surfaces, user connectivity to communities, and compatibility of ATV use on roads/trails that allow for ATVs. Increased ridership in this area over the years has prompted the development of the proposed project. The System is of regional significance and covers geographies along most of northern St. Louis County which could include connections to other state forests, GIA, or other ATV trails where ATV use is an allowed activity.

e. Are future stages of this development including development on any other property planned or likely to happen? If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review?

Yes; however, future phased stages identified in the Master Plan for the System are not fully planned at this time. Future phases might include connections in St. Louis, Itasca, and Koochiching Counties and would be composed of connections to other state forest, GIA, or other ATV trails where ATV use is an allowed activity. The priority order and timing of future connections will be determined as funding and connecting routes allow. The need for environmental review on any future stages not included in this EAW would be assessed as specific projects are defined.

f. Is this project a subsequent stage of an earlier project? Yes If yes, briefly describe the past development, timeline and any past environmental review.

The Voyageur Country ATV Club began in 2015, with a System primarily using existing trails in wooded areas of northern St. Louis County. Projects completed to date, which add connections in the System are:

- Forest Road 601 to Kabustasa Road trail improvements/bridge construction (completed 2019).
- Vermilion Falls Road to Gold Coast Road trail improvements (completed 2020). This included fill/culvert sections as well as a raised boardwalk for ATV and snowmobile travel.

Considered separately, these projects did not meet thresholds for a mandatory EAW as individual projects. They are included in the review of this EAW under MN Rules 4410.4300, Subpart 1, which includes a threshold test for earlier stages of the project.

The Club worked with county, state, and federal land administrators to open federal and county roads between CR 23 and CR 180 and Federal Forest Roads 203, 485, 491, 493, 608, 609, 611, 859 for ATV use, which were authorized in September 2016. Following the agreements for ATV use on these varied road segments, the Club completed some minor rehabilitation work between CR 23 and CR 180 on Federal Forest roads 609, 609C. At Road T6-609CD some gravel material was placed for surface rehabilitation and culverts were installed on a portion of this segment, of which is shared with the David Dill/Arrowhead State Trail. The Club also worked on a portion of the David Dill/Arrowhead State trail road north of CR 23 that is on county land, where gravel material was placed for surface rehabilitation and culverts were installed.

The Club also worked with a private landowner on Molpus Road (private road south of Long Lake, between Forest Roads 493 and 611) to receive permission for ATV use on the private road.

Many other public roads are open to ATV use, and might provide additional connections for ATV travel. However, these are not part of formal ATV trail systems and will not be mapped or signed as part of the Voyageur Country ATV System.

7. Cover Types:

Estimate the acreage of the site with each of the following cover types before and after development:

Cover Type	Before	After
Wetlands	175.23	161.87
Deep water/streams[1]	3.51	3.39
Wooded/forest[2]	1,457.40	1,457.40
Brush/Grassland	431.27	391.80
Cropland	11.80	11.09
Lawn/landscaping	740.54	717.06
Impervious Surface	144.81	144.81
Stormwater Pond	0	0
Natural Surface Trail[3]	0	77.14
Total	2,964.56	2,964.56

Table Notes:

[1] The proposer has estimated cover type change in deep water streams conservatively from the intersection of routes needing improvements and National Wetlands Inventory water features. Impacts to deep water streams would be avoided and minimized to the greatest extent practicable, consistent with wetland and waterway permitting requirements.

[2] Trail improvements/construction would occur across existing wooded/forested cover types. The construction is not anticipated to cause a land conversion due to the narrow widths of the trail and the retention of overstory trees.

[3] Natural surface trail is described as "soft surfaced, follows the contours of the land, and is much more susceptible to natural forces" (MN DNR 2007). Natural surface trails are shaped into the landscape being traversed and to provide interesting nuances of a site for the trail user. Hardening would be minimized, and would take place only where the existing surface is not sustainable for ATV use. Trail design specifications would maintain a pervious surface, through methods such as selection of proper granular material.

Acreage in the before category is the overall review area for the project; the area within a 26 foot corridor for existing routes not requiring physical improvements (route categories 1 and 2) and within a 226 foot corridor for existing routes requiring physical improvements and proposed routes with new construction (route categories 3 and 4). The after category incorporates land cover changes due to the proposed build areas in route Categories 3 and 4. Route Categories 1 and 2 are existing routes with no land cover changes.

For the purposes of this EAW, existing natural surface trails are included in the wooded/forest, brush/grassland, and wetlands cover types. Existing trails included the wetlands cover type are snowmobile trails which currently have winter use only. Following completion of the project, an estimated 77.14 acres of new natural surface trail would result as a conversion from wetlands, deep water/streams, brush/grassland, cropland, and lawn/landscaping cover types. Land cover maps are included as Figures 6-1 through 6-6.

8. Permits and approvals required:

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. *All of these final decisions are prohibited until all appropriate environmental reviews has been completed. See Minnesota Rules, Chapter 4410.3100.*

Table 8.1 Project Permits

Unit of Government	Type of Application	Status
Minnesota Pollution Control Agency	NPDES Construction Stormwater Permit Section 401 Water Quality Certification	To be submitted To be obtained if needed
St. Louis County	Conditional Use Permit	To be submitted
St. Louis County	Wetland Conservation Act approvals on lands under county zoning jurisdiction	To be submitted
DNR	Work in Public Waters Permit	To be obtained if needed
DNR	WCA approvals on state lands	To be submitted
DNR	ATV Grant-in-Aid Trail Application	Submitted March 2020 - Pending
DNR	Recreational Lease: School Trust Lands and State Forest Lands	To be submitted
U.S. Army Corps of Engineers	Section 404 Clean Water Act Permit	To be obtained
Cities and Townships	Zoning or other approvals	To be applied for if needed

Table 8.2 Project Public Funding

Unit of Government	Type of Application	Status/Amount
DNR	Federal Recreation Trail Program (Funding)	Fall 2020/TBD
DNR	ATV Dedicated Account (Funding Match of State Bonding)	$1 Million (2020) - pending
DNR	Grant-in-Aid (Funding for Maintenance of Existing Routes)	$13,300 (Submitted 2019, review pending)
DNR	Direct Appropriation from the ATV Dedicated Account for the Master Plan	$3,484.13 (2018)
DNR	ATV Dedicated Account (Funding for Master Plan Development, Engineering over Vermilion River, Wetland Delineation)	$150,000 (2017)
Minnesota Legislative Citizen Commission on Minnesota Resources	Environment and Natural Resources Trust Fund	Spring 2021/TBD

Unit of Government	Type of Application	Status/Amount
Minnesota Legislative Citizen Commission on Minnesota Resources	Environmental and Natural Resources Trust Fund (Funding for Vermilion Falls Road to Gold Coast Road)	$400,000 (2018)
Minnesota State Legislature	State Bonding (Funding) for EAW Preparation and Schuster to Buyck Segment Design, Permitting, Construction	$600,000 (2019)
Minnesota State Legislature	State Bonding (Funding)	$1 Million (2020) – pending
Minnesota Department of Iron Range Resources and Rehabilitation (IRRR)	Federal Infrastructure (Funding) for Fire Tower Improvements and Winchester Lake Overlook	$200,000 (2019) – pending
IRRR	Regional Trails Grant Program (Funding)	$1,300,000 (2019)
IRRR	Commissioner's Discretionary Fund (Funding for System Mapping, Route Signage, and Public Outreach)	$35,000 (2017)
St. Louis County	Federal Recreational Trails Program (Funding for Vermilion Falls Road to Gold Coast Road)	$150,000 (2018)
Greater Minnesota Regional Parks and Trails Commission	Application for Regional Trail of Significance	Up to $300,000 (Proposed request 2018, pending review)
Town of Crane Lake	Donation	$5,000 (2018)
Camp Five Township	Donation	$1,000 (2018)

In accordance with Minnesota Statutes, the MPCA as a regulator of all surface waters as defined by MN Statutes 115.01, Subd. 22. Waters of the state. "Waters of the state" means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof. Surface waters that are determined to be USACE non-jurisdictional or exempt from WCA, are regulated by the MPCA and as such impacts need to be included in the application and might require mitigation. If the applicant demonstrates water quality standards will be met, this project *might* be a candidate for waiver. However, if it is not a candidate for waiver, an antidegradation assessment would need to be submitted, as required by Minn. R. 7050.0285.

Grant-in-Aid Funding

Grant-in-Aid funding facilitates development and maintenance of trails for use by ATVs, Off-Highway Motorcycles, and Off-Road Vehicles at the initiative of enthusiast groups or clubs, such as the Club in this instance, with the support and participation of local government sponsors. Inspection and maintenance, for segments of the proposed project that obtain GIA, would be coordinated between the government sponsor and the Club. Currently, there are no segments of the System that are funded through GIA; however, the Club has submitted applications to the DNR for GIA funding for approximately 47 miles of existing trail. Where the System would allow for GIA funding support in the future, the Club intends to apply for said funding. The Club

has estimated a total of 195 miles of trail segments that might be eligible for GIA funding and plans to pursue the funding for these segments as they receive funding for design, permitting and construction. Existing public county roads and public state-aid highways are ineligible for GIA funding.

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19

9. Land Use:

a. Describe:

i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.

Land ownership in the System is a mix of county road right-of-way; county-, state-, and federally-managed land, including related forest roads; and, privately owned parcels (Figures 2-1 through 2-6). For additional context, Figures 3-1 through 3-6 show the System on a USGS 1:100,000 scale topographic map. The Club has several land use agreements in place with St. Louis County for existing segments in use currently. The Club will maintain its ongoing coordination with land administrators during operation of the trail system.

Land use within and surrounding the proposed project site is primarily undeveloped, natural areas managed for timber and/or recreational use. The lands are owned by the U.S. Forest Service, State of Minnesota, St. Louis County, and some private landowners, including Potlach Corporation and Molpus Woodlands Group. Most of the System is comprised of county road right-of-ways, public land, or lands managed by logging companies. Public land use within the proposed project boundaries includes the Kabetogama State Forest, Superior National Forest La Croix Ranger District and St. Louis County lands.

The proposed project would utilize public trails, including 34.5 miles of the David Dill/Arrowhead State Trail, most of which would fall under category 3, Existing Route – Proposed New ATV Use (Improvements Needed). The David Dill/Arrowhead State Trail extends 135 miles from the intersection with the Taconite State Trail (near Tower) to three miles south of International Falls. The natural surface trail is used primarily for snowmobiling. This long-distance trail was developed primarily for winter use. Sections of the trail might be impassible during warm weather months when the ground is not frozen, due to wet soils and standing water.

The Project also proposes to use 3.11 miles of the DNR Bearscratch Hunter Walking Trails. Hunter Walking Trails (HWT), as described on the DNR HWT webpage, provide access to grouse and woodcock areas in Wildlife Management Areas (WMAs) and connect with state forests and other public hunting lands.

The proposed Project area includes intersections and shared corridors with existing GIA snowmobile and cross-country ski trails, including Ashawa cross-country ski trail on the Winnifred Road portion of the System, Voyageur snowmobile trail and portions of the David Dill/Arrowhead State Trail. Ashawa is a GIA cross-country ski trail that features 19.88 miles of trails (28.0 km trackset). It includes mostly intermediate level trails running through high, rocky outcrops with scenic vistas, and black spruce bogs. Circling the western part of Lake Vermilion connecting area resorts, it ends at Elbow Lake. ATV use would be seasonal, limited to spring, summer and fall. The Lake Vermilion Bike Trail, currently in the conceptual phase, would have multiple future intersections with the System.

Regional land use outside of the System and proposed Project area includes Voyageurs National Park; Boundary Waters Canoe Area Wilderness (BWCAW), a designated wilderness area; Scientific and Natural Areas (SNAs) including Big Island and Lost Park Peatland SNAs; Wildlife Management Areas (WMAs) including Owens and Pine Island WMAs; and Sturgeon River State Forest. These areas are mainly used for outdoor recreational purposes, such as camping, canoeing, fishing, wildlife viewing, hiking, cross-country skiing, snowmobiling, off-highway vehicle trail riding, and hunting.

Agricultural land of statewide importance is located within the proposed project site. These lands are not currently being farmed nor do they have a history of being farmed. Of the 11.80 acres of farmland, 0.71 acres would be used as a recreational corridor.

Timber Lands owned by the State of Minnesota within the Project area might be, or can be used for logging. Forest cover types on the DNR-managed lands across the project area consist of upland and lowland timber cover types that are actively managed. DNR lands within the project area are subject to ongoing, active timber sale contracts. Timber Appraisal Reports are available upon request.

Overall, the proposed project and surrounding area existing land is used for timber protection, water quality protection, forest recreation and managed trail type use. Land use would remain similar under all route categories (recreational and silviculture) with main use changes as follows

- Route category 2: Seasonal use change for snowmobile trails to allow the use of ATVs during spring, summer and fall.
- Route category 3: The trail footprint in these areas is already cleared of woody vegetation for snowmobile or other vehicle travel. Areas cleared of woody vegetation only, without other improvements include: open grassland, sedge meadow wetland, fresh (wet) meadow wetlands, and shallow marsh. These areas will have a new use for ATV travel, but adjacent land use will remain similar (recreational, silviculture, etc.).
- Route category 4: New trail construction would require clearing a corridor through naturally vegetated areas that do not currently have an existing trail, path, or road. With the addition of ATV travel on an estimated 2.54 miles of new trail segments.

ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

State Forestry and Forest Classification and Road/Trail Designation

The DNR Division of Forestry anticipates future harvest will occur within the Project boundary. All DNR-prescribed harvest activity is considered.

In addition to evaluating forest classification and retaining or modifying current classification as appropriate, the 2008 Plan identifies "…forest roads and trails that the DNR proposes to (un)designate for various motorized and non-motorized purposes within the planning area." The Plan contains approximately the northern half of St. Louis County and includes Kabetogama State Forest and Bearscratch Hunter Walking Trail (pg. 4). The plan includes classifications of managed, limited and closed. Kabetogama State Forest will retain a "managed" classification, but also includes an area that is limited under the plan. The plan recommends recreational trail designations including 9.2 miles of shared ATV/OHM (Off Highway Motorcycle) trail, 4.2 miles of ATV/OHM trail to be developed by St. Louis County in the northern part of the county and 3.5 miles of Minimum Maintenance Road/Off Highway Vehicle (MMR/OHV) trail will also be designated on state lands outside of named state forests. Bearscratch Trail, a gated hunter walking area, developed and managed by DNR Wildlife, allows for motorized access from Sept. 1 – December 31. A second gate

is closed September 1 – November 1 to provide for non-motorized grouse hunting. This gate is opened November 1 annually to allow for motorized access for deer hunting.

County

St. Louis County's Recreation and Tourism Goals, Objectives, and Implementation in the Comprehensive Plan are as follows (pgs. 52-53):

Goal R1 "Preserve opportunities for outdoor recreation in St. Louis County." Objective R-1.1 "Where possible, use the Future Land Use Maps and county ordinances to guide intensive development, such as residential subdivisions or industry, to areas with supporting infrastructure and services, and away from forestry and agricultural areas appropriate for hunting and other outdoor activities." Objective R-1.2 "Work with local, state, and federal agencies to improve and promote existing lake and river access points."

Goal R-2: Promote regional trail development and maintenance. Objective R-2.1 "Work with local communities, advocacy groups, and others to expand the regional trail system and to maintain and expand opportunities for all possible user types. Prioritize links that are identified in county and regional trail plans" Objective R-2.2 Protect existing trails and support permanent easements through private lands to help facilitate trail maintenance and construction.

Further, St. Louis County Ordinance #64 provides an opportunity for organizations to request approval in which the county might authorize a corridor access trail within that county's public road right-of-way.

Federal

The 2004 Superior National Forest management plan indicates that "recreation facilities such as campsites and trails…" including ATV use, "…may be provided" (pg. 3-32).

The Chief of the Forest Service did identify "undesirable impacts" from off-highway vehicles in the final, revised 2004 report for the plan (pgs. 15-16), citing unplanned roads and trails, erosion, lack of quality riding opportunities, water degradation and habitat destruction from off-highway vehicle activity. However, it is recognized that the use of ATVs and other off-road-vehicles are a legitimate use of the National Forest System land and it must be carefully managed. The revised plan provides for an additional 90 miles of ATV trail to be designated.

David Dill/Arrowhead State Trail

The David Dill/Arrowhead State Trail, as described in the *Master Plan for the Tower to International Falls Trail* (MN DNR, 1980) includes a goal and major objective to "provide Minnesotans with a recreational travel route which will allow them to enjoy, appreciate, and better understand the natural cultural and historic resources of the border lakes region (pg. 6)." The plan was developed primarily for snowmobile use, with the potential for other uses such as hiking, horseback riding and ski touring. The current purpose and scope of this master plan does not include the use of ATVs on the trail.

iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

The project is not located in a floodplain, wild and scenic river segment, critical area, or agricultural preserve. Shoreland area is defined as within 1,000 feet of a lake or 300 feet of a stream or river, and its designated floodplain and the shore impact zone as defined by the local Shoreland

ordinance. St. Louis County has zoning authority over the majority of the System, except within the municipal boundaries of the City of Orr and the City of Cook.

Several portions of the System are located within the shoreland zone. There are existing routes that cross the Vermilion River using county and forest roads and a bridge that was installed in 2019. There is a proposed crossing of the Ash River, a designated trout stream, on an existing route requiring improvements to be sustainable for ATV use. Multiple crossings of other, smaller public watercourse streams are also part of the existing routes. Crossings on public waters might require DNR Public Waters Work permits for impacts below the Ordinary High Water Level (OHWL). Impacts above the OHWL, and on non-public waters, are subject to permitting requirements of the local zoning authority as well as Wetland Conservation Act (WCA) and the Clean Waters Act (CWA) Section 404 issued by the U.S. Army Corps of Engineers (USACE). Bridges or boardwalks, subject to state and local permitting requirements, are planned for new construction segments and would be designed to minimize impacts to water resources. Design of trail sections and water crossings would follow the recommendations from the "*Trail Planning, Design and Development Guidelines*" manual (MN DNR, 2007). The proposed trail would be designed for a sustainable trail surface that reduces erosion to stream resources. The design of each crossing (fill and culvert, bridge, or boardwalk) would be evaluated in engineering design for each crossing, considering avoidance and minimization measures required in wetland and waterway permitting. Design would also consider fish passage per the designation of each water crossing.

b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

County

The proposed project meets the goals and objectives of the St. Louis County Tourism and Recreation section of their Comprehensive Plan and further advances the purpose of the Plan as noted in section 9 a. ii to promote regional trail development and maintenance.

Federal

Although the Forest Service does express concern about impacts from off-highway vehicles, the proposed project is compatible with the management plan as the type of project that is permissible to enhance the off-highway vehicle use experience. The Forest would work closely with the DNR, local government units (LGUs) and interest groups to determine site-specific locations of the trails and ensure the trails are compatible and interlink if possible.

David Dill/Arrowhead State Trail

Where the proposed trail system shares a corridor with the David Dill/Arrowhead State Trail, ATV use is incompatible under the existing master plan. However, this State Trail master plan is currently undergoing an update, and is anticipated to determine if this corridor is compatible with ATV use in the System. The new plan will not automatically open the trail to new uses and any new use of the David Dill/Arrowhead State Trail will be subject to permission from the DNR and any other land owner prior to implementation.

State Forest Classification and Road/Trail Designation

The Plan has evaluated forest classification to manage, limit and close various areas to retain, preserve and close motor vehicle use to protect environmental factors such as wetlands. The plan might allow for some motorized use; however, the trail segment proposed on the Bearscratch Hunter Walking Trail is not consistent with the plan. The proposer would need to coordinate with state, county and private

landowners for approval of the segment, north of Black Duck Lake in the Kabetogama State Forest (Figure 2-3).

c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.

The Conservation Fund has recently completed a land acquisition from private land owner Potlach Corporation. Parcel(s) that are included in the proposed project include the Northwest-Northwest of Section 28, Township 65 North, Range 17 West. The Schuster Road to Buyck segment of the proposed project is located on these parcels. In the future, The Conservation Fund intends to work with State of Minnesota to exchange this parcel for School Trust Fund lands. At that time, the proposer would work with the DNR to obtain permissions for this segment of the proposed project. As noted in Table 8.2, this segment has received funding for design, permitting and construction as well as EAW preparation.

Additional coordination with state, county, and private landowners for access approvals would be needed to allow ATV use on a portion of the Bearscratch Hunter Walking Trail. ATV use of the hunter walking trail would require revision of management planning in the Forest Classification and Road/Trail Designation Plan for DNR Division of Forestry Administered Lands. The proposer would request approval to use segments on the David Dill/Arrowhead State Trail if/when ATV use is allowed

Approximately 2.54 miles of proposed new trail would be located on county fee, county tax forfeit, and federal land. These alignments on county land would be developed to insure compatibility for ATV use with the County Comprehensive Land Use Plan. The alignments on federal land will be developed to insure compatibility for ATV use with the Superior National Forest Land and Resource Management Plan. The proposer intends to utilize existing county roads, forest roads, logging roads, and wooded trails to the greatest extent practicable, thus minimizing new trail construction.

10. Geology, soils, and topography/land forms:

a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

Geology in the primary geographies of the System is generally relatively shallow bedrock of the Canadian Shield. Depth to bedrock is variable; however, as identified by the United States Department of Agricultural (USDA) National Resources Conservation Service (NRCS), rock outcrop complexes are present within the review area (approximately 21% of soil map units). Soils and plant communities on extremely shallow or exposed bedrock can be vulnerable to recreational over-use. Mitigation could include limiting traffic, seasonality or speeds on areas that are more vulnerable. For areas that need improvement or new construction, trail design will follow the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007) to address any effects to geologic features such as sensitive bedrock outcrop areas. Trail managers should work with area partners such as the DNR Trail Ambassador program to monitor shallow soils and exposed bedrock. The Trail Ambassador Program establishes informational and educational contacts by enabling volunteer monitoring efforts to promote safe, environmentally responsible operation of OHVs. Trail ambassadors are trained on the rules and regulations of operating OHVs and guidelines and policies of proper trail use in the recreation area. They are certified to monitor trail conditions, identify invasive species, and provide first aid.

There are no identified susceptible geologic features such as limestone, karst, or unconfined/shallow aquifers in the review area. Otherwise, there are no anticipated limitations or effects the proposed project would have on geologic features.

b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii

The System covers a wide area with many different soils, comprised of 100 soil map units plus areas of open water and gravel pits. See attachment B for a table that includes soil map units and their characteristics within the review area. Figures 5-1 through 5-45 display the project area soil map units by erodibility, as defined by Soil Loss Tolerance (T factor). The T factor, measured in tons per acre, is defined as the maximum amount of erosion at which the quality of a soil as a medium for plant growth can be maintained.

Routes throughout the System are most frequently located in soils with T factors of 5 and 4. These are least susceptible to adverse effects due to erosion, and likely correlate with other beneficial characteristics for a road or trail alignment (e.g., avoiding steep slopes and wet areas).

For proposed trails in route category 1 (existing routes currently open to ATV use) no change or potential impacts are anticipated to soils and topography.

Proposed trails in route category 2 (proposed new ATV use on existing routes) have surface characteristics that are sustainable for ongoing ATV use without physical surface improvements. Most connections in this category are located on public and forest roads, minimally susceptible to erosion. New, seasonal use (generally snow free) on natural surface trails has the potential to compact soils and lead to increased runoff. In order to minimize potential adverse impacts caused by erosion or soil instability, the proposer would coordinate with state, local, and federal agencies to monitor and maintain the trail according to BMPs as outlined in DNR Trail Planning Guidelines (2007).

Existing routes in category 3, would need physical improvements to create a sustainable natural surface trail. Ground disturbance for improvements would consist of shallow excavation (approximately 12 inches in depth where needed to prepare subgrade) and shaping to prepare a sustainable natural trail surface. Perimeter erosion control would be installed where needed, particularly in sensitive areas, prior to construction.

New summer-season use on natural surface trails has the potential to compact soils and lead to increased runoff. According to the DNR Watershed Health Assessment Framework, soil erosion potential is high in two Ash River Catchments. High stream total suspended solids (TSS) increases in the Ash River coincide with the section of trail between Sheep Ranch Road and the Ash/Blackduck River confluence (~4 mile length of trail). Figure 4-1. Appropriate erosion and sediment control BMPs would be selected based on current site conditions and maintained through the duration of each construction phase. The purpose is to reduce the potential for sedimentation occurring to surface water resources or migrating off site. Temporary BMPs will be inspected and maintained (per the NPDES Construction Stormwater Permit) until permanent vegetation and stabilization has occurred. Permanent BMPs will be incorporated into the trail design to minimize erosion of the trail during routine operational activities (post-construction) per the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007).

Once open to ATV traffic, the Club would continue to work with local, state, and federal agencies to minimize potential adverse impacts caused by erosion or soil instability by monitoring and maintenance of the trail and using BMPs as described in the DNR 2007 Trail Planning, Design, and Development Guidelines.

Proposed areas without an existing road or trail corridor in route category 4 would require ground disturbance for improvements that would consist of shallow excavation (approximately 12 inches in depth where needed to prepare subgrade) and shaping to prepare a sustainable natural trail surface. Perimeter erosion control would be installed where needed, particularly in sensitive areas, prior to construction. Erosion control measures are described in Item 11.b. ii.

Construction of these routes would include slopes and surfaces designed to allow ATV use with minimal erosion, per the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007). Stormwater control measures, including vegetative buffers and other BMPs, would be incorporated into the project design and development of sustainable natural surface ATV trails as described in Item 11.b. ii.

11. Water resources:

a. Describe surface water and groundwater features on or near the site in a.i. and a.ii.

i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

The System is located in a water resource rich area of the state, with many nearby rivers, streams, lakes, and wetlands including the Vermilion River, a designated State Water Trail. The 40-mile stretch of the Vermilion River runs from Lake Vermilion to Crane Lake. More information is available on the DNR Water Trails Webpage dedicated to the Vermilion River.

There are currently many waterbody crossings throughout the System. Wetlands are frequent, but in the current System and proposed project area, generally consisting of narrow, riverine features on the north and larger bog and wooded swamp basins on the south. Figures 4-1 through 4-6 show approximate wetland locations as mapped by the National Wetlands Inventory. Surface water features are discussed in more detail in Section 11 a. iv below. Figures 2-1 through 2-6 and 4-1 through 4-6 show the mapped surface water resources, including lakes and streams in the DNR Public Waters Inventory in the vicinity of the System.

A number of Wild Rice Lakes are located nearby the System. These are: East Vermilion, West Vermilion, Vermilion (River), Crane, Myrtle, Hoodoo, Pelican, Black, Susan, Sunset, and Echo. No Waterfowl Management Areas, Wildlife Management Areas, Wild and Scenic Rivers, or Designated Wildlife Lakes are located within one (1) mile of the System.

Trout streams are present in the review area, particularly on the northwest portion of the System south of Kabetogama (Figure 4-1). DNR-designated trout streams intersecting the System routes are listed the following table (11.1).

Table 11.1 DNR Trout Streams

Stream Name	Stream ID (Kittle Number)	DNR Designation	Route Category Intersection	Figure 4 Page
Ash River	H-001-040	Trout Stream	Existing Trail/ Improvements Needed	4-1. 4-3
Black Duck River	H-001-040-017	Trout Stream	Existing Trail/ Improvements Needed	4-1. 4-3
Unnamed Creek	H-001-040-014	Trout Stream Tributary	Existing Trail/ Improvements Needed	4-1
Unnamed Creek	H-001-040-026	Trout Stream Tributary	Existing Trail/ Improvements Needed	4-1
Unnamed Creek	H-001-040-018	Trout Stream Tributary	Existing Trail/ Improvements Needed	4-1
Unnamed Creek	H-001-040-013	Trout Stream Tributary	Existing Trail/ Improvements Needed	4-1
Unnamed Creek	H-001-040-024	Trout Stream Tributary	Existing Trail/ Improvements Needed	4-1
Fawn Creek	H-001-040-017-006	Trout Stream	Existing Trail/ No Improvements	4-1. 4-3
Ninemile Creek	H-001-040-017-008	Trout Stream	Existing Trail/ No Improvements	4-1. 4-3
Unnamed Creek	H-001-040-017-008-002	Trout Stream Tributary	Existing Trail/ No Improvements	4-1
Unnamed Creek	H-001-040-030	Trout Stream Tributary	Existing Trail/ No Improvements	4-1
Unnamed Creek	H-001-040-017-008-001	Trout Stream Tributary	Existing Trail/ No Improvements	4-1
Unnamed Creek	H-001-040-033	Trout Stream Tributary	Existing Trail/ No Improvements	4-1

Stream Name	Stream ID (Kittle Number)	DNR Designation	Route Category Intersection	Figure 4 Page
Unnamed Creek	H-001-040-017-008-003	Trout Stream Tributary	Existing Trail/ No Improvements	4-1
Unnamed Stream	H-001-030-011-025	Trout Stream Tributary	Existing Trail/ No Improvements	4-3
Unnamed Stream	H-001-030-011-026	Trout Stream Tributary	Existing Trail/ No Improvements	4-3

The current crossing on the Blackduck River (on the David Dill/Arrowhead State Trail) is below bankfull width and under water during high flows. The new crossing should take bankfull width into consideration. The section of the David Dill/Arrowhead State Trail that follows the Blackduck River between Blackduck Lake and the David Dill/Arrowhead State Trail stream crossing on the Blackduck River are identified sources of sediment to the Blackduck River which is impaired for TSS. Evidence is outlined in a "*Bank Assessment for Nonpoint Source Consequences of Sediment*" study (MN DNR, 2019), which found that the abandoned railroad initiates erosion through two processes; one occurs when the railroad grade (trail) itself is undermined where the stream abuts against the grade, accelerating the detachment and transport of grade and bank materials in streamflow. These findings are mentioned in the Stressor Identification Report for the Rainy River Headwaters as well as a draft TMDL report for the Blackduck River. The proposer should take steps to add no net increase of TSS loading to the stream with the addition of ATVs to this trail system. This could require assessing and stabilizing undermined portions of the existing trail. Figures 4-1 and 4-3.

If work is required below the OHWL, the proposer would coordinate with permitting regarding BMPs that could include, floating silt curtain, construction during no flows/low flows, or winter conditions, and if required, incorporate coffer or check dams into the final plans. If any work is conducted below the OHWL, these BMPs will assist in avoiding or minimizing total suspended solids (TSS) - turbidity/sedimentation from entering water of the state along the System and other nearby water resources. A DNR "Best Practices for Meeting MN DNR General Public Waters Work Permit GP 2004-0001" provides substantial guidance to engineers for designing and implementing projects that affect public waters.
Table 11.2 below lists the MPCA Section 303(d) listed Impaired Waters within one (1) mile of the proposed System.

Table 11.2 Section 303(d) Listed Impaired Streams

Stream Name	Reach	Impairment	Proximity to System
Ash River	Confluence with Blackduck River to Ash River Falls	Total suspended solids	Within 1 mile
Blackduck River	Headwaters to Ash River	E. coli and total suspended solids	New crossing – within 1 mile of the Stream for ~ 2.5 miles

Stream Name	Reach	Impairment	Proximity to System
Little Fork River	Headwaters to confluence with Rice River	Turbidity and mercury in fish tissue	Existing crossing
Vermilion River	Vermilion Lake to Hilda Creek	Mercury in fish tissue	Within 1 mile
Vermilion River	Hilda Creek to Pelican River	Mercury in fish tissue	Existing crossing
Vermilion River	Pelican River to Crane Lake	Mercury in fish tissue	Existing crossing

Table 11.3 below lists lakes within one mile of the proposed System designated as Section 303(d) listed impaired.

Table 11.3 Section 303(d) Listed Impaired Lakes

Lake	DNR Public Waters Inventory ID	Impairment	Proximity to System
Ban	69074200	Mercury in fish tissue	Within 1 mile
Black Duck	69084200	Mercury in fish tissue	Intersected by existing route
Crane	69061600	Mercury in fish tissue	Within 1 mile
East Vermilion	69037801	Mercury in fish tissue	Within 1 mile
Echo	69061500	Mercury in fish tissue, nutrients	Within 1 mile
Elbow	69074400	Mercury in fish tissue	Within 1 mile
Elephant	69081000	Mercury in fish tissue	Intersected by existing route
Franklin	69075400	Mercury in fish tissue	Within 1 mile
Johnson	69069100	Mercury in fish tissue	Within 1 mile
Kabetogama	69084500	Mercury in fish tissue	Within 1 mile
Kabustasa	69067900	Mercury in fish tissue	Within 1 mile
Kjostad	69074800	Mercury in fish tissue	Within 1 mile
Long	69049500	Mercury in fish tissue	Within 1 mile
Marion	69075500	Mercury in fish tissue	Within 1 mile
Moose	69080600	Mercury in fish tissue	Within 1 mile

Lake	DNR Public Waters Inventory ID	Impairment	Proximity to System
Myrtle	69074900	Mercury in fish tissue, nutrients	Within 1 mile
Pelican	69084100	Mercury in fish tissue	Within 1 mile
Susan	69074100	Mercury in fish tissue	Within 1 mile
West Vermilion	69037802	Mercury in fish tissue	Within 1 mile
Winchester	69069000	Mercury in fish tissue	Within 1 mile

ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

The System covers a relatively broad geographic area with variable topography, therefore the depth to groundwater is variable across the System. Areas of wet soils requiring improvements to allow ATV travel likely have shallow groundwater (less than 12 inches from the surface). Two (2) Minnesota Department of Health (MDH) wellhead protection areas are located in the project review area. One is in the City of Cook, and is nearby the System but does not intersect any segment of existing trail currently open to ATV use. The other is in the City of Orr and intersects a segment of existing trail proposed for improvements. Any ground disturbance for construction in these areas would consist of shallow (approximately 12 inches) excavation to prepare a subgrade, if necessary, and fill to prepare a sustainable trail surface.

The MDH County Well Index (CWI) identifies three (3) wells within the review area (26 foot corridor on existing/road trail, and 226 foot corridor for proposed improvements or new trail). These are all domestic wells with unique well numbers: 00532244, 00723366, and 00652071. These are located on a segment proposed for improvements near the City of Orr, and a segment proposed for improvements on the west side of West Lake Vermilion. Any ground disturbance for construction in these areas would consist of shallow (approximately 12 inches) excavation to prepare a subgrade, if necessary, and fill to construct a sustainable trail surface.

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv.

i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

No sanitary, municipal/domestic, or industrial wastewater will be produced or treated by the project.

2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.
Not applicable.

3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.
Not applicable.

ii. Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

Areas surrounding the System are largely forested; this natural vegetation slows runoff and promotes infiltration where soils are suitable. Existing roads generally are graded to drain to vegetated roadside ditches.

New seasonal ATV use on existing routes with proposed new ATV use (route category 2) have the potential to lead to increased sediment mobilization and erosion on natural surface trails. Monitoring and maintenance of natural surface trails would be necessary to prevent erosion that could contribute to adverse effects on stormwater quality, such as total suspended solids (TSS) impairments. The Club would work with local, state, and federal agencies to minimize potential adverse impacts caused by erosion or soil instability by monitoring and maintenance of the trail and using BMPs as described in the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007). This category would not have construction-related change to water quality or other values of nearby waters.

Construction and improvements on existing routes with improvements needed and new construction (route categories 3 and 4) would have potential to cause erosion and sedimentation to downstream water resources. Improvements would include fill and culvert, bridge, or boardwalk. Design would be based on discrete site design requirements. Design at each crossing would follow avoidance and minimization requirements for wetland and waterway permitting. Segments proposed for improvements and new construction would develop and maintain a Stormwater Pollution Prevention Plan (SWPPP) that will specify temporary erosion and sediment control BMPs. Temporary and permanent erosion control BMPs might also be requirements of any necessary Public Waters Work Permits or local planning and zoning as well as WCA permits and CWA Section 404 permits. These include, but are not limited to, erosion control blanket on steep slopes, biorolls/filter logs, rock construction entrances, and/or seeding. The proposer would consult with permitting agencies responsible for authorizing the proposed project and follow permit conditions that could include standards of care for revegetating the area with the recommended native seed mix.

New, ongoing ATV use has the potential to lead to increased sediment mobilization and erosion on natural surface trails. Monitoring and maintenance of natural surface trails would be necessary to prevent erosion that could contribute to adverse effects on stormwater quality. The Proposer would consult with permitting agencies and follow permit conditions that could minimize potential adverse impacts caused by erosion or soil instability, such as the BMPs outlined above.

iii. Water appropriation: Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

This project proposes no water appropriations nor well abandonment. However, dewatering for culvert and bridge construction is common on larger streams/crossing. While temporary in nature, if construction dewatering is needed, a DNR Water Appropriation Permit might be required.

iv. Surface Waters:

1) Wetlands: Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.

Wetlands in the System have been evaluated using the National Wetlands Inventory (NWI) to provide an estimate of wetland resources in the review area and proposed wetland impacts from the proposed project. Figures 4-1 through 4-6 show the NWI wetlands, classified by Circular 39 habitat type. Table 11.4 references the estimated impacts to wetlands in the project area. These estimates were prepared, erring on the side of overestimation, based on a maximum impact width through the estimated wetland areas.

Existing trails, those currently open to ATV use and those not open to ATV use, with no improvements proposed (route categories 1 and 2) are not expected to have an impact on surrounding wetland resources.

Existing trails with proposed new ATV use and improvements, would have the potential to cause erosion and sedimentation to downstream water resources, including wetlands. Erosion would be managed as described in Section 11.b.2. above. Wetland disturbance would be minimized by routing around wetlands where practicable, and using the narrowest trail footprint that would accommodate all allowed vehicles on each segment (i.e., 26 feet for segments shared with snowmobiles and trucks/highway vehicles, and 12-14 feet for ATV only segments). Table 11.4 below summarizes potential wetland impacts due to improvements on existing routes. These are over estimated from an intersection of NWI wetlands and the widest possible build footprint. Compensatory mitigation would be required for all permanent wetland impacts. Mitigation would be provided by purchase of credits from an established wetland bank. Selection of a mitigation bank would follow siting criteria in MN Rule 8420.0522 Supb. 7, with replacement within watershed as first priority if credits are available in the same watershed as the impact.

Table 11.4 Potential Wetland Impacts on Existing Routes, Improvements Needed

Wetland Type, Circular 39	Wetlands in Study Area Acres	Wetlands in Build Area (Potential Impact Areas) Acres
Type 1 (Seasonally Flooded Basin)	2.11	0.06
Type 2 (Fresh Meadow)	6.20	2.50
Type 3 (Shallow Marsh)	34.67	3.87
Type 4 (Deep Marsh)	0.21	0.03
Type 5 (Shallow Open Water)	2.99	0.12
Type 6 (Shrub Swamp)	30.73	1.79
Type 7 (Wooded Swamp)	32.92	1.87
Type 8 (Bog)	33.16	1.61
Riverine Systems	6.62	0.26
Total	149.61	12.11

Some wetland complexes are identified at public water wetlands by the Public Waters Inventory map and would be subject to DNR Public Waters Work Permit requirements. Non-public water wetlands might be subject to permit requirements of the local Wetland Conservation Act (WCA) authority – typically St. Louis County.

Water-related permits applicable to the project include the CWA Section 404 permit issued by the USACE and the National Pollution Discharge Elimination System (NPDES) permit (CWA Section 401 Water Quality Certification) issued by the Minnesota Pollution Control Agency.

401 Water Quality Certification

A section 401 water quality certification is required for any project with a federally-issued license or permit that authorizes an activity that results in a discharge to a Water of the United States. The 401 certification becomes an enforceable component of the associated federal license or permit – either issued under Section 404 of the CWA or Section 10 of the Rivers and Harbors Act. The scope of a CWA section 401 certification is limited to assuring that a discharge from a federally licensed or permitted activity will comply with water quality requirements. Revisions to the 401 rule became effective in September 2020 and now require applicants to request a pre-filing meeting from the certifying agency at least 30 days prior to submitting a 401 water quality certification request. MPCA is the certifying authority in the State of Minnesota.

Proposed new trails without an existing road or trail corridor and no current ATV use, would require construction including clearing of vegetation, fill/hardening sections, boardwalk, culverts and/or bridges for a sustainable trail surface. Compensatory mitigation is accomplished by restoring a previously impacted surface water of the same type, or other type if required by statute, 7050.0265 Subp. 3. The compensatory mitigation replacement ratio would be negotiated with the approving agency based on the type of impact. For wetland loss, 1:1 replacement; where

every acre of wetland lost is replaced by a minimum of one acre of wetland. Depending on the wetland and/or water body impacted, ORVW, trout stream, location replacement, or other noted feature for a waters of the state, the ratio might increase. Temporary impacts to wetland would be restored to pre-construction conditions as dictated by permit conditions established for the respective action. This might include, but not be limited to, restoring natural contours, re-seeding with recommended native vegetation or other measures specific to the type of temporary impact.

Construction would have potential to cause erosion and sedimentation to downstream water resources including wetlands. These segments would have a Stormwater Pollution Prevention Plan (SWPPP) prepared that would specify temporary erosion and sediment control BMPs. These include erosion control blanket on steep slopes, biorolls/filter logs, rock construction entrances, and/or seeding. The proposer will consult with DNR on the appropriate native seed mix. These controls are intended to be installed prior to the start of any construction, and maintained throughout earth-disturbing activities until the site is stabilized. Other wetland and water-related permits applicable to the project include CWA Section 404. New, ongoing ATV use has the potential to lead to increased sediment mobilization and erosion on natural surface trails. Monitoring and maintenance of natural surface trails will be necessary to prevent erosion that could contribute to adverse effects on stormwater quality. The Club would work with local, state, and federal agencies to minimize potential adverse impacts caused by erosion or soil instability by monitoring and maintenance of the trail and using BMPs as described in the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007).

Wetland disturbance would be minimized by routing around wetlands where practicable, and using the narrowest trail footprint that would meet design requirements. Table 11.5 below summarizes potential wetland impacts due to new construction on proposed routes. These are over estimated from an intersection of NWI wetlands and the widest possible build footprint. Compensatory mitigation would be required for all permanent wetland impacts. Mitigation would be provided by purchase of credits from an established wetland bank. Selection of a mitigation bank would follow siting criteria in MN Rule 8420.0522 Supb. 7, with replacement within watershed as first priority if credits are available in the same watershed as the impact.

Table 11.5 Potential Wetland Impacts on New Routes Requiring Construction

Wetland Type, Circular 39	Wetlands in Study Area Acres	Wetlands in Build Area (Potential Impact Areas) Acres
Type 1 (Seasonally Flooded Basin)	-	-
Type 2 (Fresh Meadow)	0.64	0.17
Type 3 (Shallow Marsh)	2.87	0.16
Type 4 (Deep Marsh)	-	-
Type 5 (Shallow Open Water)	0.18	-
Type 6 (Shrub Swamp)	2.58	0.49
Type 7 (Wooded Swamp)	2.18	0.15
Type 8 (Bog)	-	-

Wetland Type, Circular 39	Wetlands in Study Area Acres	Wetlands in Build Area (Potential Impact Areas) Acres
Riverine Systems	0.15	0.01
Total	8.61	0.98

2) Other surface waters: Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

No changes in water quality, impairments or fish wildlife values of nearby waters are anticipated on existing routes, currently open to ATV use, such as those in route category 1 that need no improvements. Route category 2, which includes existing routes with proposed new ATV use, but no improvements needed, anticipates new seasonal on-going use of ATVs. Monitoring and maintenance of natural surface trails would be necessary to prevent erosion which could contribute to TSS impairments. The ongoing use will not generate mercury or otherwise contribute to other existing impairments. The Club would work with local, state, and federal agencies to minimize potential adverse impacts caused by erosion or soil instability by monitoring and maintenance of the trail and using BMPs as described in the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007).

Route categories 3 and 4, existing trails not currently allowed for ATV use, that would need improvements and new proposed routes without an existing road or trail, would have potential to cause erosion and sedimentation to downstream water resources. To minimize potential construction effects that could contribute to TSS impairments, the project would require erosion and sediment control measures such as erosion control blanket on steep slopes. To minimize potential TSS effects from ongoing use, trail design would follow *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007). Ongoing use of the trails is not expected to generate mercury or otherwise contribute to existing impairments.

Crossings would be considered for design on a case-by-case basis based on the size and flow. Improvements include fill/hardening, culvert, boardwalk, and/or bridges for a sustainable trail surface at wetland and water crossings. Potential direct effects of improvements are modified/improved crossings of streams in order to provide safe fish passage. The proposer should refer to MnDOT's guidance on correct installation of culverts as discussed under section 6.b., under "Natural Surface Trails." For example, existing snowmobile bridges might be usable by ATVs without improvements, might need improvements with minimal potential for effects such as re-decking, or might need more extensive improvements/replacement. An area of existing route proposed for improvements, the David Dill/Arrowhead State Trail crosses the Ash River, which is a designated trout stream (Figure 4-1). The crossing has an existing snowmobile bridge for sustainable/non-erosive ATV travel. New or improved trout stream crossings would be designed to meet DNR requirements for maintaining flood flow, fish passage, and navigability (if applicable).

No physical effects or alterations to other surface water features is proposed. Small stream crossings are anticipated to be temporary bridges without permanent alterations to the bed, bank or cross section of the stream. Temporary bridge design would meet DNR's "no permit needed" criteria as described on the DNR's brochure for temporary bridge crossing available on the DNR Water Permits webpage. As described in earlier sections, any necessary improvements to stream crossings would be designed to meet DNR requirements for flood passage, fish passage, and navigability (if applicable).

Other water-related permits applicable to the project include the CWA Section 404 permit, issued by the USACE and the NPDES (NPDES) permit (CWA Section 401 Water Quality Certification) issued by the Minnesota Pollution Control Agency.

12. Contamination/Hazardous Materials/Wastes:

a. Pre-project site conditions. Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

Route category 1 and 2 would not have the potential for contaminations, wastes or hazardous materials as there are no improvements or construction anticipated on these areas. A query of MPCA's "What's in my Neighborhood" online database (April 2020) identified a Petroleum Remediation Leak Site (LS0005293) nearby the existing routes associated with Vermilion River Tavern and a Contaminated Soil Treatment Facility (LS0002008, LS0007736, CS0003500) associated with St. Louis County Garage near Cook.

Existing trails that are not currently suitable for ATV use, as identified in route category 3, would need improvements to allow sustainable/non-erosive ATV travel. Improvements would include fill/culvert, boardwalk or bridges for suitable trail surface at wetland and water crossings. A query of MPCA's "What's in my Neighborhood" online database (April 2020) did not identify any known regulated sites or leaks nearby the proposed route. Excavation will be limited to approximately 12 inches in depth for subgrade preparation, where necessary. The proposed project does not anticipate spill/leaks contaminants during construction. In the event contaminated soil is encountered the state duty officer would be contacted immediately.

Proposed construction of trails in areas without an existing road or trail corridor, identified as route category 4, would construct a 12-14 foot wide drivable top surface with a footprint no wider than 26 feet to accommodate shoulders and clearance on either side of the trail depending on the specific design requirements of any new construction. Improvements would include fill sections, boardwalk, culverts and/or bridges for suitable trail surface at wetland and water crossings. Because these are new routes, clearing of woody vegetation might be necessary to prepare a sustainable corridor. A query of MPCA's "What's in my Neighborhood" online database (April 2020) did not identify any known regulated sites or leaks nearby the proposed route. The proposed project does not expect to encounter contaminants during construction. Excavation would be limited to approximately 12 inches in depth for subgrade preparation, where necessary. If contaminated soil is encountered the state duty officer will be contacted immediately.

b. Project related generation/storage of solid wastes. Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential

environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling

There is potential during operation of the trail (i.e., riding) that solid waste (trash) could be left behind. The Club works to promote trail stewardship and maintenance including discouraging littering. Trail ambassadors, as described in section 10, would help monitor and maintain trails to leave no trace of trash. Solid waste would also be addressed by trail riders being encouraged in the rules and in the signage to stay on the mapped and signed trails. The Minnesota GIA program would allow the use of Trail Ambassadors to help monitor for trail etiquette. The proposed project is not expected to generate significant amounts of solid waste during construction for those route categories, 3 and 4 that would require improvements/construction. Solid waste generated during construction would be limited and would consist primarily of items like construction material packaging. The contractor would be responsible for removing any construction-generated wastes to appropriate off-site facilities for disposal.

c. Project related use/storage of hazardous materials: Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

During operation (i.e., riding), the project could introduce small quantities of fuel and other materials such as hydraulic oils. The release of such material is anticipated to be negligible in quantity. To minimize fuel leaks, the Club encourages trail stewardship which includes maintaining vehicles to avoid leaks. For route categories 3 and 4 that would require improvements/construction, some hazardous materials (such as fuel and lubricants for machinery) would be used. These materials would be used during active construction only, and the contractor would be required to follow Pollution Prevention Management Measures (Part IV.F.2) of the NPDES Construction Stormwater Permit. Refueling spills and equipment breakdowns, such as a broken hydraulic line, could introduce contaminants into the soil during construction. Equipment operators would be instructed to take precautions when refueling equipment and on what to do in the event of an equipment breakdown. Refueling would be conducted away from surface waters and equipment would be regularly inspected by the contractor with appropriate oversight from the lead engineer, and repaired to prevent inadvertent loss of fuels, oils, or other hazardous fluids. Any spills will be reported to MPCA by the contractor or lead engineer. All hazardous materials will be removed from the project site upon completion of construction.

d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.

No hazardous wastes are anticipated to be generated/stored during construction or ongoing trail operation.

13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):

a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

The System has connections over a relatively broad geographic area. As classified by the DNR's Ecological Classification System (ECS), the System is located within the Laurentian Mixed Forest province, with conifer forest, mixed conifer-hardwood forest, and conifer-dominated wetlands. The routes are located

in the western portion of the Northern Superior Uplands section and a small area of the Northern Minnesota and Ontario Peatlands section near Cook. The Northern Superior Uplands are characterized by shallow bedrock of the Canadian Shield, with high topographic relief. Typical native vegetation is fire-dependent forests and woodlands with inclusions of peatlands and wet forests. The Northern Minnesota and Ontario Peatlands section, in contrast, is generally flat and poorly drained. Mesic and wet forests and open peatlands are common in this section.

The System is situated nearby Minnesota Biological Survey (MBS) sites of high biodiversity significance. These sites generally border the System on the east, and are associated with Voyageurs National Park and Lake Vermilion areas. Short lengths of existing routes, not proposed for improvements intersect the MBS sites. Forest management and recreation are dominant current land uses in the area of the System.

Fisheries: The System encompasses a large portion of Northern Minnesota – an area nationally and regionally known for its plentiful lake and stream resources. Fish commonly sought by anglers in the proposed project area are typified by coolwater and warmwater game fishes, such as Walleye (*Sander vitreus*), Sauger (*Sander canadensis*), Northern Pike (*Esox lucius*), Smallmouth Bass (*Micropteris dolomieu*), sport fish (sunfish and crappies), and small forage fish (minnows, shiners, and darters). The Walleye fishery attracts anglers to the area and many lakes are managed for Walleye through stocking and fishing regulations.

Some of the deeper lakes in the area, such as Crane, Kabetogama, and Winchester Lake also possess a coldwater fish community which includes species such as Lake Trout (*Salvelinus namaycush*), Whitefish (*Coregonus clupeaformis*), Cisco (*Coregonus artedi*), and Burbot (*Lota lota*). Additionally, state-designated trout streams in the project area possess wild populations of Brook Trout (*Salvelinus fontinalis*).

Wildlife: Resident wildlife in the proposed project area includes species common to areas with conifer and mixed forest, such as beaver, wolves, black bear, long-eared bat, bald eagle and spruce grouse. Rare species are discussed in more detail under item 13.b. below.

b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-____) and/or correspondence number (ERDB _____) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

The Club's consultant, SEH, queried the DNR Natural Heritage Information System (NHIS) (LA-936) on April 21, 2020 to determine what significant natural features and rare features are known to occur within a one (1) mile buffer of the proposed project area. The query identified multiple rare features near the project area, including federal and state listed species, as identified below and discussed in Item 13c. On May 20, 2020, SEH staff submitted a request for NHIS staff to review and comment on the findings. Natural Heritage staff replied on July 2, 2020 (attached)

Ecologically Significant Areas

MBS identified several Sites of Biodiversity Significance in the proposed project including areas designated as Preliminary Sites. Sites of Biodiversity Significance have varying levels of native biodiversity and are ranked based on the relative significance of this biodiversity at a statewide level. Sites ranked as High contain very good quality occurrences of the rarest species, high quality examples of the rare native plant communities, and/or important functional landscapes. Sites ranked as Moderate contain occurrences of rare species and/or moderately disturbed native plant communities, and/or landscapes that have a strong potential for recovery. These sites contain multiple native plant communities and old-growth forests.

NHIS staff recommend minimizing additional disturbance within and adjacent to these sites as much as possible. Actions to help minimize disturbance of ecologically significant areas is discussed below in 13d.

State-Listed Species

Minnesota's Endangered Species Statute (Minnesota Statutes, Section 84.0895) requires the DNR to adopt rules designating species meeting the statutory definitions of endangered, threatened, or species of special concern. The resulting List of Endangered, Threatened, and Special Concern Species is codified as Minnesota Rules, Chapter 6134. The Endangered Species Statute also authorizes the DNR to adopt rules that regulate treatment of species designated as endangered and threatened. These regulations are codified as Minnesota Rules, Parts 6212.1800 to 6212.2300.

Minnesota's Endangered Species Statute and the associated Rules impose a variety of restrictions, a permit program, and several exemptions pertaining to species designated as endangered or threatened. A person may not take, import, transport, or sell any portion of an endangered or threatened species. However, these acts might be allowed by permit issued by the MN DNR; plants on certain agricultural lands and plants destroyed in consequence of certain agricultural practices are exempt; and the accidental, unknowing destruction of designated plants is exempt. Species of special concern are not protected by Minnesota's Endangered Species Statute or the associated Rules; however, the measures incorporated to protect listed species and generally minimize impacts to wildlife and wildlife habitat will also benefit non-listed species.

The following state or federally listed or otherwise protected species might occur within the project area:

- **Northern Long-Eared Bat** *(Myotis septentrionalis)*
  Federal Status: Endangered
  Minnesota Status: Special Concern
  The Northern Long-eared Bat commonly roosts in tree snags, under loose tree bark, and in tree cavities within forested habitat. There are known roost maternity trees in the direct vicinity of the trail in T67N R20W Section 35, within 850 feet of the trail in T67N R18W Section 14 and mist net observations within 850 feet of the trail in T67N R18W Section 23.
  (Route Category 2)

- **Canada Lynx** (*Lynx canadensis*)
  Federal Status: Threatened
  Minnesota Status: Special concern
  The Lynx has been documented in the vicinity of the proposed project. Found in large tracks of boreal and mixed conifer-hardwood forests.

- **Little brown bat** (*Myotis lucifugus*)
  Minnesota Status: Special Concern
  During the active season (approximately April – October) these species typically roost underneath bark, in cavities, or in crevices of both live and dead trees; and in human structures such as buildings and bridges. During winter, they hibernate in caves and mines.
  (Route Category 2)

- **Laurentian Tiger Beetle** *(Cicindila denikei)*
  Minnesota Status: Special Concern
  Multiple observations were identified by the NHIS query. Suitable habitat for this species includes gravel roads and openings in northern coniferous forests.
  (Route Categories 2, 3, 4)

- **American White Pelican** *(Pelicanus erythrorhynchos)*
  Minnesota Status: Special Concern
  The American White Pelican prefer large, shallow bodies of water, and generally nest on flat or bare islands.
  (Route Category 2)

- **Creek Heelsplitter** *(Lasmigona compressa*)
  Minnesota Status: Special Concern mussel species
  The Creek Heelsplitter occurs in creeks, small rivers, and the upstream portion of large rivers. It has been documented within the Black Duck River in T66N R19W Section 8.
  (Route Categories 2, 3, 4)

- **Northern Goshawk** *(Accipiter gentilis)*
  Minnesota Status: Special Concern
  The Northern Goshawk is typically found and nests in larger tracts of mature upland forest.
  (Route Categories 2, 3)

- **Least Moonwort** *(Botrychium simplex)*
  Minnesota Status: Special Concern
  In the context of this occurrence, the habitat was sandy roadside. It is not known which variety of B. simplex this was, so a further description of habitat preference is not available.
  (Route Category 2)

- **Caddisfly** *(Goera stylata)*.
  Minnesota Status: Threatened
  The habitat of Goera stylata consists of fast-moving, cold, clear streams.
  (Route Category 2)

- **Floating marsh-marigold** (*Caltha natans*)
  Minnesota Status: Endangered
  Floating marsh-marigold occurs in shallow, slow-moving water in streams, creeks, ditches, swamps, pools, beaver ponds, and sheltered lake margins.

- **Trumpeter swans** (*Cygnus buccinator*)
  Minnesota Status: Special Concern
  The Trumpeter swan nests in the vicinity of the proposed project. During breeding season, they select small ponds and lakes with extensive beds of cattails, bulrush, sedges, and/or horsetail.

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

Species Impacts

The proposed project areas that have not been previously disturbed (route categories 2, 3 and 4), could be more vulnerable to disturbance. ATV/OHV-related construction and operational activities could alter the quality of wildlife habitats compared to no additional use. Species currently conditioned to the proposed project site would be subject to new types of disturbances caused by the ongoing human activity and noise associated with ATV/OHV use. Noise would be generated by individual ATV/OHV machines, or collectively when ridden in groups.

The northern long-eared bat *(Myotis septentrionalis)* and Little Brown Myotis *(Myotis lucifugus)* have habitats in trees that are affected during tree removal.

Canada Lynx (*Lynx canadensis*), documented in the vicinity of the proposed project are highly dependent on snowshoe hare for prey.

State-listed Laurentian tiger beetle (*Cicindela denikei*) was documented in the vicinity of the project multiple times. These beetles are found in sand and gravel openings, including gravel roads and trails or sparsely vegetated rock outcrop areas within northern coniferous forest. The species might be impacted by this proposed project.

American White Pelican *(Pelicanus erythrorhynchos)* are generally prefer large, shallow bodies of water, and generally nest on flat or bare islands.

Creek Heelsplitter *(Lasmigona compressa*) occurs in creeks, small rivers, and the upstream portion of large rivers. It has been documented within the Blackduck River in T66N R19W Section 8. Mussels are particularly vulnerable to deterioration in water quality, especially increased siltation.

The Northern Goshawk *(Accipiter gentilis)* has been documented multiple times in the vicinity of the proposed project. They are impacted by fragmentation, loss of forest diversity, and a decrease in mature trees.

Goera stylata, state-listed threatened species of caddisfly can incur indirect impacts from surface runoff or spread of invasive species. As currently proposed, there will be no trail construction or improvements in the area.

The Trumpeter swans (*Cygnus buccinator*) nests in the vicinity of the proposed project. Stable levels of unpolluted water, emergent vegetation, low levels of human disturbance and the presence of muskrat *(Ondatra zibethicus)* houses and American beaver *(Castor canadensis)* lodges for use as nesting platforms are important to avoid impacts.

Plant Community and Ecosystem Impacts

Potential for effects includes construction related effects of direct excavation and fill, erosion/sedimentation, and transport of invasive species. Ongoing ATV use has potential to cause erosion and spread invasive species.

State-listed endangered floating marsh-marigold is an aquatic species that occurs in shallow slow moving water and is particularly sensitive to habitat disturbances, such as indirect impacts from surface runoff or the spread of invasive species. As currently proposed, there will be no trail construction or improvements in the area of occurrence.

Impacts to wetlands within the project area would be due to the placement of fill to allow for the trail to be constructed on stable soils. The permitting process would address additional mitigation strategies as necessary for wetland impacts. Specific mitigation strategies will be determined during the WCA process as well as through coordination with appropriate federal agencies.

Wetlands within MBS Sites of High Biodiversity Significance might qualify as rare natural communities under the WCA. Wetlands that have the potential to be identified as a rare natural community would be further evaluated and under Minnesota Rules 8420.0515, Subp. 3 states that a wetland replacement plan for activities that modify a rare natural community must be denied if the LGU determines the proposed activities will permanently adversely affect the natural community.

Multiple portions of the proposed project are within and adjacent to old-growth forests. In particular, an existing trail that needs improvement within T68N R20W Sections 20 and 29, directly intersects a designated old-growth forest. Old-growth forests are natural forests that have developed over a long period, generally at least 120 years without severe, stand-replacing disturbance. Less than 4% of old-growth forests remain in Minnesota.

d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

Activities that could impact the northern long-eared back include disturbance to hibernacula and destruction/degradation of habitat. In order to avoid impact, tree removal would be avoided during pup rearing season, June 1st through July 31st. The US Fish and Wildlife Service (USFWS) has published a final 4(d) rules that identified prohibited take of the Long-Eared Bat.

DNR Public Waters Work Permits would include work exclusion periods to protect fish spawning and migration. No activity affecting the bed of the protected water might be conducted during exclusion periods. For warm water system, the exclusion period is April 1 – June 30 of the same year. For cold water systems (designated trout streams), the exclusion period is September 15 through June 30 of the following year.

Habitat impacts can also be addressed by trail riders being encouraged in the rules and in the signage to stay on the mapped and signed trails as well as to use the PlayCleanGo program, including cleaning machines prior to using the trail system. The Minnesota GIA program would allow the use of Trail Ambassadors to help keep invasive species in check and monitor for trail etiquette and safety.

Stormwater pollution prevention BMPs would be implemented in order to prevent water quality degradation. To reduce potential impacts to wildlife habitat itself, design standards will follow the sustainable natural surface trail design practices described in the *"Trail Planning, Design and Development Guidelines"* manual (MN DNR, 2007) throughout the project area to minimize tread area and potential erosion.

Potential design features for project amenities that could provide benefit to wildlife include greater buffering along water and wooded areas, and sites or stops for activities such as picnicking, bird watching, or hiking that use sensitive habitat areas for the placement of such zone.

The Trail Ambassador Program establishes informational and educational contacts by enabling volunteer monitoring efforts to promote safe, environmentally responsible operation of OHVs. Trail ambassadors are trained on the rules and regulations of operating OHVs and guidelines and policies of proper trail use in the recreation area. They are certified to monitor trail conditions, identify invasive species, and provide first aid. They are not however licensed peace officers, and therefore cannot arrest or detain violators.

The OHV GIA program would also allow an area ATV club to help maintain the trail system and remove invasive species.

Invasive species can adversely impact wildlife habitat. Prevention and control of invasive species would be considered in the design, construction, and maintenance of trails. Measures to prevent the spread of invasive species during construction include: working in non-infested areas first before moving to infested areas; thoroughly cleaning equipment after working in infested areas; and revegetating disturbed areas as soon as possible after construction is completed. Wood chips or other mediums which allow invasive plants to easily take root will not be used for the trail system. Where current or future infestations are identified, control methods will be applied to limit the spread and impact of invasive species. Disturbed land will use native plants seed mixes where possible. Keeping riders on designated trails will limit the potential of transporting invasive species to other areas.

If a lake, stream, or wetland contains an aquatic invasive species that could spread to other waters, it is added to the infested waters list. During trail construction, any work in infested public waters, such as construction of crossings, would require a joint Public Waters Work Permit/Invasive Species Permit. The joint permit includes conditions to help mitigate the spread of aquatic invasive species, such as decontamination of equipment used in infested waters and for the transport of infested materials. A list of ignited infested waters is available on the DNR Infested Waters webpage.

Disturbance to old-growth forest stands should be minimized to the extent feasible and tree removal within old-growth forest stands should be avoided. The proposer would consult with the Regional Plant Ecologist regarding avoiding impacts on these areas.

14. Historic Properties:

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

Previously known historic structures, archeological sites, and/or traditional cultural properties in the same sections as the System include the Fire Tower at Shively Road. If this System destination is approved, minimum repairs would be planned to allow for recreational use of the fire tower including new stair treads, safety fencing, and handrail support. Per the State Historic Preservation Office (SHPO), if the Fire Tower at Shively is approved, and it becomes a federal undertaking, further identification and evaluation efforts might be needed in regards to identifying historic properties that might be affected by the proposed project. This could also apply to the Winchester Lake Overlook.

In reference to the lookout tower at Shively Road, SHPO recommended the project utilize the guidance provided in the report titled *Rehabilitation Planning Study: Scenic Fire Lookout Tower, Scenic State Park* (February 2019) as prepared by Gemini Research and Widseth Smith Nolting.

Per the request of the proposer, SHPO conducted a database search of the Minnesota Archaeological Inventory and Historic and Architectural Inventory of the project area and immediate vicinity (outside of the defined project area). On June 22, 2020, SHPO recommend a Phase 1A literature review and archaeological assessment be completed with the condition that if the literature review and assessment further recommended a Phase 1 archaeological survey, it must be completed prior to construction.

Duluth Archaeology Center completed and submitted a cultural resources survey titled Phase 1A Archaeological Review of the Voyageur County ATV Trail System, St. Louis County, Minnesota (July2020). This

document is available upon request from the DNR. The consultant recommended that a Phase 1 Archaeological survey should be conducted in areas of proposed new trail construction as well as in areas of proposed trail improvements where new ground disturbance would take place. On September 9, 2020, SHPO concurred with the recommendation of Duluth Archaeology Center.

15. Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

The System enjoys multiple scenic views and vistas as a result of the natural land cover and steep topography common in the region. These areas are an important part of the System user experience due to unique aesthetic value. No lighting or vapor plumes are proposed as part of the project. Unique visual features of the project are the proposed Winchester Lake Overlook and Fire Tower on Shivel Road. The scenic views and vistas from these locations would not be altered by the project; rather, these elements of the System are intended to improve access to these scenic views for trail users. Repairs are proposed to the Fire Tower to allow this access, and a roughly 256 ft^2 pull-out/platform is proposed at the Winchester Lake Overlook.

Under all route categories, substantial changes to scenic and views/vistas is not anticipated. Impacts to visual aesthetics are expected to be minimal and include the installation of additional signage identifying the route. The signage would be similar to wayfinding signage for other roads, trails, and amenities in the area. Signs would follow the standards of the "*Minnesota Manual on Uniform Traffic Control Devices*" (MnDOT). Clearing of trees/shrubs required for proposed new trail segments would result in visual changes; however, might provide the opportunity to access scenic views/vistas to new users as a result of the proposed trails.

16. Air

a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

   There are no stationary sources of air emission currently on the proposed project site or proposed as part of the project.

b. Vehicle emissions. Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

   During operations, an expected increase in vehicle-related emissions would occur as a result of the proposed new ATV travel and associated trailering traffic, in all route categories. These increases are anticipated to be sporadic and intermittent. For proposed ATV routes that share a corridor with snowmobile trails, the air emissions would be restricted to the months in which the trails are open for ATV use during snow-free seasons. Improvement/construction-related vehicle emissions would result from the use of equipment to physically improve trails for ATV travel. Construction emissions are anticipated to be minor and temporary in nature, while ATV operations emissions are expected to increase.

The Club encourages trail stewardship which includes maintaining vehicles to maintain standard emission requirements. Otherwise, no improvements or mitigation measures are proposed. Air emission levels are expected to remain below current EPA standards and are not expected to have a negative impact on air quality.

c. Dust and odors. Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

For existing routes currently open to ATV use (route category 1) no additional dust or odor effects is anticipated as a result of the proposed project.

For route categories 2, 3, and 4 (existing routes with proposed new ATV, with and without improvements and new proposed new routes and new construction) no significant odors are anticipated from trail riding. Odors that could be strong or offensive would be generated where vehicles congregate; however, such congregations are anticipated to be sporadic and temporary. As the proposed routes become operational, ATVs and OHMs would create dust on trails, but not on public roads. Actual dust would depend primarily on types and numbers of vehicles, operating speeds, time of day, and trail moisture conditions.

Dust from the construction of new trails or the physical improvement of existing trails is expected during periods of dry weather. Dust would be visually monitored and recorded in conjunction with the NPDES Construction Stormwater Permit inspections. Appropriate dust control BMPs, such as soil wetting or misting/water vapor, would be implemented by the construction contractor as necessary. Specific BMPs would be determined based on severity, weather conditions, and site conditions.

17. Noise:

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

Generally, ATV noise is regulated by MN Rule 6102.0040, Subp. 4.B, which restricts noise emission from ATVs and ORVs

> *"…so that overall noise emission does not exceed a sound level limitation of not more than 99 decibels on the A scale from a distance of 20 inches using test procedures and instrumentation as set forth in the Society of Automotive Engineers' Standard, SAE J1287, June 1988, or, if different procedures or instrumentation are used, a noise level equivalent to that level."*

The region of the System is relatively sparsely populated and surrounding land use is mostly natural vegetation, timber management, and recreation. Effects of noise and nearby sensitive receptors is outlined as follows:

- For existing routes currently open to ATV use (route category 1) no change to current ambient noise levels is anticipated.
- For route categories 2, 3, and 4 (existing routes with proposed new ATV, with and without improvements and new proposed new routes, new construction) existing road ambient noise is currently primarily generated by year-round vehicle traffic. This noise is sporadic and short in duration. Allowing ATV use on existing roads is anticipated to have a negligible change on ambient noise. Sensitive receptors include the general public recreating near the segment, and private

landowners adjacent to a road segment. Wildlife would also be exposed to noise levels near or along the road.

Ambient noise on existing trails is currently primarily generated by winter vehicle (snowmobile) traffic. A change in use to allow ATVs would involve new or increased noise due to ATV traffic during spring, summer and fall use. Sensitive receptors include the general public recreating near the segment and private landowners adjacent to a trail segment. Few residences are located near the majority of the trail segments, most of which are concentrated near city centers. Private landowners are not anticipated to experience a negative change in quality of life from the intermittent noise generated during routine trail operations. Wildlife would also be exposed to noise levels near or along the trail. This noise is anticipated to be sporadic and short in duration.

Construction/improvement effects would include noise typical of road or trail project construction contractors using skid steers, small excavators, or similar machinery. Construction noise would be temporary and limited to daytime hours.

18. Transportation:

a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

Parking areas are currently identified on System maps. No new parking areas are proposed. Currently available parking areas are provided by local businesses offering services such as food, lodging, gas, trailer/vehicle parking, and minor repairs. These services (including parking) are provided and maintained by those businesses.

The proposed project involves an estimated 386.51 miles of trail, including an estimated 383.97 miles of existing trail and 2.54 miles of new trail. The peak hour traffic generated is not expected to exceed 250 vehicles or 2,500 total daily trips. Increases in traffic-related aspects would occur as a result of new ATV use and associated vehicles trailering ATVs to the System. These increases will be sporadic and intermittent and restricted to seasonal (spring, summer, fall) use in which these segments would be open for ATV use. There is no plan for winter use by ATVs, therefore no conflict are anticipated with snowmobile use or groomer operations within System trails. Seasonal (spring, summer, fall) ATV System user traffic is anticipated to be similar to current snowmobile (winter) user traffic, where users access trailheads from System parking areas. Construction-related traffic effects temporarily increase during construction. These effects are anticipated to be minor and temporary in nature.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. *If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW.* Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (MnDot, 2020) (*available at the Minnesota Department of Transportation Access Management webpage*), or a similar local guidance.

Traffic within and near the project area is not expected to change substantially as a result of the proposed project. Increased congestion is not anticipated due to the project, nor are traffic improvements expected to be needed.

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.
Project related transportation effects are not anticipated. Any increase in traffic that potentially might occur is expected to be minor. Any temporary traffic disruptions would be mitigated by implementing proper traffic control measures as specified in the "*Minnesota Manual on Uniform Traffic Control Devices*" (MnDOT). There are no identified long-term traffic minimization plans associated with the project.

19. **Cumulative potential effects** (Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items):

a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

The geographic scale of the project-related environmental effects includes the immediate trail corridor reviewed (26 feet for existing road/trail and 226 feet for newly proposed routes) as defined within the project boundary depicted on Figure 1. This is the general locale for future activity associated with the proposed project and future forest management.

The timeframe for considering potential cumulative effects would be approximately 10 – 15 years related to on-going use of the System, but more immediately, the first five years of construction and early operations. The primary construction window for each trail segment with potential improvements is expected to be one construction season, taking place over multiple years, with disturbance in any individual location having a duration of approximately 3-6 months for each respective segment. In practice, duration and timing of construction phase would depend on a number of factors, including but not limited to 1) accessibility to the project area; 2) avoidance of threatened and endangered species; 3) logistical considerations.

Potential environmental effects related to this project that could combine with environmental effects from other reasonably foreseeable future projects for which a basis of expectation has been laid, include dust and noise, traffic, spread of invasive species, erosion, and water quality. The proposed project would temporarily generate dust and noise during the phases of construction, with the potential for noise and dust generation during ongoing maintenance. The proposed project would increase traffic levels above existing conditions that would vary as a function of total recreational use of the site. Routine use of the trails can result in increased erosion and introduction or spread of invasive species.

b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

St. Louis County

According to the 2018-20222 St. Louis County Capital Improvement Program (CIP), there are three planned roadway projects in the area of the proposed project as follows:

- **2021: County Project 317610** (Township 62, Range 18, Section 16)
  Bridge Construction CR – 600 (Johnson Rd. ext) - .07 mile south of CSAH 150. This type of work is performed to eliminating structurally deficient, functionally obsolete, load posted & fracture critical structures.

- **2022: County Project 367955** (Township 63, Range 18, Section 36)
  Reclaim and overlay County Road 478 (Wakely Rd.) – CR 540. This type of improvement allows for subgrade and structural improvements, load capacity increases, culvert replacement and minimizes cracking of the pavement surface.

- **2022: County Project 314089** (Township 65, Range 17, Section 9)
  Bridge Construction CSAH 24 (Crane Lake Rd.) – 15.0 Miles Northeast of the Town of Orr over Vermilion River at Buyck. This type of work is performed to eliminating structurally deficient, functionally obsolete, load posted & fracture critical structures.

Timber

Timber Lands owned by the state of Minnesota within the proposed project area might be, or can be used for logging. Forest cover types on the DNR-managed lands across the project area consist of upland and lowland timber cover types that are actively managed. DNR lands within the project area are subject to ongoing, active timber sale contracts. Timber Appraisal Reports are available upon request.

Voyageur Country

The Voyageur Country ATV Club's Master Plan identifies future segment connectivity of the System (6-10+ years in the future) that could provide additional connections to communities and amenities in the region (see Figure 1 for location of communities). Any construction effects from these segments will not overlap in the timeframe of review of this EAW. Ongoing use of the System will have limited geographic overlap with these future segments at connection points.

Prospectors

The Prospectors Trail Alliance aims to connect the communities of Ely, Babbitt, Embarrass and Tower, as well as the Bear Head Lake and Lake Vermilion State Parks with a 130-mile loop open to Class 1 and 2 ATVs, off-highway motorcycles and some segments open to off-road vehicles. A section of the loop would utilize the Taconite snowmobile trail that heads west from Ely to Murray Road. The loop would connect to the new Lake Vermilion State Park which has a planned motorized campground for ATVs and snowmobiles.

Quad Cities, Northern Traxx and Ranger ATV Clubs

Quad Cities ATV Club, along with Northern Traxx ATV and The Ranger ATV-Snowmobile Clubs have proposed approximately 24 miles of trail improvements between four different trail segments in St. Louis County. Quad Cities ATV Club proposes two trail segments. One segment consists of seven miles of trail improvements from Virginia to County Road 303 and four miles of trail improvements from Pfeiffer Lake Forest Road to County Road 361. The Northern Traxx ATV Club is currently proposing to develop a five-mile designated ATV route from Chisholm to Hibbing. The Ranger ATV-Snowmobile Club is proposing to connect Gilbert to Biwabik with eight miles of trail improvements.

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

Traffic

Temporary localized increases in traffic could occur near locations of other reasonably foreseeable projects during construction. There might be temporary increases in localized traffic and parking demand where future segments share connection points and amenities. Following trail development, cumulative traffic effects would persist over the lifetime of use of the trails proposed for this project, in combination with other recreation-oriented reasonably foreseeable projects, due to increased use in the area. Traffic effects would likely have seasonal peaks around the three major summer holidays as well as other peak use levels, such as special events (e.g., organized ATV events).

Dust and Noise

Cumulative dust and noise effects are possible if any of the additional reasonably foreseeable construction and trail use overlaps the planned project construction and trail use. Construction related effects would be expected to occur during daylight hours and would end when construction is complete. At this time, it is not known whether construction on any of the reasonably foreseeable projects will overlap with this project. State noise standards are not expected to be exceeded in these cases. The potential exists that OHV-generated noise may increase; however, it is expected to be temporary and sporadic in nature and the proposer does not believe that noise levels will constitute a nuisance under state law (*see* Minnesota Rules Chapter 7030).

Plant Communities/Invasive Species

Cumulative invasive species effects are possible, both during construction and use of the trails. Both construction equipment and OHVs can create the opportunity for and establishing and transporting invasive species both inside and outside the proposed project area. Reasonably foreseeable ATV trail improvements/expansions would provide additional possible infestation sources, as would the existing trail system. Any invasive species established along these trails could serve as potential source for additional invasive species spread to any subsequent nearby project. This is a permanent possibility and will require permanent routine monitoring and maintenance of the trails to manage the effect. Trail managers should work with area partners such as the DNR Trail Ambassador program to monitor and reduce the spread of invasive species in the System.

Erosion

Cumulative erosion effects are possible if project construction activities overlap any of the other planned construction activities in the area. Any land alteration activity entails the risk of erosion, so effective site erosion and sedimentation control precautions are essential. While overlap with other projects is not anticipated, it is important to note that the magnitude of any cumulative effects is variable and would be minimized by all projects following the erosion precautions stipulated in their respective workplans and as conditions of their permits. The possibility of cumulative effects from construction activities is also minimized if construction activities do not overlap in time. Timber management activities my take place in the same geographic scale and timeframe for construction and ongoing use. Where the System might share use with traffic for timber management, regular monitoring and maintenance will be important to keep sustainable slopes and treads to prevent erosion.

Water Quality

Cumulative water quality effects are possible, but expected to be minimal if the proposed project and construction work meet conditions of permitting including WCA and MPCA-administered Construction Stormwater General Permit. Measures required under these permits are designed to avoid and minimize as well as limit erosion and subsequent offsite transport of sediment and nutrients to adjacent waterbodies. Proposed trail segments might require wetland fill or alterations to waterways to provide sustainable crossings for ATV traffic. The proposer would work with permitting to minimize effects and provide mitigation where alternate routes are not possible. Timber management potential effects on water resources might occur in the same geographic areas and timeframe as the proposed project. In order to prevent System construction and ongoing use from contributing to water resource effects overlapping with timber management effects, construction BMPs (such as silt fence, erosion control blanket, or biorolls) and sustainable trail design will be implemented.

20. Other potential environmental effects:

If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

There are no other known or potential environmental effects that were not discussed in EAW items 1 to 19.

RGU Certification

*(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Cynthia Jhosak-Korbs

Signature

November 13, 2020

Date

Title: EAW Project Manager