

1 *December 2022 version*

2 Environmental Assessment Worksheet

3 This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are
4 available at the Environmental Quality Board’s website at: <https://www.egb.state.mn.us/> The EAW
5 form provides information about a project that may have the potential for significant environmental
6 effects. Guidance documents provide additional detail and links to resources for completing the EAW
7 form.

8
9 **Cumulative potential effects** can either be addressed under each applicable EAW Item or can be
10 addressed collectively under EAW Item 21.

11
12 **Note to reviewers:** Comments must be submitted to the RGU during the 30-day comment period
13 following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and
14 completeness of information, potential impacts that warrant further investigation and the need for an
15 EIS.

17 1. Project title: Voyageur Country ATV System Phase 2

19 2. Proposer: Voyageur Country ATV

20 3. RGU: DNR Environmental Review Unit

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28 4. Reason for EAW Preparation: (check one)

Required	Discretionary
<input type="checkbox"/> EIS Scoping	<input type="checkbox"/> Citizen Petition
<input checked="" type="checkbox"/> Mandatory EAW	<input type="checkbox"/> RGU Discretion
	<input type="checkbox"/> Proposer Initiated

29 If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

30 [Minnesota Rule 4410.4300 Subp. 37 B](#). The project would be designating at least 25 miles of an existing trail
31 for a new motorized recreational use other than snowmobiling.

32 5. Project Location:

- 34 • Counties: [Koochiching and St. Louis](#)
- 35 • City/Township: [Refer to Attachment A-1](#)
- 36 • PLS Location ($\frac{1}{4}$, $\frac{1}{4}$, Section, Township, Range): [Refer to Attachment A-2](#)
- 37 • Watershed (81 major watershed scale): [Rainy River – Rainy Lake \(#74\)](#), [Rainy River – Black River](#)
38 [\(#75\)](#), [Little Fork River \(#76\)](#)
- 39 • GPS Coordinates: [Refer to Attachment A-1](#)
- 40 • Tax Parcel Number: [Refer to Attachment A-3](#)

41 **At a minimum attach each of the following to the EAW:**

- 42 • County map showing the general location of the project;
- 43 • U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy
- 44 acceptable); and
- 45 • Site plans showing all significant project and natural features. Pre-construction site plan and
- 46 post-construction site plan.
- 47 • List of data sources, models, and other resources (from the Item-by-Item Guidance: *Climate*
- 48 *Adaptation and Resilience* or other) used for information about current Minnesota climate
- 49 trends and how climate change is anticipated to affect the general location of the project during
- 50 the life of the project (as detailed below in item 7. Climate Adaptation and Resilience).
- 51

52 **Figures and Attachments**

- 53 • Figure 1: Project Overview Map
- 54 • Figures 2-1 through 2-12: Project Area Map
- 55 • Figures 3-1 through 3-12: USGS 24k Topographic Map
- 56 • Figures 4-1 through 4-12: Hydrology Map
- 57 • Figures 5-1 through 5-12: Soils Map (SSURGO)
- 58 • Figures 6-1 through 6-12: Land Cover Map (NLCD, 2019)
- 59 • Figures 7-1 through 7-12: MN DNR NPCs and Sites of Biodiversity Significance
- 60 • Figure 8: Voyageur Country ATV System Overview Map
- 61 • Attachment A-1: Project Location Information
- 62 • Attachment A-2: Public Land Survey ¼, ¼, Section, Township, Range
- 63 • Attachment A-3: Tax Parcels
- 64 • Attachment B-1: Trail Design Typical Sections
- 65 • Attachment B-2: ATV Boardwalk Detail
- 66 • Attachment C: Soil Characteristics
- 67 • Attachment D: NHIS letter
- 68 • Attachment E: State Historic Preservation Office Correspondence
- 69

70 **6. Project Description:**

- 71
- 72 a. Provide the brief project summary to be published in the *EQB Monitor*, (approximately 50
- 73 words).
- 74

75 The Voyageur Country ATV Club (VCATV) is proposing up to 125 additional miles of roadway and
76 natural surface trail to be included in the Voyageur Country ATV System, connecting communities in
77 Koochiching and St. Louis counties. The proposed project includes 39 possible miles of existing route,
78 78 possible miles of existing route with improvements, and 8 possible miles of new trail.

- 79
- 80 b. Give a complete description of the proposed project and related new construction, including
- 81 infrastructure needs. If the project is an expansion include a description of the existing facility.
- 82 Emphasize: 1) construction, operation methods and features that will cause physical
- 83 manipulation of the environment or will produce wastes, 2) modifications to existing equipment
- 84 or industrial processes, 3) significant demolition, removal or remodeling of existing structures,
- 85 and 4) timing and duration of construction activities
- 86

87 **Existing System**

88 The existing System (shown on Figure 1) connects communities in northern St. Louis County on natural surface
89 trails, shared-use natural surface or gravel roads, and paved roads. These communities include Kabetogama to
90 the north, Ely to the east, Orr to the west, and Cook to the south, with connecting routes in between.

91
92 The proposed project would connect the existing System with communities in Koochiching County, including the
93 City of International Falls, the City of Littlefork, and the unorganized territories of East Koochiching, Rainy Lake,
94 and Northwest St. Louis County.

95
96 **Status of Phase 1 Projects**

97
98 Phase 1 of the Voyageur Country ATV Trail Improvement Project underwent environmental review in 2021. Like
99 the current proposed project, Phase 1 also involved improving, connecting, and constructing new trail along
100 various trail segments across a large area of northern Minnesota. The current project status of these segments is
101 described below.

102
103 *Connections from Sheep Ranch Road north to Gamma Road/Kabetogama, generally using the Arrowhead State*
104 *Trail alignment* [for reference, these connections are shown on Figure 2-1 of the first Environmental Assessment
105 Worksheet (EAW)] – These segments are managed by MN DNR Parks & Trails (MN DNR PAT) as a shared use on
106 the Arrowhead State Trail. MN DNR PAT is currently finalizing design and expects to bid a project in 2024 from CR
107 129 to CR 122/ Gamma Road on the northern end of these segments. The trail further south from Sheep Ranch
108 Road to CR 129 is undergoing resource assessment before the next stages of design.

109
110 *Connections from CR 180 to Sheep Ranch Road* (shown on the north portion of Figure 2-3 and the south portion
111 of Figure 2-1 of the first EAW) – Voyageur Country ATV is currently engaged in permitting and design for a
112 connection from CR 180 near the Blackduck Lake public access, north/northwest to the Fawn Creek Road to
113 make this connection. This segment is planned for construction in 2024. Other connections in this area are not
114 currently being designed nor permitted.

115
116 *Connection from Schuster to Buyck* (shown on Figure 2-4 of the first EAW) – This segment has completed
117 construction.

118
119 *Winchester Lake Overlook* (shown on Figure 2-4 of the first EAW) – This segment has completed construction.

120
121 *Pelican River Road to Susan Lake* (shown on Figure 2-5 of the first EAW) – The sub-segment from Pelican River
122 Road to Elbow River is currently in design, with permitting and construction anticipated in 2024 or 2025. Work
123 from the Elbow River to Susan Lake Road (CR 426) would follow, potentially in 2025 or 2026. Other connections
124 in this area are not currently being designed or permitted.

125
126 *Fire Tower at Shively Road* (shown on Figure 2-6 of the first EAW) – The fire tower overlook is not currently being
127 designed or permitted. The trail loop in this area is open to ATVs.

128
129 **Proposed Phase 2**

130 The proposed project (Project) would build and/or designate segments of the System for seasonal (spring,
131 summer, fall) motorized all terrain/utility terrain vehicle (ATV/UTV) and off-highway motorcycle (OHM) use
132 (Note: The term “ATV” is used throughout this document to refer to all motorized vehicles intended for use on
133 the trail, including ATVs, UTVs, and OHMs). Phase 2 trail construction would be anticipated to start in 2025 and
134 be phased over 3 to 5 years. Timing of construction of segments would vary depending on funding, permitting,
135 and seasonal restrictions.

136

137 Figure 8 displays the existing trail system, the Phase 1 expansion, and the proposed Phase 2 expansion.
138

139 **Construction**

140 The Club proposes construction in the summer or during winter, with the intention of avoiding January through
141 March for those sections proposed to be co-located on snowmobile trails, and outside of seasonal road
142 restrictions. There are no plans to add snowmobile use, where it is not currently a use. Where there is not
143 designated snowmobile use, the trail would not be groomed for winter (snowmobile) use. Physical
144 improvements to allow sustainable¹/non-erosive ATV travel could include fill/hardening, or installation of
145 culverts, boardwalks, and/or bridges at wetland and water crossings. Coordination with the DNR Area
146 Hydrologist and Wetland Conservation Act WCA Technical Evaluation Panel (TEP) would occur during design and
147 permitting stages of the projects. The amount of aggregate or other fill that would be needed, and the
148 placement locations would be established during the design phase. Temporary storage locations for the
149 necessary fill would be sited in upland areas that do not block trail use. BMPs used at temporary storage
150 locations would be described in the site Stormwater Pollution Prevention Plan (SWPPP). The sources of
151 aggregate and other fill would need to meet regulatory and permit requirements. The proposer would
152 communicate with the appropriate land administrator and local snowmobile clubs to ensure trail design is
153 compatible with shared use by snowmobile grooming equipment where appropriate. Active construction is
154 expected to take about 3-6 months (within an 8-month primary construction window) for each segment, over a
155 duration of 1-2 years, depending on complexity.
156

157 Construction sequence would start with brush clearing without ground disturbance, if necessary (see EAW Item
158 8), followed by installation of stormwater perimeter control, earthwork, structure construction (if needed), and
159 ending with site stabilization. Construction timing would abide by seasonal regulations, which may include
160 fisheries exclusion dates, tree removal restriction dates to avoid adverse effects to bats, and spring road
161 restrictions. The applicability would vary by trail segment, proposed schedule, and permit conditions. The need
162 for temporary storage or staging areas would be determined during the design phase. If needed, the exact
163 locations of these areas would be determined during the final design phase. These would be located adjacent to
164 the trail corridor. Stormwater BMPs needed in these areas would be evaluated during final design. At a
165 minimum, these would include silt fencing along the perimeter, but may, depending on the location of
166 staging/storage areas, require redundant BMPs (e.g., silt fence and a sediment control log). BMPs would be
167 designed to meet the requirements of the Construction General Stormwater Permit as applicable. The deposition
168 of any brush, soils, or other materials that may need to be excavated and hauled away would be the
169 responsibility of the contractor to handle such that they abide by any local, state, and federal regulations and
170 permit conditions.
171

172 Based on existing conditions, the routes would require varying amounts of work to prepare connections for
173 inclusion in the VCATV System. Existing conditions are divided into three categories, described in the table below.
174 Proposed work and trail design would vary by each of the categories. Throughout the proposed project, the use
175 of new trail alignments was minimized, and the proposed routes have been chosen to avoid sensitive features
176 (such as wetlands) to the greatest extent practicable.
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¹ In this document, the term “sustainable” refers to capable of sustaining ongoing ATV traffic in a manner than does not contribute to substantial erosion or degradation of the trail.

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Proposed Route Categories

The proposed project incorporates existing and new routes into an expanded network of ATV trails, which can be placed into three categories:

Route Category	Type	Landscape Position	Possible Miles
1	Existing route, open to ATV use	On road	39
2	Existing route, proposed new ATV use (improvements needed)	On road/trail	78
3	Proposed route, new construction proposed for ATV use	Off road	8
		Total	125

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Existing routes include cleared utility corridors, current recreational trails of various types (e.g., current ATV or snowmobile trails, currently designated mixed use trails, hiking or hunting trails), forest and logging roads, and streets, township, and county roads. The current width for these existing routes varies in accordance with current use and maintenance status. The estimated width is between 12 to 26 feet depending upon the different existing uses. Maximum widths for recently maintained logging roads are around 20 feet with a 26-foot clear zone; around 20 feet for snowmobile trails; and around 14 feet for ATV trails. Proposed ATV-only trails would have a 12-14-foot-wide drivable top surface within a maximum 26-foot-wide cleared corridor for new trail segments. Where trails would have dual use for ATVs and snowmobiles, a 16-20-foot-wide drivable top surface would be required to accommodate trail grooming equipment (see Table below). Anticipated corridor height for future maintenance of vegetation is approximately 10 feet. There may be a temporary need for corridor clearing of up to 30 feet in height for construction activities, if a crane is needed for placement of bridges or other trail structures. This activity would be localized and temporary, if needed.

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Existing and Proposed Trail Use

Type	Current Use	Proposed Use	Proposed Drivable Surface Width (feet)	Miles
Existing Logging Road / Trail / Forest Route	ATV	ATV	12-14	37
Existing Utility Corridor	ATV	ATV	12-14	7
Existing CR / CSAH / TH / Township Road / Road ROW	ATV	ATV	12-14	41
Existing Blue Ox Trail	Snowmobile, ATV	Snowmobile, ATV	16-20	7
Existing Arrowhead State Trail	Snowmobile	Snowmobile, ATV	16-20	5
Existing Haggerman Voyager Lowman Trail	Snowmobile	Snowmobile, ATV	16-20	14
Existing Voyageur Trail	Snowmobile	Snowmobile, ATV	16-20	4
Existing Local Snowmobile Trail	Snowmobile	Snowmobile, ATV	16-20	2
New ATV Trail	Non-motorized use	ATV	12-14	8
			Total	125

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209 Segments of alternative alignments are considered in this review, as they may provide opportunities to avoid
 210 sensitive resources or improve trail user experience. The total length of corridor reviewed herein, including the
 211 alternative alignments, is 125 miles; however, the length of corridor that would ultimately be incorporated into
 212 the network is less than 125 miles, and is anticipated to be approximately 100 miles.

213

214 **Route Category 1**

215 This category is currently open to ATV traffic and needs no physical road or surface work. The 39 miles in this
 216 category are located on County State Aid Highways (CSAH), County Roads (CR), Township, or Forest Service
 217 roads. Proposed routes in this category would be added to future trail user maps. The only physical work that
 218 would be completed is adding signage, where not already in place, identifying the route as part of the System.
 219 The review area of this proposal includes a 26-foot review corridor to include the existing roadways, which are
 220 typically 18-26-foot surfaces.

221

222 **Route Category 2**

223 This category includes existing roads and recreational trails not currently designated for ATV use. Some areas
 224 would require physical improvements to allow ATV travel. This category includes up to 78 miles of trail proposed
 225 on state, federal, private and tax forfeit lands, including 28 miles as shared corridors with snowmobile trails.
 226 Where existing highways are incorporated into the trail system, the route would parallel the highway within the
 227 right-of-way (ROW). Proposed improvements may include fill/hardening, culverts, boardwalks, and/or bridges for
 228 sustainable trail surface at wetland and water crossings. Because these are existing routes, clearing of woody
 229 vegetation would generally be minor where required. Temporary workspace may be needed for staging for

230 bridge or boardwalk materials and culverts; these would be sited in upland areas adjacent to the wetland and
231 watercourse areas requiring work. These staging areas are typically coordinated with the selected contractor
232 and land managers/administrators. They would generally be minor in size (1,000 to 2,000 square feet) and would
233 not require tree removal. The most conservative estimate for the construction limits where improvements are
234 necessary is a 26-foot-wide corridor. Evaluation of a wider corridor allows for minor adjustments in trail
235 alignment, particularly where adjustments might allow avoidance or minimization of wetland impacts, otherwise
236 sensitive surface areas, or alignment adjustments due to topography.
237

238 **Route Category 3**

239 This category includes areas without an existing road or trail corridor and would require new construction. A
240 combined total of eight miles of new trails are proposed on tax forfeit, state, federal, Minnesota Department of
241 Transportation (MnDOT) ROW, and private lands. One new trail route and a possible alternative route would
242 affect two private property owners. VCATV is in the process of coordinating necessary permissions with private
243 landowners. The routes are located within a High Voltage Transmission Line (HVTL) utility corridor or MnDOT
244 ROW. These proposed routes would construct a 12-14-foot-wide drivable top surface with a footprint no wider
245 than 26 feet to accommodate shoulders and clearance on either side of the trail, depending on the specific
246 design requirements. New construction includes clearing of vegetation, fill/hardening sections, boardwalk,
247 culverts and/or bridges for sustainable trail surface. As indicated in the description of Route Category 2, the
248 review area considered in this EAW to evaluate environmental effects is 40 feet wide, to allow for minor
249 alignment adjustments. Upon completion, the routes would be included on future user maps of the System.
250

251 **Proposed Trail Segments**

252 Trail segments and alternative routes reviewed as part of the proposed project are described below and shown
253 on Figures 2-1 to 2-12. Alternative routes are included in the review of the proposed project in case of inability
254 to secure landowner/administrator permissions. Final routes would be settled prior to detailed design.
255

256 **Ranier Connector**

257 The Ranier Connector is an approximately four-mile trail segment that would connect with the Ericsburg to
258 International Falls trail. The proposed trail is Route Category 2, and would follow the existing Haggerman
259 Voyager Lowman snowmobile trail, from the cities of International Falls to Ranier. Improvements might
260 include the placement of aggregate to stabilize any erosion, rutting, etc.; installation of culverts to maintain
261 flowpaths; or grading to construct a sustainable trail. Specific improvements would be identified during the
262 design phase of the project, and all necessary permits would be obtained prior to construction.
263

264 The Ranier Connector is shown on Figure 2-1.
265

266 **Blue Ox to Pelland Junction**

267 The Blue Ox to Pelland Junction trail segment consists of approximately six miles of Route Category 2 trails.
268 A portion is on the Haggerman Voyager Lowman snowmobile trail / Blue Ox State trail, where ATV traffic is
269 currently allowed. Improvements are anticipated to be necessary on the Blue Ox State Trail to
270 accommodate continued ATV use, and may include placement of aggregate to stabilize any erosion, rutting,
271 etc.; installation of culverts to maintain flowpaths; or grading to construct a sustainable trail. Specific
272 improvements would be identified during the design phase of the project, and all necessary permits would
273 be obtained prior to construction. The remainder of the trail segment is on Utility Road 202 / Town Road
274 202 and along the U.S. Highway 71 ROW to the terminus at the Y Knot Quick Stop in Pelland, MN.
275

276 The Blue Ox to Pelland Junction trail segment is shown on Figure 2-2.
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280 **Ericksburg to International Falls**

281 The Ericksburg to International Falls trail segment consists of approximately 14.5 miles of ATV use on existing
282 routes, including 3 miles of Route Category 1 and 11.5 miles of Route Category 2. The Route Category 1
283 segments would follow CR 98. The Route Category 2 segment would follow an existing degraded trail, utility
284 corridor, and the Haggerman Voyager Lowman snowmobile trail / Blue Ox State trail, and would require
285 improvements to accommodate ATV use. Improvements might include the placement of aggregate to
286 stabilize any erosion, rutting, etc., installation of culverts to maintain flowpaths, or grading to construct a
287 sustainable trail. Specific improvements would be identified during the design phase of the project, and all
288 necessary permits would be obtained prior to construction.

289
290 A potential three-mile alternative route is also under consideration. The alternative route includes two miles
291 of Route Category 1 trail that would follow CR 97, and one mile of Route Category 2. Improvements to the
292 Route Category 2 section would be needed to accommodate ATV use. Alternatives would be evaluated for
293 their continuity with the trail system, and the avoidance and minimization of impacts to natural resources
294 during permitting and design phases.

295
296 This trail segment would connect with the Kab Store to Ericksburg segment at its southern terminus and the
297 Ranier Connector at its northern terminus.

298
299 The Ericksburg to International Falls segment is shown on Figures 2-1, 2-2, 2-3, and 2-9.

300
301 **Galvin Spur**

302 The Galvin Spur Trail includes approximately eight miles of Route Category 2 trail. The trail would run along
303 existing utility corridor and Township Road (Ut 198 / Galvin Rd). Needed improvements include a water
304 crossing of the Rat Root River. The water crossing may consist of a bridge or boardwalk, which are subject to
305 state and local permitting requirements, and would be designed to minimize impacts to water resources.
306 Other improvements might include the placement of aggregate to stabilize any erosion, rutting, etc.,
307 installation of culverts to maintain flowpaths, or grading to construct a sustainable trail. Specific
308 improvements would be identified during the design phase of the project, and all necessary permits would
309 be obtained prior to construction.

310
311 The Galvin Spur would connect to the Littlefork Connection at its southern terminus and the Ericksburg to
312 International Falls segment at its northern terminus.

313
314 The Galvin Spur is shown on Figures 2-3 and 2-4.

315
316 **Littlefork Connection**

317 The Littlefork Connection includes approximately 44 miles of trail connecting the City of Littlefork with the
318 proposed project near the community of Ray. The proposed route includes approximately 16.5 miles of
319 Route Category 1 trail, that would follow existing Township and County Roads; approximately 25 miles of
320 Route Category 2 trail that would follow existing forest roads, logging roads/trails, and a segment of an
321 existing local snowmobile trail; and two segments of Category 3 trail, with a total length of 1.5 miles.
322 Improvements needed on the Category 2 trail include a new water crossing of the East Branch Rat Root
323 River. Other improvements might include the placement of aggregate to stabilize any erosion, rutting, etc.,
324 installation of culverts to maintain flowpaths, or grading to construct a sustainable trail. Specific
325 improvements would be identified during the design phase of the project, and all necessary permits would
326 be obtained prior to construction.

327
328 One segment of Category 3 trail would begin at the intersection of the utility corridor and Township Road
329 238 (Ut 238) and end at the intersection of the utility corridor and County Road 22 / Aspen Street in the City
330 of Littlefork. The other segment would begin at the intersection of TH 217 and an alleyway to the east of the

331 Littlefork River bridge, extending west along TH 217 over the river, and south along TH 65 to the CSAH 77 /
332 TH 65 intersection. Improvements are expected to be necessary for the trail segments, except the TH 217
333 bridge where no improvements are needed.

334
335 An alternative route for the Route Category 3 segment is included as part of the project proposal. This
336 alternative would follow the road ROW along MN Trunk Highway (TH) 217 / 6th Avenue in the City of
337 Littlefork, from the intersection of TH 217 and CR 8, for approximately one mile. Alternatives would be
338 evaluated for their continuity with the trail system, and the avoidance and minimization of impacts to
339 natural resources during permitting and design phases. The Littlefork Connection alternative may be used if
340 landowner permissions are not secured for the primary route, or if adverse environmental effects appear to
341 be greater for the primary route upon more detailed design. The alternative and preferred routes are
342 shown on Figure 2-6.

343
344 The Littlefork Connection would connect with the Galvin Spur and Kab Store to Ericsburg trail segments, as
345 well as the Blue Ox State Trail.

346
347 The Littlefork Connection is shown on Figures 2-4, 2-5, 2-6, 2-7, and 2-8.

348
349 **Kab Store to Ericsburg**

350 The Kab Store to Ericsburg trail segment consists of approximately 23 miles of ATV trail. Nine miles of Route
351 Category 1 trail is included in this segment, which follows existing Koochiching County Roads (CSAH 122,
352 CSAH 3, CR 98, CR 100, and CR 119). Thirteen miles of Route Category 2 trail is part of this segment,
353 including portions of the existing Voyageur Trails and Haggerman Voyager Lowman Trails snowmobile trail,
354 the Arrowhead State Trail, and existing logging roads. Improvements may be needed along these routes to
355 accommodate ATV use.

356
357 The Kab Store to Ericsburg trail segment also includes approximately 0.5 mile of Route Category 3 trail (new
358 trail), which is needed to connect the existing Arrowhead State Trail to an existing logging road, and provide
359 a continuous travel route. The new trail crosses a Northern Poor Dry-Mesic Mixed Woodland or other
360 aspen-dominated plant community.

361
362 When complete, this segment of trail would connect the Kab Store at the intersection of U.S. Highway 53
363 and Gamma Road to the community of Ericsburg. This trail segment would connect with the Ericsburg to
364 International Falls segment at its northern terminus, and the Ray Spur.

365
366 Route alternatives are included for the Kab Store to Ericsburg trail (Figure 2-11). Alternative trail segments
367 under consideration include seven miles of Category 1, 11 miles of Category 2, and 3.25 miles of Category 3
368 trail. Category 1 and 2 alternatives are located along existing logging roads, county roads, and portions of
369 the Arrowhead State Trail, with the goal of connecting the communities of Kabetogama and Ericsburg.

370
371 One Category 3 alternative includes 0.25 mile of new trail, and would require a new water crossing of the
372 East Branch Rat Root River, approximately 0.5 mile east of the proposed main route. A second Category 3
373 alternative includes approximately three miles of new trail within MnDOT ROW along the north side of U.S.
374 Highway 53. Alternatives would be evaluated for their continuity with the trail system, and the avoidance
375 and minimization of impacts to natural resources during permitting and design phases.

376
377 The Kab Store to Ericsburg alignment and alternative routes are shown on Figures 2-9, 2-10 and 2-11.

378
379 **Ray Spur**

380 The Ray Spur trail segment is a spur trail off the proposed Kab Store to Ericsburg trail. This 0.5-mile trail is

381 Route Category 1 and would follow existing CSAH 3. The spur would end in the community of Ray.

382

383 The Ray Spur is shown on Figure 2-10.

384

385 **FR 612A to Black Duck Connector**

386 The FR 612A to Black Duck Connector trail segment consists of approximately 1.5 miles of Route Category 3
387 and a 1,300 foot segment of Category 2 trail within a shared corridor for the Arrowhead State Trail. This trail
388 segment would connect to existing VCATV System Trails, including the Elephant Lake to Lake Kabetogama
389 Connector along Forest Route 612 at its eastern terminus and the Black Duck Grade to Fawn Creek of Phase
390 1 at its western terminus. There is a potential future connection using the Arrowhead State Trail to the
391 north that was reviewed in the Phase 1 EAW. Land cover for the FR 612 A to Black Duck Connector is
392 primarily deciduous and mixed forest with some shrub/scrub.

393

394 The FR 612A to Black Duck Connector is shown on Figure 2-12.

395

396 **Design**

397 Trail design for new trail construction would follow guidelines in the *“Trail Planning, Design, and*
398 *Development Guidelines”* manual (MN DNR, 2007) intended to construct and improve sustainable natural
399 surface trails. For all trail improvements, construction would follow standard practices. Prior to ground
400 disturbing activities, the contractor would install downgradient stormwater Best Management Practices
401 (BMPs) and would apply other BMPs throughout construction. Specific BMPs would be selected during final
402 design and incorporated into the Stormwater Pollution Prevention Plan (SWPPP). BMPs would include
403 erosion control blankets on steep slopes, bioroll/filter logs to capture mobilized sediment, and/or rock
404 construction entrances. The SWPPP for each project would be developed as part of the final design.

405

406 Construction methods include earth moving with small excavators and/or skid steers. Where fill is needed,
407 the trail would have geogrid placed as a base layer. Where needed based on soil characteristics, the trail
408 would be excavated to a 12-inch depth, backfilled with gravel, and covered with geotextile. All fill sections
409 would have 6-18 inches of fill placed above the ground surface, depending on existing ground conditions.
410 The removal and handling of fill/sediment is the responsibility of the contractor. The contractor would be
411 expected to follow all applicable local, state, and federal regulations. If necessary, fill would be stored in
412 temporary storage/staging areas. Potential runoff would be contained via the installation of silt fencing
413 and/or bioroll. Specific BMPs would be identified during design to meet the needs of any given fill storage
414 location. The typical section would have approximately 2% slopes away from the centerline for appropriate
415 drainage (Attachment B). The typical section may be modified based on site conditions in detailed design; in
416 no case would the trail be widened beyond the review.

417

418 The need for and locations of temporary storage or staging areas would be determined during the design
419 phase. These would be located adjacent to the trail corridor. Stormwater BMPs needed in these areas
420 would be evaluated during final design. At a minimum, these would include silt fencing around the
421 perimeter, but may, depending on the location, require redundant BMPs (e.g., silt fence and a sediment
422 control log). BMPs would be designed to meet the requirements of the Construction General Stormwater
423 Permit as applicable. The deposition of any brush, soils, or other materials that may need to be excavated
424 and hauled away would be the responsibility of the contractor to handle such that they abide by any local,
425 state, and federal regulations. Areas used for construction that are not part of the trail surface would be
426 minimal and largely restricted to temporary staging or storage areas. These areas would be regraded,
427 seeded with an appropriate native seed mix, and monitored for revegetation per the plan described in the
428 Construction SWPPP and the permit conditions of the Construction Stormwater Permit.

429

430 Prevention and control of noxious/invasive species would be considered in the design, construction, and

431 maintenance of trails. Signage may be implemented at trailheads to aid in the identification and reporting of
432 such species. Measures to prevent their spread during construction include thoroughly cleaning equipment
433 after working in infested areas and revegetating disturbed areas as soon as possible after construction is
434 completed. Wood chips or other media which allow noxious/invasive plants to easily take root would not be
435 used for the trail system. Where infestations are identified, control methods would be applied to limit the
436 spread and impact of noxious/invasive species. Where disturbed, land would be stabilized by seeding with
437 appropriate native seed mixes (native NE woodland or wet meadow). Contractors would be instructed to
438 clean equipment before and after use, and the construction would use clean fill. Monitoring for noxious and
439 prohibited weeds would be included as part of the trail monitoring and maintenance plans.

440
441 The proposed segments would provide designated, safe routes, that are sustainable for ATV use. Safe routes
442 consider factors such as minimizing conflicts with other uses (e.g., highway vehicle traffic), accommodating
443 maintenance activities, and providing adequate space for two-way traffic. These would be multi-use trails, and
444 signage for ATV use would alert other users of ATV operation. Signage would be consistent with other multi-use
445 trails in the system. Trail widths would allow safe passing for pedestrians. Sustainable trails, as the term is used
446 throughout this document, are those that follow the guiding principles of ecological sustainability as outlined in
447 the *“Trail Planning, Design, and Development Guidelines”* manual (MN DNR, 2007) as follows:

- 448
- 449 1. Avoid sensitive ecological areas and critical habitats.
 - 450 2. Develop trails in areas already influenced by human activity.
 - 451 3. Provide buffers to avoid/protect sensitive ecological and hydrologic systems.
 - 452 4. Use natural infiltration and BMPs for Stormwater management.
 - 453 5. Provide ongoing stewardship of the trails and adjoining natural systems.
 - 454 6. Ensure that trails remain sustainable.
 - 455 7. Formally decommission and restore unsustainable trail corridors.

456
457 Trail design follows the guiding principles of avoiding sensitive ecological areas and critical habitats by developing
458 trails in areas already influenced by human activity. The proposed System would use existing corridors to the
459 maximum extent practicable, including co-locating with existing snowmobile trails. The proposer does not
460 anticipate conflict with snowmobile use or winter trail grooming given ATV use would only be seasonal (spring,
461 summer, fall). Additionally, ongoing stewardship of the trails, the sustainability of the trails, and the adjoining
462 natural systems would be conducted through a collaborative effort made by the DNR, ATV Club, and LGUs.

463
464 The segment design would incorporate the following elements:
465

466 **Trailhead maps, signage, and system kiosks**

467 Newly prepared and installed maps and signage would provide wayfinding and trail markers on new areas of the
468 trail segments. These would also be maintained on existing routes. Signage on public roadways would meet
469 standards as indicated in the *“Minnesota Manual on Uniform Traffic Control Devices”* (MnDOT)².

470 471 **Natural surface trail**

472 The Project would improve or construct natural surface trails that would support ATV use. Some areas would
473 require fill and culvert or boardwalk crossings to create a sustainable trail surface as outlined in the *“Trail
474 Planning, Design, and Development Guidelines”* manual (MN DNR, 2007).
475 New/improved stream crossings are opportunities to ensure proper culvert size and placement for fish passage
476 and stream stability. To ensure correctly installed culverts, the proposer should refer to MnDOT’s *“Minnesota
477 Guide for Stream Connectivity and Aquatic Organism Passage Through Culverts”*³. Routes were evaluated by the
478 Club to minimize aquatic resource crossings while still following existing trail corridors. Crossings of aquatic

² [Minnesota Manual on Uniform Traffic Control Devices \(state.mn.us\)](https://state.mn.us)

³ [Minnesota Guide for Stream Connectivity and Aquatic Organism Passage Through Culverts | MnDOT Digital Library](#)

479 resources would be considered on a case-by-case basis during design, based on the size and flow of the aquatic
 480 resources. Culverts, bridges and/or boardwalks may be proposed. All crossings would meet design requirements
 481 based on the classification of the aquatic resource (e.g., public waters, trout streams, etc.). Minimization of
 482 aquatic resource impacts is required for permitting; therefore, lower impact structures would be used whenever
 483 feasible. Evaluation of potential impacts in this document is conservative in assuming more fill impacts than
 484 would likely be constructed. Final decision of crossings and evaluation of impacts would occur during the design
 485 and permitting phases of each project.

486
 487 Trail design would also consider compatibility with shared uses. Trail segments co-locating with snowmobile use
 488 would typically have a 20-26-foot-wide footprint to accommodate a 16–20-foot top surface for snowmobile
 489 groomers. The segments would have a maximum construction width of 26 feet to accommodate shoulders and
 490 clearance on either side of the trail depending on the specific design requirements of any new construction,
 491 including accommodation of winter use by snowmobile groomers. Routes not shared with snowmobiles are
 492 planned for a 12-14-foot-wide drivable top surface. Typical sections are included as Attachment B.

493
 494 **Maintenance**

495 The Club anticipates that the project would increase ATV traffic on the existing sections currently open to ATV
 496 use. Local trail managers estimate that when the VCATV System is complete, it is expected to attract 100 to 150
 497 machines per week, or 400 to 600 per month; however, the additional traffic is not anticipated to necessitate
 498 additional maintenance because it would be spread out over a larger trail network. Maintenance needs,
 499 including erosion, trail reshaping, culvert conditions, etc. would be monitored following the Grant in Aid (GIA)
 500 program, which involves collaboration between the MN DNR, the LGU, and the Club to identify maintenance
 501 priorities and a monitoring schedule. This also involves the MN DNR Trail Ambassador program in which
 502 volunteers, who are trained to identify noxious/invasive species and appropriate trail conditions, assist with trail
 503 monitoring⁴. The Trail Ambassador Program establishes informational and educational contacts by enabling
 504 volunteer monitoring efforts to promote safe, environmentally responsible operation of ATVs. Trail ambassadors
 505 are trained in ATV regulations, guidelines and policies of proper trail use in the recreation area. They are certified
 506 to monitor trail conditions, identify noxious/invasive species, and provide first aid.

507
 508 c. Project magnitude:
 509

Description	Number
Total Project Acreage*	532.27 acres
Linear project length**	125 miles
Number and type of residential units	not applicable
Residential building area (in square feet)	not applicable
Commercial building area (in square feet)	not applicable
Industrial building area (in square feet)	not applicable
Institutional building area (in square feet)	not applicable
Other uses – specify (in square feet)	not applicable
Structure height(s)	not applicable

510
 511 * Total project acreage was determined by applying an average 26-foot review corridor for proposed Category 1 trails and 40 foot review corridor for
 512 proposed Category 2 & 3 trails. The acreage includes approximately 100 acres for alternative routes under consideration.

⁴ [Trail Ambassador program | Minnesota DNR \(state.mn.us\)](https://state.mn.us)

513 ** Includes 20 miles of alternative routes

514

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

517

518 The purpose of the VCATV System is to provide safe access to rideable surfaces, user connectivity to
519 communities, and compatibility of ATV use with other uses on roads/trails that allow for ATVs. Increased
520 interest in ATV riding in northern Minnesota has prompted the development of the proposed project. The
521 VCATV System is of regional significance and covers northern St. Louis and Koochiching counties, and may
522 include connections to other state forest roads, grant-in-aid, or other ATV trails.

523

524 e. Are future stages of this development including development on any other property planned or
525 likely to happen? Yes _ No

526

527 If yes, briefly describe future stages, relationship to present project, timeline and plans for
528 environmental review.

528

529 Yes, however future phased stages of the VCATV Trail System, as identified in the Voyageur Country
530 ATV Master Plan, are not fully planned at this time. Future phases may include connections in Itasca
531 County, and to larger areas of St. Louis and Koochiching counties. The priority order and timing of
532 future connections would be determined as funding and connecting routes allow. The need for
533 environmental review on any future stages, not included in this EAW, would be assessed as specific
534 projects are defined.

535

536 f. Is this project a subsequent stage of an earlier project? Yes _ No
537 If yes, briefly describe the past development, timeline and any past environmental review.

537

538 The Voyageur Country ATV Club was founded in 2015, with the System consisting primarily of existing trails in
539 wooded areas of northern St. Louis County. The Voyageur Country ATV Master Plan (2018) includes the proposed
540 addition of approximately 538 miles to the System to occur in phases, as funding and opportunities arise.

541

542 Phase 1 included approximately 387 miles of roadway and natural surface trail to be added to the System, which
543 was primarily situated in northern St. Louis County. The EAW for Phase 1 was developed in 2020 and completed
544 in 2021. This EAW covers Phase 2 segments and is an extension of Phase 1 in northern St. Louis County and into
545 Koochiching County. Phase 1 received a negative declaration on the need for an Environmental Impact
546 Statement on March 18, 2021.

547

548 Projects completed to date, which added connections into the System, include:

549

549 • Forest Road 601 to Kabustasa Road – trail improvements and bridge construction (completed 2019)

550

550 • Vermilion Falls Road to Gold Coast Road – trail improvements, including fill/culvert sections and a raised

551

551 boardwalk for ATV and snowmobile use (completed 2020)

552

552 • Buyck to Schuster Road – trail improvements including fill/culvert sections and a raised boardwalk for ATV

553

553 use (completed 2023).

554

554 • Winchester Lake Overlook – amenities including gate, shelter, and privy. Shelter and gate were installed in

555

555 2022. Privy is planned for 2023.

556

556 • Gamma Road / Kabetogama (CR 122) to Ash River Trail (CR 129) - trail improvements, including culvert

557

557 replacement and trail surfacing. This is a DNR Parks and Trails led project, originally proposed by Voyageur

558

558 Country ATV. The project is in design and permitting, anticipated for construction in 2024.

559

560 Other segments of the Voyageur trail discussed in the previous EAW are in various stages of design, without firm
561 construction dates as of the preparation of this document.

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7. Climate Adaptation and Resilience:

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- a. Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.

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In general, climate change projections for Minnesota predict a warmer and wetter climate, with more frequent extreme precipitation events. According to the MN DNR, Minnesota has warmed by 3.0 degrees Fahrenheit between 1895 and 2020, and annual precipitation has increased by an average of 3.4 inches across the state⁵.

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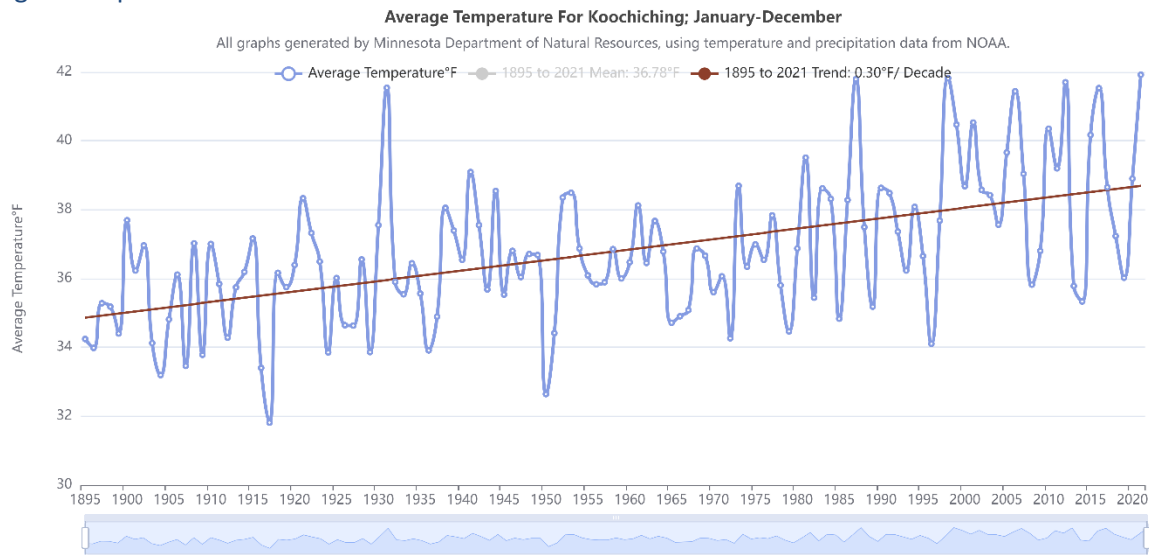
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Climate data available through the Minnesota Climate Explorer⁶, demonstrates that historical average annual temperatures recorded in Koochiching County have warmed over the past century (1895 to 2021), increasing on average 0.3°F per decade.

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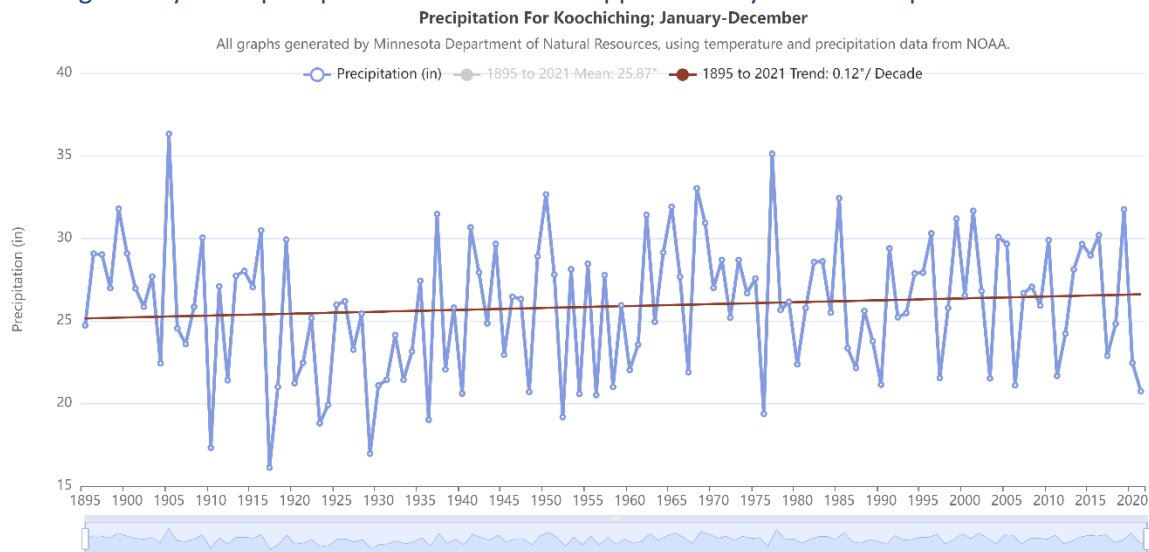
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Precipitation has also increased over the past decade, however, not as notably. Precipitation records for Koochiching County show precipitation has increased approximately 0.12 inches per decade⁶.

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⁵ [Climate trends | Minnesota DNR \(state.mn.us\)](https://www.dnr.state.mn.us/climate/trends/)

⁶ [Minnesota Climate Explorer \(state.mn.us\)](https://climateexplorer.state.mn.us/)

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In general, projections for Minnesota predict that the days per year with more than one inch of precipitation will increase, but summer precipitation will be lower (i.e., precipitation events will be larger, but more infrequent) by the end of the century, as compared with the historical period of 1981-2010⁷. Climate change impacts in the project area would likely include warmer temperatures and more periods of drought with periodic flooding.

In the context of the proposed project, a wetter climate has the potential to impact ATV trails. Increased precipitation may also increase opportunities for trail rutting, erosion, or destabilization. These risk factors would be mitigated through proper trail design, including culverts, bridges, boardwalks, and establishment of native vegetation in disturbed areas. To mitigate these impacts, trail conditions would be monitored, and maintenance actions carried out as needed.

- b. For each Resource Category in the table below: Describe how the project’s proposed activities and how the project’s design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.

Resource Category	Climate Considerations	Project Information	Adaptations
Project Design	Design should consider increased frequency and duration of heavy rain events; potential for flooding. Design will also consider runoff, beaver activity, snowpack, extreme precipitation events, and more frequent freeze thaw cycles, which may cause trails and roadways to require a more intensive maintenance regime.	Increased frequency and intensity of storm events and increased precipitation. Potential for increased runoff from compacted soils.	Culverts, bridges, and boardwalks will be designed to be suitable for high flow events. Establishment of native vegetation in disturbed areas may slow flow and help infiltrate runoff.
Land Use	Land use is currently primarily agriculture, undeveloped natural areas managed for silviculture and/or used for recreation. The proposed trail segments are co-located on several managed trails. The project proposes to utilize existing trail and roadways to the greatest extent practicable, minimizing land use changes, and subsequent climate considerations due to land conversion.	Increased frequency and intensity of storm events, increased precipitation. Increased temperature and dry periods between storm events may lead to increased risk of wildfire.	Tree and shrub clearing is contained to a relatively small work area (10.10 acres along approximately 3 miles of main trail; alternative trail includes approximately 2.50 acres along 1 mile). Increased equipment use may pose a fire risk, so rider education should include warnings to avoid idling/parking in tall dry grass. Trails may provide opportunity for improved firefighting equipment access and firebreaks. The project

⁷ [Minnesota Climate Projections | University of Minnesota Climate Adaptation Partnership \(umn.edu\)](https://climate.umn.edu/minnesota-climate-projections/)

			proposer, in coordination with DNR, will evaluate temporary closures during extreme drought conditions. Fire danger warnings are typically posted at USFS signage locations. Fire danger warnings will also be posted on the Club's website, and at trailheads, as this information becomes available.
Water Resources	Address in item 12	Address in item 12	Address in item 12
Contamination/ Hazardous Materials/ Wastes	No aspects of the Project are anticipated to result in climate impacts on contamination / hazardous materials / wastes. During construction, contractors will protect soil and water resources from contamination and hazardous materials.	Construction equipment may require the limited use of potentially hazardous materials, such as gasoline or diesel fuels, motor oils, hydraulic fluids, and other lubricants.	Vehicles equipped with spill kits for rapid response. All hazardous materials will be stored in containment apparatuses, while not in use.

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Resource Category	Climate Considerations (example text provided below is to be replaced with project-specific information)	Project Information	Adaptations
Fish, wildlife, plant communities, and sensitive ecological resources (rare features)	Address in item 14.	Address in item 14.	Address in item 14.

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8. **Cover types:** Estimate the acreage of the site with each of the following cover types before and after development:

Cover Types	Before (acres)	After (acres)
Wetlands and shallow lakes (<2 meters deep)*	34.20	18.48
Deep lakes (>2 meters deep)	0.08	0.08
Wooded/forest**	154.33	154.33
Rivers/streams	0.30	0.30
Brush/Grassland	53.54	41.46
Cropland	0.27	0.27
Livestock rangeland/pastureland	6.56	6.56
Lawn/landscaping	87.26	60.02
Green infrastructure TOTAL (from table below)	0	0
Impervious surface***	146.58	146.58
Stormwater Pond (wet sedimentation basin)	0	0
Non-paved trail ³	49.15	104.19
TOTAL	532.27	532.27

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* This cover type change represents the intersection of National Wetlands Inventory (NWI) mapped wetlands and trail categories 2 and 3. Particularly in existing corridors, trails may already run on upland improved grades not shown on the NWI. In addition, minor alignment changes may allow wetland avoidance or impact minimization. However, the NWI may miss smaller wetlands not visible on aerial photography. This table presents an estimate of the wetland impact due to the trail segments. Prior to any trail construction, a wetland delineation will be completed to quantify the wetland impacts.

** Some existing trail length is included in the wooded/forest cover type category, because a continuous forest canopy is present. Because forest cover will remain, wooded/forest land cover is not considered to change post-project.

*** New non-paved trails will meet the definition of natural surface trail: "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. The proposer understands that certain improvements (some surfacing materials) may be considered impervious. Precise locations and materials would be evaluated in design of each segment needing improvements. Permitting and stormwater treatment would be provided accordingly for segments reaching acreage thresholds triggering permitting, if any.

Green Infrastructure	Before (acreage)	After (acreage)
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	0
Constructed tree trenches and tree boxes	0	0
Constructed wetlands	0	0
Constructed green roofs	0	0
Constructed permeable pavements	0	0
Other (describe)	0	0
TOTAL*	0	0

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Trees	Percent	Number
Percent tree canopy removed or number of mature trees removed during development	0%*	Roughly 300*
Number of new trees planted	0	0

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¹Tree clearing will be avoided and minimized to the greatest extent practicable during construction. New corridor clearing will have flexibility to route around most mature trees and removals will be limited, leaving canopy intact even in areas of new corridor clearing. Approximately 300 trees across 125 miles of trails are anticipated to require removal. The overall percent of tree canopy removed from the landscape will be minimal, therefore 0% is reported. It is possible for some localized clusters of trees to be removed in certain areas throughout the review area, which would result in a noticeable loss of canopy at that specific location. However, due to the scale of the project, and the tree removal required, an overall loss of tree canopy is not expected.

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9. 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 review has been completed. See Minnesota Rules, Chapter 4410.3100.*

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Potential funding sources for these trail segments include the Legislative-Citizen Commission on Minnesota Resources (LCCMR), state bonding funds, and the state off-road vehicle dedicated fund.

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The table below shows permits and approvals anticipated for the project.

Unit of Government	Type of Application	Status
Minnesota Pollution Control Agency (MPCA)	National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit	To be obtained
MPCA	Section 401 Water Quality Certification	To be obtained
St. Louis County	Section 401 Water Quality Certification	To be obtained
St. Louis	Letter of Authorization	To be obtained

DNR or other WCA authority (County or Municipality)	Wetland Conservation Act (WCA) Delineation Approval	To be obtained
DNR or other WCA authority (County or Municipality)	WCA Replacement Plan	To be obtained
DNR	Public Waters Work Permit	To be obtained
DNR	Rare Species Takings Permit	To be obtained if needed
DNR	ATV Grant-in-Aid Trail Application	To be obtained
DNR	Recreational Lease	To be obtained, if needed
MN Department of Transportation	Right-of-Way Permit	To be obtained if needed
U.S. Army Corps of Engineers	Section 404 Clean Water Act Permit	To be obtained
Cities and Townships	Zoning or other approvals	To be obtained
Private landowner	Easement or other permission	To be obtained
U.S. Forest Service	Land use permission	To be obtained

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Although not a formal permit or approval, a MN DNR PAT Resource Assessment (RA) is needed for projects occurring on Parks, PAT Division administered lands, and State Trails. The RA incorporates regulations, statutes, policies, guidelines, and plans, some of which are division specific. State Trails are to be managed to provide a travel route through an area with minimal disturbance of the natural environment and recognizing other multiple use land activities. Resource Specialists within PAT implement the RA process to incorporate comments from other MN DNR staff as well as NHIS findings. Resource Specialists inform PAT leadership about project impacts so that informed decisions can be made about projects occurring on PAT administered lands and State Trails.

Current and ancestral lands of the Bois Forte Band of Chippewa are in the vicinity of the proposed project. Although the proposed project routes and alternative routes do not cross through any tribal lands, the proposed trail alignments may be submitted to the Bois Forte Band of Chippewa for their Cultural Resources Review. The Proposer understands that tribal coordination is recommended prior to and throughout the survey process for archaeological and cultural resources.

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 10-20, or the RGU can address all cumulative potential effects in response to EAW Item No.22. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 21.

10. Land use:

a. Describe:

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

Land use within and surrounding the proposed project area is primarily agriculture and undeveloped natural areas managed for silviculture and/or used for recreation. The proposed trail segments are co-located on several managed trails including state, grant in aid, and forest service trails. The proposed routes follow portions of the Haggerman Voyageur Lowman Trail, Arrowhead State Trail, Blue Ox Trail, and Voyageur Trails. Land use patterns current as of 2019 are shown on Figures 6-1 through 6-12.

Land ownership is primarily the State of Minnesota and County-administered lands, with some municipal lands, Forest Service parcels, and privately-owned parcels. Most of the proposed project is located on existing forestry roads, county roads, within road right-of-way, tax-forfeit, or public lands. Public forest lands include the Kabetogama State Forest, the Koochiching State Forest, and the Superior National Forest. Permits would be maintained for the duration of the trail system.

Regional lands outside of the project area are mainly used for outdoor recreational activities, such as hiking, camping, fishing, canoeing, viewing wildlife, snowmobiling, cross-country skiing, ATV trail riding, etc. The greater area includes the Boundary Waters Canoe Area Wilderness (BWCAW); several Scientific and Natural Areas (SNAs) such as the Watrous Island, East Rat Root River Peatland, and West Rat Root River Peatland SNAs; Wildlife Management Areas (WMAs) including the Gold Portage and the Littlefork River WMAs; and the Smoky Bear, Pine Island, Koochiching, and Kabetogama State Forests. The nearest WMA is the Littlefork River WMA, which is approximately two miles from the nearest trail segment. The BWCA is over 10 miles from the nearest trail segment. The nearest SNA is the East Rat Root River Peatland, which is over one mile from the nearest trail segment. Increased accessibility to these areas is not anticipated as a component of this project.

The project crosses soil units mapped as prime farmland (prime farmland, farmland of statewide importance, and prime farmland if drained) in 139 locations (Web Soil Survey, accessed September 2023); however, the existing and proposed corridors are not currently being farmed. Pasture and hay production may occur adjacent to the trail corridor in some areas, however farmland conversion is not part of the proposed project, and there are no known incompatibilities between ATV trail use and agriculture.

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. The proposer may be responsible for reimbursing the value of timber production ("timber damages") in forested areas converted to new trail use. Trail use in DNR-managed lands would adhere to closures as needed. Trail closures due to logging would be posted on the Club's website, and at trailheads, as this information becomes available.

Overall, the proposed project and surrounding area land use is timber production, water quality protection, forest recreation, and managed trail use. Land use would remain similar under all route categories with main use changes as follows:

- Route Category 2: Existing trail corridors are already cleared of woody vegetation for snowmobiles or other vehicles. These routes would have a new use for ATV travel, but adjacent land use would

remain similar (recreational, silviculture, etc.).

- Route Category 3: New trail construction would require clearing a corridor through naturally vegetated areas or constructing trail in road ROW in areas that do not currently have an existing trail, path, or road. Approximately eight miles of new trail are proposed. New trail is proposed for tax forfeit, state, federal, MnDOT right-of-way, and private lands.
 - 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.

Koochiching County

Koochiching County's *Comprehensive Land Use Plan* (2001) includes the following Recreation Goal & Objective: "Provide a diversity of recreational opportunities to County residents and visitors". The strategies listed to support the recreation goal (page 140 of the plan) include "Expand opportunities for trail-based recreation during the summertime".

St. Louis County

St. Louis County's *Comprehensive Land Use Plan* (2019) includes Recreation and Tourism Goals, Objectives, and Implementation (pages 52-53 of the plan). The goals are:

Goal R-1: "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 ATV clubs to request county approval for a corridor access trail within county road right-of-way.

Arrowhead Regional Development Commission

In 2017 and 2018, the Northern St. Louis County Trails Task Force created the St. Louis County & Northeast Koochiching County Trails Plan (Trails Plan) as "a guide to develop and maintain a quality system of multi-use trails enhancing quality of life and tourism in northern Minnesota." Recommended Improvements specified in the Trails Plan include:

"Support the expansion of ATV trails/routes in the Voyageur Country area of northeast Koochiching County and far north St. Louis County. Include connections between Kabetogama and International Falls."

David Dill/Arrowhead State Trail Master Plan

The David Dill/Arrowhead State Trail Master Plan was completed in 1980 and updated in 2021. The David Dill/Arrowhead State Trail is a multi-use, multi-season trail; however, not all allowable uses can be accommodated on all sections of the trail. The Master Plan states that ATV use may be accommodated on some sections of the David Dill/Arrowhead State Trail where it meets sustainability criteria. The VCATV Trail

System was identified in the Master Plan, as including several parts of the David Dill/Arrowhead State Trail for summer ATV use. The proposed project is consistent with the Arrowhead Trail Master Plan, as it proposes to improve existing trails to support seasonal and sustainable use by ATVs.

The David Dill/Arrowhead State Trail Master identifies some segments that may someday be open to summer motorized use, including ATVs (e.g., directly adjacent to the Black Duck Grade). The proposer understands that some trail segments may be contingent on the approval of connecting sections. These determinations would be completed through coordination with MN DNR PAT.

State Forestry and Forest Classification and Road/Trail Designation

The Project is located within areas identified under the Forest Classification & Road/Trail Designation Plan for DNR Forestry-Administered Lands in Northern St. Louis County (October 2008)⁸. The DNR Division of Forestry anticipates future harvest would occur within the project boundary, and 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 covers approximately the northern half of St. Louis County and includes Kabetogama State Forest.

Federal

The 2004 Superior National Forest Land and Resource Management Plan⁹ specifies the Semi-primitive Motorized (SPM) Recreation Management Area, which emphasizes land and resource conditions that provide recreational opportunities in nearly primitive surroundings, where motorized use is allowed. The SPM Recreation Management Area is in parts of the Superior National Forest (SNF) with roads and trails, where management activities (i.e., timber management) are not very noticeable. Approximately 69,018 acres of the SNF are included in the SPM Recreation Management Area.

- 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 within a wild and scenic river corridor, critical area, or agricultural preserve. Mapped floodplain does intersect the project at several locations. Proposed improvements at floodplain crossings would consist of a boardwalk or bridge. Impacts to floodplain are not anticipated, and the proposed uses would be allowed in floodplain.

Portions of the project are within shoreland area, which is defined by local ordinance as land within 1,000 feet of a lake, pond, or flowage, and 300 feet of a stream or river, or the landward coverage of its designated floodplain. Local shoreland ordinances apply to waters included in the Public Waters Inventory (PWI; Figure 4). The entities with zoning authority over the proposed project routes include Koochiching County, St. Louis County, the City of Littlefork, and the City of International Falls.

The proposed project includes three possible new water crossings of MN DNR public waters, including two crossings as part of the preferred trail alignment and one crossing as a route alternative. The preferred trail alignment would cross the Rat Root River as part of the Galvin Spur trail segment (see Figure 4-4 and 4-7) and the East Branch of the Rat Root River as part of the Littlefork Connection (see Figure 4-9 and 4-10). An alternative route for the Kab Store to Ericsburg trail segment would cross the East Branch of the Rat Root River (see Figure 4-10). Crossings on public waters might require DNR Public Waters Work permits for

⁸ [Microsoft Word - NoStLPlan_Final.doc \(state.mn.us\)](#)

⁹ [Microsoft Word - Superior_FP_Preface.doc \(mn.gov\)](#)

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, 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 proposed trail 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 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.

The Rainy Headwaters-Vermilion Comprehensive Watershed Management Plan does not reference ATVs or fragmentation due to trails/roads. The MN Wildlife Action Plan references habitat fragmentation as a stressor for wildlife.

- iv. If any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.

No critical facilities are proposed in floodplain areas or areas identified as at risk for localized flooding. New water crossings would be constructed to withstand seasonal flooding to the greatest extent practicable.

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

Koochiching County

The proposed project meets the goals and objectives of the Koochiching County Recreation section of their Comprehensive Land Use Plan by expanding opportunities for trail-based recreation during the summertime. Trail use would adhere to seasonal road restrictions.

St. Louis 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 10.a.ii to promote regional trail development and maintenance.

State Forest Classification and Road/Trail Designation

The Plan has evaluated forest classification to manage, limit, or close various areas to motor vehicle use to protect environmental features such as wetlands. The plan allows for some motorized use and coordination with state, county and private landowners may be required.

Compatibility with the State Trail Master Plan for the Arrowhead State Trail

The Arrowhead State Trail Master Plan designates feasibility of ATV use on the Arrowhead State Trail on a section basis, determined by social and resource factors. ATV use is a compatible use with some of the sections of the Arrowhead State Trail under this Master Plan, primarily non-paved segments where feasibility criteria can be met. The factors determining social and resource feasibility rankings on this trail are as follows:

Feasibility Ranking	Social	Resource
High	<ul style="list-style-type: none"> • Impacts to current uses are negligible • Strong desire by public for section of trail • Provides connections to other trails and facilities • The use is compatible with current land uses and land owner agreements 	<ul style="list-style-type: none"> • Trail treadway requires limited to no improvements • Listed species, cultural resources and wetlands are few to none and the new use can easily accommodate those present.
Moderate	<ul style="list-style-type: none"> • New uses will have limited impact to current uses • Moderate desire by public for section of trail • May provide connections to other trail with minor development. Landowner agreements may need to be updated to reflect the new use. 	<ul style="list-style-type: none"> • Moderate improvements and trail reroutes may be required • Site surveys and permits may be required prior to construction Listed species, cultural resources and wetlands may be present.
Low	<ul style="list-style-type: none"> • New use would displace current users • Low desire by public for section of trail • No connections to other trails are possible • Landowner agreements specifically prohibit the new use. 	<ul style="list-style-type: none"> • The trail would require significant upgrades and reroutes to be sustainable • Listed species, cultural resources and wetlands are present and avoidance is not possible.

(Criteria used to identify new use feasibility; David Dill/Arrowhead State Trail Masterplan draft 06/15/2021/)

Wherever the proposed ATV segments intersect the Arrowhead State Trail sections not currently open to ATV use, the proposer understands that gates may be required to limit/restrict ATV use on incompatible sections.

Two segments of the proposed project intersect or coexist with portions of the Arrowhead State Trail. The expected social and environmental impacts of these segments on the Arrowhead State Trail, and expected compatibility issues with the Arrowhead State Trail Master Plan, are described below.

Kab Store to Ericsburg Segment

The proposed 'Kab Store to Ericsburg' segment of the system shares a corridor with a portion of Section 8 (Gamma [Kabetogama] Road to the Blue Ox Multi Use Trail) of the Arrowhead State Trail. According to the trail's Master Plan, Section 8 currently does not have much summer use due to the amount of wetland along the trail. The feasibility ranking for ATV use is considered "low" for both social and resource feasibility. The social rank is designated as "low" for lack of trail connections for summer use along the portion of trail, a low level of interest from the general public in developing this trail section, and because OHV use conflicts with management and visitor experiences of the East Rat Root SNA. The resource rank is designated as low due to the amount of low-lying wetland habitat and few opportunities for reroutes to avoid wetland habitat. Additionally, Section 8 includes areas that protect unique geologic resources including those found in the SNA, and the Arrowhead trail crosses one stand of old growth forest that requires special considerations for any work proposed in the area.

Although these rankings apply to Section 8 as a whole, some portions of the section are more favorable to trail development due to a local lack of large-scale wetlands, and these parts were chosen for possible inclusion in the proposed project. The Kab Store to Ericsburg segment includes three alternative routes that avoid the East Rat Root SNA, and extensive wetland crossings. The proposed project does not intersect the old growth forest stand

on the Arrowhead trail, which is east of the proposed project. These reroutes would mitigate the “low” feasibility as described in the Arrowhead State Trail Master Plan by using only more suitable portions of the Arrowhead State Trail in Section 8.

FR 612A to Black Duck Connector

The proposed ‘FR 612A to Black Duck Connector’ segment of the system shares an approximately 1,300 foot long corridor with a portion of Section 6 (Bearscratch Road to Sheep Ranch Road) of the Arrowhead State Trail. The Master Plan describes Section 6 as used for hunting, summer, and winter recreation. Several state forest, US Forest Service, and county roadways in this section are currently open to OHVs. The feasibility ranking is considered “moderate”, with a social rank of moderate to high and a resource rank of low-moderate. For the moderate to high social rank, Blackduck Grade is a more desirable portion for OHV enthusiasts, and portions of the Section 6 corridor provide critical connections to the Kabetogama State Forest. A portion of the Section 6 corridor is shared with the Bearscratch Hunter Walking Trail and some sections are privately owned. In these locations, OHV operation may conflict with existing use and should be reviewed prior to allowing new use. Resource feasibility is considered moderate, for a mix of uplands and wetlands along the Section, and there is some opportunity to reroute around wetlands. The FR 612A to Black Duck Connector segment does not use the Bearscratch Hunter Walking Trail, nor does it intersect private ownership.

Federal

Although the U.S. Forest Service plan 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 user experience. During previous phases of the VCATV System, the U.S. Forest Service has worked closely with the DNR, local government units (LGUs) and interest groups to evaluate site-specific locations of the trails and ensure the trails are compatible and interlink if possible. Objectives and guidance are laid forth for the control and limiting of noxious/invasive species, sustaining watershed health, and soil resources. Coordination with the Forest Service would occur to best ensure compatibility with these objectives.

- c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.

Additional coordination with state, county, and private landowners for access permissions and/or easements would be needed to allow ATV use on portions of the trail system. The proposer would request approval as needed for ATV use on segments of the Arrowhead State Trail.

Approximately eight miles of proposed new trail would be located on tax forfeit, state, federal, MnDOT ROW, and private lands. The alignments on tax forfeit land would be developed to ensure compatibility for ATV use with the County Comprehensive Land Use Plan. The trail on federal land would be developed to ensure compatibility for ATV use with the Superior National Forest Land and Resource Management Plan. The alignments on state lands would be developed to ensure compatibility for ATV use with the state Forest Classification & Road/Trail Designation Plan for DNR Forestry-Administered Lands in Northern St. Louis County. The proposer intends to utilize existing county, forest, and logging roads and existing managed trails to the greatest extent practicable, thus minimizing new trail construction.

Portions of the two segments intersecting or coinciding with the Arrowhead State Trail have potential for incompatibilities (i.e., those areas with a ‘low’ feasibility ranking). These would be mitigated by:

- Installing sturdy gates to limit or restrict ATV access to incompatible sections;

- Use of alternative routes that avoid the East Root SNA;
- Use of alternative routes and minor rerouting to avoid sensitive areas; and
- Use of alternative routes and minor rerouting to minimize wetland crossings and avoid wetland areas.

11. 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.

The project's ecological setting is primarily the Northern Minnesota and Ontario Peatlands Section. Geology in the area is clayey deposits from Glacial Lake Agassiz, and the terrain is generally flat and poorly drained. Underlying bedrock is Precambrian. Large peatland complexes are present in the region; however, new trail crossings of peatlands are not proposed. Depth to bedrock ranges widely but is generally shallow in the northern and eastern extent and covered by up to 300 feet of glacial drift elsewhere. Soil and plant communities on shallow or exposed bedrock can be vulnerable to recreational use. These segments would be reviewed by NHIS prior to construction. Recommendations based on the NHIS response letter would be followed. Rock outcrop native plant communities, which often consist of rare and specialized plant and animal communities, would not be impacted since new trail segments would not be placed in locations of rock outcrop. For areas that need improvement or new construction, trail design would 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. Club members and volunteers should work with area partners such as the DNR Trail Ambassador program to monitor the condition of shallow soils and exposed bedrock. Mitigation measures may include use of buffers and/or signage near sensitive areas. As with soil suitability in EAW Item 11.b. below, the design level at preparation of this document is a broad characterization of soils and geology, to identify likely suitable soils and challenges. Detailed design would more precisely locate areas of instability or erosion potential and make minor reroutes (i.e., within the review corridor) or improve/construct a built-up trail section as appropriate.

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 12.b.ii.

The proposed project covers a wide area, with 42 mapped soil units plus areas of open water and gravel pits. See Attachment C for a table that includes soil map units and their characteristics within the project area. Soils are discussed below in the context of K and T factors.

The K factor quantitatively represents the soil's susceptibility to erosion. The lower the K factor the less

susceptible the soil is to erosion and more capable the soil is to water permeation. Figures 5-1 through 5-12 display the project area soil map units by erodibility, as defined by Soil Erodibility Factor (K factor).

The T factor is defined as the soil loss tolerance, or the maximum amount of erosion at the soil can be maintained. T factors are integer values that range from 1 to 5, where 1 is most susceptible to loss, and 5 is least susceptible to loss. Some trail segments are in soils with T factors of 5 and 4 (see Attachment C). 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). Segments not currently open to ATV use in soils with lower T factors (more susceptible to erosion) may need improvements to prevent erosion and allow sustainable trail use. Precise volumes of excavation and grading would be determined through final design, which generally follows the DNR Natural Surface Guidelines for ATV Trails.

For proposed Route Category 1 segments, no change or potential impacts to soils and topography are anticipated. Route Category 2 segments 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. 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 *“Trail Planning, Design, and Development Guidelines”* manual (MN DNR 2007).

New use on natural surface trails may compact soils, possibly resulting in increased runoff. According to the DNR Watershed Health Assessment Framework, the soil erosion potential is high for the majority of the three major watersheds associated with the project. Appropriate erosion and sediment control BMPs would be selected based on current site conditions and maintained throughout each construction phase. The purpose of BMPs is to reduce the potential for sedimentation and runoff to surface water resources or migrating off site. Temporary BMPs would be inspected and maintained (per the NPDES Construction Stormwater Permit) until permanent vegetation has become established and stabilization has occurred. Permanent BMPs would be incorporated into the trail design to minimize erosion of the trail during ongoing use per the *“Trail Planning, Design, and Development Guidelines”* manual (MN DNR 2007). Design would consider modifications based on appropriate slopes and drainage, propose installation of boardwalks or fill to correct areas with unsuitable soils, and avoid areas requiring extensive earthwork to the extent practicable.

Route Category 3 trail segments (new construction) would require ground disturbance for improvements that may consist of shallow excavation, backfill, 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 EAW Item 12.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 ATV trails as described in EAW Item 12.b. ii.

After construction, an adaptive management plan would be implemented to address soil and topography stabilization, corrections, and erosion controls as needed. Immediate post construction would be managed by the Club, following the conditions outlined in the SWPPP. Trail monitoring would follow the GIA program. Ongoing maintenance is being addressed in the NE MN ATV master plan currently in development.

- NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 12 must be consistent with the geology, soils and topography/land forms and potential effects described in EAW Item 11.

12. Water resources:

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

- i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic noxious/invasive species and the 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 proposed project is in a water resource rich area with many nearby rivers, streams, lakes, and wetlands. There are currently multiple waterbody crossings on the Voyageur Country ATV Trail, and wetlands are frequent. These surface water features are discussed in more detail in EAW Item 12 a.iv below.

The proposed project is located within the Rainy River – Black River (#74), Rainy River – Rainy River (#75), and the Little Fork River (#76) major watersheds.

Two Wild Rice lakes are close to the System, including Rat Root Lake and Rainy Lake. Construction is proposed adjacent to the Rat Root Lake outlet. The proposer would evaluate date restrictions for construction to avoid disturbance to Rat Root Lake during the spring wild rice growing season.

No Wildlife Management Areas, Waterfowl Management Areas, Wild and Scenic Rivers, or Designated Wildlife Lakes are within one mile of the proposed project.

Several Minnesota DNR public waters, including designated trout streams, are within the project area. No trout streams would intersect the proposed project route. Public waters intersecting the proposed project are summarized below.

Minnesota DNR Public Watercourses

Stream Name (Kittle Number)	DNR Shoreland Classification	New or Existing Crossing	Proposed Trail Segment	Route Category	Figure Number
Rat Root River, East Branch (H-001-035-006)	Remote, Agriculture	New	Littlefork Connection	2	4-9, 4-10
Rat Root River, East Branch (H-001-035-006)	Remote, Agriculture	New	Kab Store to Ericsburg (Alternative)	3	4-10
Rat Root River (H-001-035)	Agriculture, Forested	New	Galvin Spur	2	4-4, 4-7
Unnamed Stream (H-001-031)	Tributary	Existing	Ericsburg to International Falls	2	4-1

Rat Root River (H-001-035)	Agriculture, Forested	Existing	Galvin Spur	2	4-3, 4-7
Rat Root River (H-001-035)	Agriculture, Forested	Existing	Kab Store to Ericsburg	1	4-3, 4-9
Rat Root River, East Branch (H-001-035-006)	Tributary	Existing	Kab Store to Ericsburg	1	4-9
Rat Root River, East Branch (H-001-035-006)	Tributary	Existing	Kab Store to Ericsburg	2	4-10, 4-11
Rat Root River, East Branch (H-001-035-006)	Tributary	Existing	Kab Store to Ericsburg	1	4-10
Unnamed Stream (H-001-035-006-008)	Tributary	Existing	Kab Store to Ericsburg (Alternative)	1	4-10, 4-11
Unnamed Stream (H-001-035-006-009)	Tributary	Existing	Kab Store to Ericsburg (Alternative)	1	4-10, 4-11
Unnamed Stream (H-001-035-022)	Tributary	Existing	Littlefork Connection	1	4-10
Unnamed Stream (H-001-030-004)	Tributary	Existing	Littlefork Connection	1	4-4, 4-5, 4-6, 4-8
Unnamed Stream (H-001-030-004)	Tributary	Existing	Littlefork Connection	2	4-7, 4-8
Rat Root River (H-001-035)	Agriculture, Forested	Existing	Littlefork Connection	1	4-7, 4-10

The proposed project includes nine existing MN DNR public water crossings. Seven existing crossings are on Route Category 1 trail, and do not require improvements as part of the project; therefore, no work on these existing water crossings is planned as part of the project. Two existing crossings are Route Category 2 trail and may need improvements to accommodate ATV use. The suitability for ATV travel on these existing crossings would be assessed once routes are finalized.

The proposed project includes three new water crossings of MN DNR public waters, including two crossings as part of the preferred trail alignment and one crossing as a route alternative. The preferred trail alignment would cross the Rat Root River as part of the Galvin Spur trail segment and the East Branch of the Rat Root River as part of the Littlefork Connection. The School Trust route alternative would cross the East Branch of the Rat Root River.

If work is required below the OHWL, required BMPs would be established during permitting. These 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. These BMPs would avoid or minimize Total Suspended Solids (TSS) from entering nearby water resources. A DNR document, "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. MN Rule 6115.0230 (Bridges, culverts, intakes and outfalls) and 6115.0231 (Specific standards for bridges, culverts, intakes and outfalls), as well as Floodplain Rules, would apply to public water crossings. Other MN Rules may apply depending on activities, including but not limited to MR 6115.0190 to 6115.0192 and MR 6115.0200 to 6115.0202, for filling and excavation in public waters.

There are two Lakes of Biological Significance within one mile of the proposed project: Rainy Lake and Rat Root Lake are listed as Outstanding Lakes of Biological Significance. Rat Root Lake is within the review area for the Kab Store to Ericsburg segment. The proposed project is further than 0.5 mile from Rainy Lake; no impacts to Rainy Lake are anticipated to result from the project. The Rat Root River is located directly adjacent to a proposed Route 1 trail segment which follows existing CR 119. No improvements are needed along this route; therefore, no impacts to Rat Root Lake are anticipated.

There are no MPCA Exceptional Aquatic Life Use Waters within one mile of the proposed project. Rainy Lake is a MPCA Outstanding Resource Value Water located within one mile of the proposed project.

There are four MPCA 303d Impaired Waters within one mile of the proposed project area. Impaired waters and the impairments are summarized below.

MPCA 303d Impaired Waters

Waterbody Name	Trail Segment	Impairment
Black Duck River	FR 612A to Black Duck Connector	<i>Escherichia coli</i> and total suspended solids (TSS)
Littlefork River	Littlefork Connection	Turbidity and mercury in fish tissue
Rainy River	Ranier Connector	Mercury in fish tissue
Rainy Lake	Ranier Connector	Mercury in fish tissue

BMPs required for work adjacent to Impaired Waters would be established during permitting and would vary depending upon site specific conditions. These could include floating silt curtain, construction during no flows/low flows or winter conditions, and, if required, incorporation of coffer or check dams into the final plans. These BMPs would avoid or minimize TSS from entering nearby water resources. The proposers would work with the MPCA to ensure construction and ongoing use of the trails are in accordance with TDMLs.

- 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 project covers a broad geographic area (see EAW Item 6.c) with variable topography, so the depth to groundwater varies across the review area. The Littlefork Wellhead Protection Area (ID #105901) is located within one mile of the project, but proposed trails would not intersect the area.

The MDH County Well Index does not identify any wells within a 40-foot buffer of the entire project route. The closest well near the project route is well number 00256944, which is adjacent to an existing roadway not proposed for improvement. The well is about 65 feet from the road's edge and would not be impacted.

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. below.

- 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 would 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. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion.

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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.

Not applicable

- ii. Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the project will affect runoff volume, discharge rate and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.

The landscape surrounding the proposed project is largely natural, undeveloped, forested lands. Undisturbed vegetation naturally slows stormwater runoff and promotes infiltration where soils are suitable. Existing roads are typically graded to drain from the roadbed to vegetated roadside ditches.

The use of existing, allowed routes for seasonal ATV use (Route Category 1), has minor potential to lead to increased sediment mobilization and erosion of natural surface trails if incorporating these routes into the VCATV System increases rider numbers. Monitoring and maintenance of natural surface trails would be necessary to prevent erosion and sedimentation that could contribute to adverse effects on stormwater (i.e., TSS). The Club would work with local, state, and federal agencies to minimize potential adverse impacts caused by erosion of soil instability by monitoring and maintenance of the trail, and by using BMPs as described in the *“Trail Planning, Design and Development Guidelines”* manual (MN DNR 2007). Route Category 1 trail segments would not have construction-related changes to water quality of stormwater.

Improvements of existing routes and new construction (Route Categories 2 and 3) may cause erosion and

sedimentation to downstream waterways. Improvements and new trail construction would include fill, culverts, bridges, or boardwalks. Design would be based on discrete site conditions (i.e., elevations, drainage, flow paths, soils, etc.). The design of all wetland and waterway crossings would follow avoidance and minimization requirements for permitting. A Stormwater Pollution and Prevention Plan (SWPPP) would be developed for trail segments proposed for improvements and new construction. The SWPPP would specify temporary erosion and sediment control BMPs. Redundant temporary and permanent erosion control BMPs may also be requirements of any necessary Public Water Work permits. BMPs may also be specified by local planning and zoning permits, WCA permits, or CWA Section 404 permits. BMPs utilized during construction may include (but are not limited to) the following: erosion control blankets on steep slopes, biorolls / filter logs, rock construction entrances, and seeding. The proposer would consult with permitting agencies responsible for the authorization of the project and follow permit conditions.

- 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. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.

This project proposes no water appropriations nor well abandonment. No dewatering is currently anticipated. If temporary construction dewatering is needed, a MN DNR Water Appropriation Permit may be required.

iv. Surface Waters

- a) 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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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.

Field delineation of wetlands for the proposed trail segments has not yet been completed; however, all proposed routes will be delineated prior to permitting and construction. For context of wetland resources in the project area, Figures 4-1 through 4-12 show approximate wetland locations as mapped by the National Wetlands Inventory (NWI).

Mapped wetlands are found adjacent to, or are intersected by, portions of the following trail segments:

- Ranier Connection
- Blue Ox to Pelland Junction
- Ericsburg to International Falls
- Galvin Spur
- Littlefork Connection
- Ray Spur
- FR 612A to Black Duck Connector

Estimated impacts to wetlands in the project area are preliminary and were prepared based on a maximum impact width through the anticipated wetland areas. The estimated impacts are intended to represent the maximum amount of expected impact, since the project would avoid and minimize wetland impacts to the greatest extent practicable. Direct wetland impacts would result from excavation and fill. The exact locations and amounts of wetland impact will be identified during the design phase. Indirect impacts to wetland hydrology would be avoided by maintaining hydrological connectivity with equalizing culverts where appropriate, and indirect impacts to wetland flora would be avoided by using fill and seed mixes certified free of invasive species, by regularly monitoring trails for emergence of invasive species, and by promoting good Play/Clean/Go practices among trail users.

Route Category 1 trails are not expected to have an impact on surrounding wetland resources from trail construction. Existing trails with proposed new ATV use and improvements (Route Category 2) and new trail segments (Route Category 3) would have the potential to cause erosion and sedimentation to downstream water resources, including wetlands, during construction and/or improvements. The potential for invasive species introductions is also possible. Erosion would be managed as described in EAW Item 12.b.2 above. Wetland disturbance would be minimized by crossing wetlands with boardwalks where practicable and using the narrowest trail footprint that would accommodate all allowed vehicles on each segment (i.e., 20 to 26 feet for segments shared with snowmobiles and trucks/highway vehicles and 12 to 14 feet for ATV only segments). Potential wetland impacts due to improvements on existing trails and new trail construction are summarized below. These are conservatively estimated from an intersection of the estimated wetlands and the widest possible build footprint using fill.

Proposed Wetland Impacts

Wetland Type, Circular 39	Acres of Wetland in Study Area (Acres)	Acres in Build Area - Potential Impacts Areas (Acres)
Type 1 (Seasonally Flooded Basin)	0.35	0.11
Type 2 (Fresh (wet) Meadow)	7.50	3.87
Type 3 (Shallow Marsh)	5.33	2.30
Type 4 (Deep Marsh)	0	0
Type 5 (Shallow Open Water)	0.20	0.04
Type 6 (Shrub Swamp)	8.50	4.15
Type 7 (Wooded Swamp)	8.37	3.36
Type 8 (Bog)	3.35	0.99
Riverine Systems	0.30	0.15
Total	33.90	14.97

Both the Wetland Conservation Act (WCA) and Clean Water Act (CWA) require that impacts to aquatic resources be avoided or minimized; project alternatives are needed in justifying all impacts. Wetland

replacement/mitigation is the last resort when avoidance is not feasible, and minimization has already been achieved. Project design will minimize impacts where practicable by proposing a narrower footprint or boardwalk crossing. Alternative routes are also considered for avoidance and minimization of wetland impacts. Minimization measures would be refined in the design process, and applications for WCA and CWA approvals would describe minimization measures and sequencing of project alternatives in detail.

Trail design would reduce impacts to the host watershed by such means as using equalizing culverts to maintain hydrologic connections between wetlands. Like prevention of adverse effects due to stormwater discussed in EAW Item 12 b. iii. above, climate trends are anticipated to increase the frequency of large storm events, making stormwater management critical for reducing impacts to the host watershed.

None of the wetland complexes are identified as public water wetlands by the Public Waters Inventory. Non-public water wetlands might be subject to permit requirements of the local WCA authority – typically Koochiching County, St. Louis County, MN DNR, or a municipality, depending on the location of impacts. Water-related permits applicable to the project include the CWA Section 404 permit issued by the USACE, the National Pollution Discharge Elimination System (NPDES) permit issued by the MPCA, and CWA Section 401 Water Quality Certification.

Wetland mitigation requirements would be established in permitting, but generally 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 priority if credits are available in the same watershed as the impact. The compensatory mitigation replacement ratio would be negotiated with the approving agency based on the type of impact. For wetland loss, the minimum would be 1:1 replacement, where one acre of wetland lost is replaced by a minimum of one acre of wetland. Depending on the wetland and/or water body impacted, the ratio might increase. Temporary impacts to wetlands would be restored to pre-construction conditions as dictated by permit conditions. This would likely include restoring natural contours, re-seeding with recommended native vegetation, and/or other measures specific to the type of temporary impact.

- b) 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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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 direct changes to any surface water bodies are planned as part of this project. Construction and improvements of trails, construction of water body crossings, and ongoing ATV use of the trails could have impacts to surface water bodies.

No changes in water quality, impairments, or fish and wildlife values of nearby waters are anticipated on Route Category 1 trails. Monitoring and maintenance of natural surface trails would be necessary to prevent erosion which could contribute to TSS impairments. Air emissions from ongoing use may emit mercury, like any combustion of fossil fuels; however, these emissions would be negligible compared to highway vehicle traffic, power plant, or other industrial sources of air emissions. Therefore, ATV use would not be expected to

contribute to mercury impairments because of their negligible contribution to the overall deposition of mercury to these watersheds. 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). In general, climate change projections for Minnesota predict a warmer and wetter climate, with more frequent extreme precipitation events. These precipitation events could result in increased erosion of the trail and sedimentation into nearby water features and therefore would require increased trail monitoring and maintenance.

Improvements for Route Category 2 and construction of Category 3 segments could cause erosion and sedimentation to downstream water resources. To minimize potential construction effects that could contribute to increased TSS, the project would require erosion and sediment control measures such as erosion control blanket on steep slopes, silt fencing, etc. To minimize potential TSS from ongoing use, trail design would follow *“Trail Planning, Design, and Development Guidelines”* manual (MN DNR, 2007), and continued trail monitoring and maintenance would be conducted to mitigate rutting, trail erosion, and other issues.

Individual wetland and waterbody crossings would be designed based on the aquatic resource characteristics including size and flow. Possible improvements include fill/hardening and installation of culverts, boardwalks, and/or bridges for a sustainable trail surface at wetland and water crossings. Potential direct effects of improvements are modified/improved crossings of streams to provide safe fish passage. New or improved stream crossings would be designed to meet DNR requirements for maintaining flood flow, fish passage, and navigability (if applicable). 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 crossings available on the DNR Water Permits webpage¹⁰. Possible impacts of water body crossings include sedimentation and runoff during construction, and effects on water flow. Impact of sedimentation would be reduced by use of redundant erosion and sedimentation BMPs during construction; proper placement and sizing of water crossings; and proper integration of the crossing with the trail. Possible effects on water flow would be reduced by proper sizing of water crossings so they can accommodate expected flood waters, taking into consideration the expected increase in precipitation intensity from climate change impacts.

13. 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 trails would not have the potential for additional contamination, wastes, or hazardous materials, as there are no improvements or construction anticipated in these trail segments.

A query of the MPCA’s “What’s in My Neighborhood” online database (accessed September 2023) did not identify any active sites within the 40-foot review corridor for Route Category 2 and 3 trail segments. The proposed project does not anticipate encountering 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 would be contacted immediately.

¹⁰ [Temporary Bridges and Low-Water Ford Crossings \(state.mn.us\)](https://state.mn.us)

- 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.

The proposed project is not expected to generate significant amounts of solid waste during construction for those trail segments that would require improvements/construction. Solid waste generated during construction would be comprised primarily of items like construction materials. The contractor would be responsible for removing any construction-generated waste to appropriate off-site facilities for disposal.

During use of the trail (i.e., ATV riding), solid waste (trash) may be discarded along the project route. The Club promotes trail stewardship and maintenance, which includes discouraging littering. Following the completion of the proposed project, the trail would be operated, maintained, and managed by the VCATV through the Minnesota Trail Assistance program (Grant-in-Aid program) which allows the use of Trail Ambassadors to help monitor for trail etiquette. Trail ambassadors would help monitor and maintain trails and manage trash. Signage placed along the trails would encourage trail riders to stay on mapped and signed trails and dispose of waste in proper receptacles.

- 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 new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size, and age of existing tanks on the property that the project will use. 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 use of the trails, small quantities of fuel and other materials such as hydraulic oils may be introduced into the environment. The release of these materials is anticipated to be negligible in quantity. To minimize fuel leaks, the Club encourages trail stewardship which includes maintaining vehicles to avoid leaks.

For trail segments 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 would be reported to MPCA by the contractor or lead engineer. All hazardous materials would 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.

14. 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 proposed project has connections over a broad geographic area (see EAW Item 6.c). As classified by the DNR’s Ecological Classification System (ECS), it is located within the Laurentian Mixed Forest (LMF) ecological province, with conifer forest, mixed conifer-hardwood forest, and conifer-dominated wetlands. The routes are in the Northern Superior Uplands and the Northern Minnesota and Ontario Peatlands ecological sections. 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 project is near several Minnesota Biological Survey (MBS) sites of high biodiversity significance. Short lengths of Category 2 routes cross or run adjacent to some of these sites, as shown on Figures 7-1 through 7-12.

MBS Sites intersecting the proposed project are discussed in more detail in EAW Item 14.b.

Native Plant Communities

The Minnesota DNR Native Plant Community (NPC) database identifies mapped NPCs within and adjacent to the project area, which are summarized below. The mapped NPCs are shown in relation to the project segments on Figures 7-1 through 7-12. The NPCs are assigned conservation status ranks (S-ranks) that reflect the risk of elimination of the community from Minnesota. The ranks include:

- S1 – critically imperiled
- S2 – imperiled
- S3 – vulnerable to extirpation
- S4 – apparently secure; uncommon but not rare
- S5 – secure, common, widespread, and abundant

DNR Native Plant Communities

MBS Site Name	NPC Code	Native Plant Community Classification	Conservation Status Rank	Number of Communities
Beaver Brook North	FFn57	Northern Terrace Forest	S3	1
Beaver Brook North	MHn44	Northern Wet-Mesic Boreal Hardwood-Conifer Forest	S2, S3, S3S4, S4	2
Beaver Brook North	WMn82	Northern Wet Meadow/Carr	S4, S5	1
Not within MBS Site	FFn57	Northern Terrace Forest	S3	1
Not within MBS Site	MHn44	Northern Wet-Mesic Boreal Hardwood-Conifer Forest	S2, S3, S3S4, S4	5
Not within MBS Site	MHn44c	Aspen – Fir Forest	S3S4	2
Not within MBS Site	WFn53	Northern Wet Cedar Forest	S3, S4	1
Not Within MBS Site	WFn55	Northern Wet Ash Swamp	S3, S4	2
Not Within MBS Site	WMn82	Northern Wet Meadow/Carr	S4, S5	1

These NPCs are found within the review area of the Littlefork Connection segment. In addition, portions of the proposed Category 2 routes along the Kab Store to Ericsburg segment also pass through cedar stands that are important for deer wintering yards.

Fisheries

The project is in an area 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, sauger, northern pike, smallmouth bass, 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. Deeper lakes in the area also possess a coldwater fish community which includes species such as lake trout, whitefish, cisco, and burbot. Additionally, state-designated trout streams in the project area possess populations of brook trout.

Wildlife

Resident wildlife in the proposed project area includes species common to areas with conifer and mixed forest, such as beaver, wolves, black bear, northern long-eared bat, bald eagle, spruce grouse, ruffed grouse, white-tailed deer, moose, woodcock, an array of songbirds, hawks, and owls; many small mammals such as voles, shrews, and squirrels; and furbearers such as fisher, marten, red and gray fox, mink, and otter. Rare species are discussed in more detail under EAW item 14b below.

Birds

The project is within one mile of two Important Bird Areas (IBAs): The Superior National Forest (SNF) and Voyageurs Kabetogama. The forest in the Superior IBA is an extraordinarily diverse mixture of forest species and patch sizes interspersed with lakes and waterways. This diversity provides habitat for 163 species that are breeders in the Superior NF. Within the Voyageurs Kabetogama IBA, 238 species have been observed, 68 of which are Species of Greatest Conservation Need (SGCN) or species of conservation concern. This IBA supports significant numbers of breeding Herring Gulls, Ring-Billed Gulls, and Double-Crested Cormorants. Both breeding and migratory Common Loons are here in large numbers as are Great Blue Herons and Red-necked Grebes, Bald Eagles, Ospreys, and Merlins. Twenty-four of the 29 species of wood warblers found in Minnesota have been documented here in the summer and are presumed breeding, making this area one of the most important in the state for bird species diversity.

The review areas for the Ranier Connection, Kab Store to Ericsburg, and Ray Spur segments intersect the Voyageurs Kabetogama IBA. Kab Store to Ericsburg also intersects the Superior National Forest IBA, as does FR 612A to Black Duck Connector.

- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota 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 (MCE 2023-00720) from which the data were obtained and attach the Natural Heritage Review letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

MN DNR Consultation

A request for a Natural Heritage Review was submitted through the Minnesota Conservation Explorer (MCE) on September 13, 2023. Correspondence #MCE 2023-00720 was received on February 7, 2024 (Attachment D), which indicated the following rare features may be impacted by the proposed project, including Ecologically Significant Areas, State-listed Species, and Federally listed Species. These features are discussed in detail below.

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.

State-listed species that may be impacted by the proposed project (as described in the NHIS letter) are

summarized in the Table below.

State-Listed Species

Taxonomic Group	Species	Status	Habitat
Mosses and Liverworts	Cushion Peat Moss (<i>Sphagnum compactum</i>)	Threatened	Wet and sandy soil, siliceous rocks, or bare peat, often in seepage, in late snow melt areas, and on low banks of roadside ditches
Mollusks	Black Sandshell (<i>Ligumia recta</i>)	Special Concern	Riffle and run areas of medium to large rivers in areas dominated by sand or gravel
Mollusks	Creek Heelsplitter (<i>Lasmigonia compressa</i>)	Special Concern	Creeks, small rivers, and upstream portions of large rivers; sand, fine gravel, and mud substrates
Fish	Lake Sturgeon (<i>Acipenser fulvescens</i>)	Special Concern	Moderately clear, large rivers and lakes with firm sand, gravel, or rubble bottoms.
Insects	Laurentian Tiger Beetle (<i>Cicindela denikei</i>)	Special Concern	Prefers openings in northern coniferous forest, including abandoned gravel and sand pits, and sparsely vegetated rock outcrops
Mammals	Canada Lynx (<i>Lynx canadensis</i>)	Special Concern	Boreal spruce-fir forest ecosystems with dense trees and understory, covering large tracts of area
Birds	Trumpeter Swan (<i>Cygnus buccinator</i>)	Special Concern	During the breeding season, small ponds and lakes or bays on larger water bodies with extensive beds of emergent vegetation such as cattails, bulrushes, and sedges
Vascular Plants	Few-flowered spikerush (<i>Eleocharis quinqueflora</i>)	Special Concern	Sparsely vegetated wet habitats found in graminoid fens, shorelines of ponds and small lakes, and occasionally in wet prairie openings
Vascular Plants	Northern oak fern (<i>Gymnocarpium robertianum</i>)	Special Concern	Forested rich peatlands dominated by northern white cedar and black spruce

Federally-Listed Species

According to a planning-level query of the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation System (IPaC), requested on August 29, 2023, the project area is within the distribution range of five federally-listed species. These include the endangered northern long-eared bat (*Myotis septentrionalis*), the proposed endangered tricolored bat (*Perimyotis subflavus*), the threatened Canada lynx (*Lynx canadensis*), the threatened gray wolf (*Canis lupus*), and the candidate monarch butterfly (*Danaus plexippus*), as summarized below.

Federally-Listed Species

Species	Status	Habitat
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Endangered	Roosts in trees in forests from April through October. Hibernates in

		caves and mines from October through April.
Tricolored Bat (<i>Perimyotis subflavus</i>)	Proposed Endangered	Roosts in trees in forests from April through October. Hibernates in caves and mines from October through April.
Canada Lynx (<i>Lynx canadensis</i>)	Threatened	Boreal spruce-fir forest ecosystems with dense trees and understory, covering large tracts of area.
Gray Wolf (<i>Canis lupus</i>)	Threatened	Occupies a diversity of habitats, including conifer and hardwood forests and forested peatlands.
Monarch Butterfly (<i>Danaus plexippus</i>)	Candidate	Grassland/prairie habitat where milkweeds (<i>Asclepias</i> spp.) and other forbs are present.

Minnesota Biological Survey (MBS) Sites of Biodiversity Significance

The NHIS letter describes several MBS Sites of High and Moderate Biodiversity Significance adjacent to or crossed by the proposed project. 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. All of these areas are in Koochiching County, and most of the land in these Sites is in the Koochiching State Forest and adjacent public and private lands.

The Minnesota DNR Biological Survey Sites data layer, accessible through the MCE, identified Sites of Biodiversity Significance intersecting the proposed 40-foot review corridor of the project route (see below). The MBS sites are shown in relation to the project segments on Figures 7-1 through 7-12. Actions to help minimize disturbance of ecologically significant areas are discussed below in EAW Item 14.d.

MBS Sites

Name	Segment	Biodiversity Significance
Unnamed 36054	Ericsburg to International Falls	High
Beaver Brook North	Littlefork Connection	High
Burlington Bog	Blue Ox to Pelland Junction, Ericsburg to International Falls	High
Unnamed 36076	Kab Store to Ericsburg	Moderate
Galvin Road Peatland	Ericsburg to International Falls, Galvin Spur, Littlefork Connection	High
Galvin Road East	Littlefork Connection	Moderate
Black Duck Elephant	FR 612A to Black Duck Connector	Moderate

Calcareous Fens

The nearest known calcareous fen is Nett Lake Fen, located over 18 miles west of the Project.

DNR Old Growth Stands

Old-growth forests are natural forests that have developed over a long period of time, generally at least 120 years, without experiencing severe, stand-replacing disturbances such as fires, windstorms, or logging. There are

two old growth forests within the 40-foot review corridor of the proposed project route, found along the Ericsburg to International Falls segment, on Category 2 trail. The DNR's old growth committee was contacted for guidance on avoiding impacts to the old growth stand, and would continue to be consulted throughout construction. Work in the corridor adjacent to the old growth forest would follow forest road management guidelines, where applicable, according to the 2012 DNR publication *Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management*.

Minnesota Prairie Conservation Plan

The Minnesota Prairie Conservation Plan, a 25-year strategy for accelerating prairie conservation in the state, identifies Core Areas, Corridors, and Corridor Complexes as areas in which to focus conservation efforts. No Core Areas, Corridors, or Corridor Complexes were identified in the vicinity of Project.

Lakes of Biological Significance

There are two Lakes of Biological Significance within one mile of the proposed project: Rainy Lake and Rat Root Lake are listed as Outstanding Lakes of Biological Significance. The proposed project is greater than 0.5 mile from Rainy Lake; no impacts to Rainy Lake are anticipated to result from the project. The Rat Root River is located adjacent to a proposed Category 1 trail segment which follows existing CR 119. No improvements are needed along this route; therefore, no impacts to Rat Root Lake are anticipated.

- c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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 open to ATV use (i.e., route categories 2 and 3), could be more vulnerable to impacts from disturbance. ATV-related construction and operation 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 use, which is estimated to be approximately 100 to 150 machines per week, or 400 to 600 per month. Noise would be generated by individual ATV machines, or collectively when ridden in groups. Where trails are near roads, wildlife in the area may already be conditioned to noise and disturbance from human-related activities. In more remote areas, the noise and disturbance associated with ATV use may cause more sensitive species to alter their habits to avoid noise. Large predators (for example wolves and Canada lynx) may utilize existing trail corridors for travel and hunting. ATV use of these routes may alter predator travel and hunting patterns.

Impacts to smaller wildlife (e.g., turtles), may occur due to collisions with ATVs. During construction, "natural netting" or "bio netting" erosion control BMPs would be specified to avoid impacts to smaller wildlife.

Habitat connectivity is important to the viability of small wildlife populations, such as amphibians. Fragmentation and habitat loss can impact species distribution and diversity. Habitat fragmentation would be avoided and minimized to the greatest extent possible, by utilizing existing trail corridors and disturbed areas. Extending trail use into spring, summer, and fall may disrupt seasonal movements of wildlife along these routes, however the disruptions are anticipated to be intermittent, sporadic, and temporary in nature.

The NHIS report did not identify any state-listed threatened or endangered species within the review area of the proposed project. The only state threatened or endangered species identified within 0.5 mile of the trail alignment is a population of cushion peat moss (*Sphagnum compactum*; state threatened). The population is located approximately 750 feet from a Category 2 route and would not be impacted by the proposed project. A

few special concern species also have known occurrences within 0.5 mile of the trail alignment, as summarized in the table in EAW Item 14.b above. Guidance from the NHIS letter would be followed to avoid impacts to these species, including refraining from construction activity during nesting season if trumpeter swans are present.

Impacts to the gray wolf and Canada lynx are anticipated to be negligible. The trails largely follow existing corridor which limits habitat conversion. Extending trail use into spring, summer, and fall may disrupt seasonal movements of wildlife along these routes, however the disruptions are anticipated to be intermittent, sporadic, and temporary in nature. Noise generated by trail users would be temporary and short in duration but would be anticipated to temporarily displace the gray wolf or Canada lynx away from the trail.

Plant Community Impacts

The potential for impacts to plant communities includes construction related effects of direct excavation and fill, erosion/sedimentation, and transport of noxious/invasive species. Ongoing ATV use can cause erosion and spread noxious/invasive species. The proposed trail improvements that would result from the project would reconstruct portions of existing trails that have shown signs of rutting, erosion, and wear. Maintenance needs, including erosion, trail-reshaping, culvert conditions, invasive species, etc. would be monitored following the GIA program to identify maintenance priorities and a monitoring schedule. This also involves the DNR Trail Ambassador program in which volunteers, who are trained to identify noxious/invasive species and appropriate trail conditions, assist with trail monitoring.

As stated in the NHIS letter, 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. 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 would permanently adversely affect the natural community.

Portions of proposed Category 2 routes that pass through cedar stands along the Kab Store to Ericsburg segment may impact the hydrology of these tree species. Although these segments are already used by snowmobiles, this use is limited to frozen conditions. Extension of motorized traffic through these stands outside of frozen conditions could impact area hydrology. This would also affect local white tailed deer, which use these cedar stands for winter deeryards. Potential negative effects could include both primary impacts to the cedar stands as well as secondary effects on local populations of white tailed deer that use these stands for wintering deer yards. Development of the Category 3 trail in the alternative route proposed along Highway 53 would avoid these impacts to the cedar stands along this segment.

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

Activities that could impact the northern long-eared bat (NLEB) include disturbance to hibernacula and destruction/degradation of habitat. To avoid impact, tree removal would be avoided during pup rearing season, June 1st through August 15th. The US Fish and Wildlife Service (USFWS) interim guidance¹¹ would be followed. The Michigan DNR *Lake States Forest Management Bat Habitat Conservation Plan*¹² would be followed on DNR managed lands. Impacts to the NLEB from noise is anticipated to be negligible. Increases in noise from construction would be temporary and typically short in duration, only occurring during daytime hours. Bats roosting in trees may be disturbed by ATV noise; however, suitable roosting forested habitat away from the trails is neither unique nor rare in the surrounding area, and if impacted by noise adjacent to the trail there should be suitable roosting locations nearby. Impacts to the bat's ability to feed are not anticipated as trail use would primarily occur during daylight hours. Consultation with the USFWS

¹¹ [Interim Voluntary Guidance for the Northern Long-Eared Bat: \(fws.gov\)](https://www.fws.gov)

¹² [Lake States Forest Management Bat Habitat Conservation Plan](#)

will be completed, and the USFWS would have the opportunity to issue a formal determination and comment on impacts to NLEB.

To avoid and minimize impacts to the wood turtle and other aquatic species, construction BMPs would be used to exclude turtles from the construction area and prevent erosion/sedimentation to aquatic habitat. Erosion control measures should not be mesh (plastic, nylon, etc.) that could cause entrapment of the wood turtle or other wildlife. In addition, construction and regular maintenance of trails near suitable wood turtle streams would be scheduled outside of the wood turtle nesting season (May-June).

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 would be conducted during exclusion periods. For warm water systems, the exclusion period is April 1 – June 30 of the same year.

Stormwater pollution prevention BMPs would be implemented to prevent water quality degradation. To reduce potential impacts to wildlife habitat itself, design standards would 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.

No Category 3 trails are in MBS sites of biodiversity significance; all the proposed routes intersecting MBS sites are existing roads, ROWs, or trails of some type that may require modification for new ATV use (Category 2) or currently allow ATV use (Category 1).. Actions identified in the NHIS letter to avoid and minimize disturbance to ecologically significant areas would be implemented. Impacts from construction in these areas would be reduced by siting the trail on existing trails or ROWs; using only fill guaranteed free of invasive species; refraining from staging supplies or equipment in or near the MBS sites; and following redundant stormwater runoff BMPs. In some cases, construction activities may also be confined to certain times of the year to reduce impacts (e.g., when the ground is frozen, low/no flow conditions). A barrier between the proposed activities and MBS Sites would be maintained where routes intersect or border MBS sites. Examples would be restrictive gates where trails not intended for ATV use intersect the proposed routes (e.g., existing snowmobile trail on Figure 7-2). Impacts to MBS sites of biodiversity significance from trail use can 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 reduce spread of noxious/invasive species and monitor for trail etiquette and safety. The trail would be signed adequately to inform users of the designated routes and trail rules/requirements. Installation of gates in specific locations would be considered to restrict access during sensitive environmental periods such as in spring or particularly wet periods, on old logging roads, burned over areas, other easily accessible forest sites, and areas adjacent to but not approved for ATV use.

Impacts to the cedar stands along the Kab Store to Ericsburg segment would be avoided by constructing the alternative route along Highway 53. See Figure 2-11 for this alternative route.

A portion of existing logging road, classified as Route Category 2, along the Ericsburg to International Falls segment passes through an old growth forest stand (OG12-38). MN DNR’s Old Growth Committee has been consulted and provided guidance regarding avoidance and minimization of possible adverse impacts to this stand. Their suggestions would be implemented, and they would continue to be consulted during any improvement actions taken on this trail segment. This guidance includes:

- No additional clearing of trees beyond the existing trail corridor;
- The corridor would not be widened;
- A culvert inventory would be conducted to determine whether any culverts require replacement;

- Any gravel used for reconstructing the trail bed would be certified free of invasive species propagules (this would preclude the use of local gravel);
- The area would require post-construction monitoring and treatment, if necessary, to identify and remove invasive species; and
- Any existing trails that could allow access from the proposed trail into other parts of the stand would be blocked off with boulders or other substantial barriers;
- Trail construction would follow *MFRC Voluntary Site Level Guidelines on Forest Road Construction and Maintenance* (2012, red tab, beginning on page 234);
- *MN DNR State Land Rutting Guidelines* would be followed.

These conditions would be included as requirements in the lease.

Noxious/invasive species can adversely impact wildlife habitat. Prevention and control of noxious/invasive species would be considered in the design, construction, and maintenance of trails. Measures to prevent the spread of noxious/invasive species during construction include thoroughly cleaning equipment after working in infested areas and revegetating disturbed areas as soon as possible after construction is completed. Wood chips or other media which allow noxious/invasive plants to easily take root would not be used for the trail system. Where infestations are identified, control methods would be applied to limit the spread and impact of noxious/invasive species. Where disturbed, land would be stabilized by seeding with appropriate native seed mixes (native NE woodland or wet meadow), which would be certified free of invasive species. Contractors will be instructed to clean equipment before and after use, and the construction would use clean fill. Monitoring for noxious and prohibited weeds would be included as part of the trail monitoring and maintenance plans. MN Department of Agriculture guidelines on management of the invasive plant Spotted Knapweed (*Centaurea stoebe ssp micranthos*) would be implemented to control for this plant. Signage may be implemented at trailheads to aid in the identification and reporting of noxious/invasive species. Boot brushes for footwear may also be installed.

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 infested waters is available on the DNR Infested Waters webpage.

15. 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.

According to the Minnesota Office of the State Archaeologist's Public Viewer¹³, previously known historic structures, archaeological sites, and/or traditional cultural properties are in the same sections as the proposed project. Several properties / sites listed on the National Register of Historic Places are within the same municipality as the proposed trail segments, specifically the City of International Falls and the City of Ranier. Seven of these sites are categorized as "prehistoric" or "historic aboriginal", and the address is restricted. None of the properties with a listed address are in the proposed project area.

¹³ [MN OSA Public Viewer - OSAsites](#)

The Minnesota State Historic Preservation Office (SHPO)'s Statewide Historic Inventory Portal (MnSHIP) was reviewed to identify project areas where SHPO resources are present. The following MnSHIP point and line features are within the EAW study area:

Feature Type	Historic Inventory Number	Historic Name	National Register Eligible	National Register Listed
Line	XX-ROD-00163	Trunk Highway 71	No	No
Line	XX-ROD-00179	Trunk Highway 65	No	No
Line	XX-ROD-00013	Trunk Highway 11	No	No
Line	XX-ROD-00023	Trunk Highway 53	No	No
Line	XX-RRD-CNR001	Duluth Winnipeg and Pacific Railway Company/Canadian National Railway	No	No
Line	XX-RRD-NPR011	Minnesota and International Railway Company/Northern Pacific Railway Company: Main Line	No	No
Line	XX-RRD-NPR016	Big Fork and International Falls Railway Company/Minnesota and International Railway Company/Northern Pacific Railway Company	No	No
Line	XX-RRD-NPR017	Minnesota and International Railway Company/Northern Pacific Railway Company: Main Line, Bemidji to International Falls	No	No
Point	KC-UOG-00127	Bridge 36504	No	No
Point	KC-UOG-00139	Bridge R0280	No	No
Point	KC-UOG-00169	Bridge 92891	No	No
Point	KC-UOG-00170	Bridge 93280	No	No

A project review request was sent to the Minnesota State Historic Preservation Office (SHPO) on September 20, 2023. SHPO responded on November 17, 2023 (Attachment E, correspondence #2023-3116) with a recommendation that a Phase 1 archaeological survey be completed in areas of proposed new trail construction as well as in areas of proposed trail improvements where new ground disturbance would take place. The proposer will contract a consultant to complete the Phase 1 archaeological survey prior to any ground disturbance.

16. 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.

Because the routes are largely existing corridors, substantial changes to scenic views/vistas are not anticipated. No lighting or vapor plumes are proposed or expected as part of the project.

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 MnDOT's standards of the "Minnesota Manual on Uniform Traffic Control Devices". Clearing of trees/shrubs required for proposed new trail segments would result in visual changes; however, the nature of the project as linear corridors without substantial clearing should minimize these effects.

17. 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. 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.

The proposed project is anticipated to result in an increase in vehicle-related emissions, due to the expected new ATV traffic. Local trail managers estimate that when the VCATV System is complete, it will attract 100 to 150 machines per week, or 400 to 600 per month. Increases in vehicle-related emissions are anticipated to be sporadic and intermittent. Air emissions would be restricted to the months in which the trails are open for ATV use. Construction equipment would also result in air emissions during construction of the new trail segments and trail improvements. Construction emissions are anticipated to be minor and temporary in nature. Ongoing ATV operations emissions are expected to increase.

- 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 17a). 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), there may be a small amount of additional dust and odors due to increased ATV traffic.

For Route Categories 2 and 3, no significant odors are anticipated to result from ATV trail riding. Odors that may be strong or offensive to some would be generated where vehicles congregate; however, such congregations are anticipated to be sporadic and temporary. As the proposed routes become operational, ATVs may create dust on natural surface trails. Dust would depend primarily on the type and number of vehicles, operating speeds, time of day, and trail moisture conditions. In many of the Voyageur's proposed segments, there are no sensitive receptors for odors, noise, dust, and emissions. Closer to developed areas and residences (e.g., approaching International Falls and Ranier), the segments use existing corridors largely already used for ATV travel. For County Road alignments, noise and dust are generated by existing ATV and highway vehicle traffic. For new trail alignments, the proposed trail section would not allow high speeds, thereby limiting dust and odors.

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.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

- a. GHG Quantification: For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.

GHG emissions related to the project were calculated using emission factors and consumption data from the Environmental Protection Agency (EPA)¹⁴. Emission categories for the project are shown below, as provided in the EQB Guidance.

Emission Categories for GHG Assessment

Emission Category	Scope	Project Phase	Type of Emission	Estimated GHG Emissions per year (metric ton of CO ₂ e)	Estimated GHG Emissions per year (short ton of CO ₂ e)
Direct	Scope 1	Construction	Combustion – Stationary Sources	187*	206*
Direct	Scope 1	Construction	Combustion – Mobile Sources	11*	12*
Direct	Scope 1	Operations	Combustion – Mobile Sources	555-558	612-615

*1Construction emissions only applicable for years when construction occurs.

(One metric ton=1.10231131 short tons)

Construction Emissions

During construction, gas and diesel-powered equipment would be used and would generate GHG emissions. Stationary construction equipment would stay within the project area for the duration of construction. GHG emissions related to construction of the project are anticipated to be minor and temporary in nature. Construction is anticipated to take about 3-6 months (within an 8-month primary construction window) for each segment. This calculation assumes some exclusions due to weather or other site conditions. For the purposes of this GHG assessment, it is assumed that there is a maximum of 120 days of construction for the project.

Two pieces of diesel-powered equipment are assumed to be in operation for 12 hours per day, for 1,440 hours total. The default diesel fuel consumption rate of 0.05 gallons per horsepower-hour¹⁵ is used to determine the fuel usage for all equipment. Gallons of diesel fuel that would be used during construction are estimated using the information provided above. Emission factors are based on Table 2 and 5 of the EPA’s Emission Factors Hub¹⁶, and were utilized to estimate the emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) generated by construction of the project. Emissions of carbon dioxide, methane, and nitrous oxide are multiplied by their global warming potentials and summed using the following equation to estimate total greenhouse gas emissions (CO₂e):

¹⁴ [ce2.3.pdf \(eia.gov\)](#)

¹⁵ [Microsoft Word – Guidelines for Calculating Emissions from Internal Combustion Engines - March 2023 - FINAL.docx \(aqmd.gov\)](#)

¹⁶ [ghg-emission-factors-hub-2024.xlsx \(live.com\)](#)

$$\text{CO}_2\text{e} = 1 * \text{CO}_2 + 25 * \text{CH}_4 + 298 * \text{N}_2\text{O}$$

Construction Emissions-Stationary Sources

Emission Factors

Emissions

Off-road Vehicle	No.	Consumption Rate (gal / hr per hp-hr)	Engine Size (hp)	Hrs	Total gals	CO ₂ (kg/gal)	CH ₄ (g/gal)	N ₂ O (g/gal)	CO ₂ (MT)	CH ₄ (MT)	N ₂ O (MT)	CO ₂ e (MT)
Diesel-powered vehicle	2	0.05	125	1440	18,000	10.21	0.91	0.56	183.78	1.64E-02	1.01E-02	187.2

The operation of mobile vehicles related to the construction of the project includes commuting construction workers and dump trucks that may haul material to or off-site. For the purposes of this assessment, it was assumed that two on-road passenger vehicles and one dump truck would travel 40 miles per day, to and from the project during the 120-day construction period. Emission factors are based on Tables 2, 3, and 4 of the EPA’s Emission Factors Hub¹⁷, and were applied to estimate the emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) generated by construction of the project. An assumed vehicle year of 2007 was used for gas mileage efficiency.

Construction Emissions – Mobile Sources

Emission Factors

Emissions

On-road Vehicle	Veh/day	Fuel	Days	Miles/day	Miles/gal	Est. gals	CO ₂ (kg/gal)	CH ₄ (g/gal)	N ₂ O (g/gal)	CO ₂ (MT)	CH ₄ (MT)	N ₂ O (MT)	CO ₂ e ² (MT)
Passenger Cars – workers	2	Gas	120	40	9600	533.3	8.78	0.0072	0.0052	4.7	6.91E-05	4.99E-05	4.7
Dump Truck	1	Diesel	120	40	4800	631.6	10.21	0.0095	0.0431	6.4	4.56E-05	2.07E-04	6.5

According to this GHG assessment for the Project, greenhouse gas emissions due to the construction equipment are estimated to be 198.4 metric tons (MT).

Operational Emissions

GHG emissions related to ATV traffic are anticipated to increase because of the proposed project. These increases in GHG emissions are anticipated to be seasonal and intermittent. GHG emissions related to operational use by ATVs would be restricted to the months in which the trails are open to ATVs. Note that the intention of the project is to increase ATV trail connectivity, and therefore reduce need for vehicle travel and trailering to isolated and separate trail segments.

Local trail managers estimate that when the VCATV System is complete, it would attract 100 to 150 machines per week, or 400 to 600 per month. Much of the System would be open for ATV use eight months out of the year (closed December through March for snowmobile season). Therefore, the approximate annual ATV use is estimated to be 4,800 machines for the trail system.

GHG emissions related operations for the 125 miles of trail included in this project were estimated using 4,800 ATVs per year and an average fuel consumption rate of 10 miles per gallon. Total GHG emissions were estimated using a similar method as described above for the emissions related to construction. Estimated gallons of gasoline used annually were calculated using the estimated ATVs per year, mileage of the trail, and average miles per gallon. Emission factors for gasoline are based on Table 2 and 5 of the EPA’s Emission Factors Hub¹⁸, and were utilized to estimate the emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) related

¹⁷ ghg-emission-factors-hub-2024.xlsx (live.com)

¹⁸ [Emission Factors for Greenhouse Gas Inventories](https://www.epa.gov/emissions-factors-and-intensity/emission-factors-greenhouse-gas-inventories) (epa.gov)

to annual operational use of the trail segments. Global warming potentials were applied to estimate total greenhouse gas emissions (CO₂e²). Estimates indicate use of the segments of trail included in the project would generate 555 to 557 metric tons (MT) of emissions annually.

On-trail Vehicle Emissions

Vehicle	Est. Annual ATVs	Miles	Miles / gal	Total gals	CO ₂ (kg/gal)	CH ₄ (g/gal)	N ₂ O (g/gal)	CO ₂ (MT)	CH ₄ (MT)	N ₂ O (MT)	CO ₂ e ² (MT)
Recreational Vehicle (2-stroke)	4800	125	10	35,640	8.78	17.6	0.1	309.8	0.6	0.004	555.2
Recreational Vehicle (4-stroke)	4800	125	10	35,640	8.78	2.9	1.5	309.8	0.1	0.1	557.9

b. GHG Assessment

i. Describe any mitigation considered to reduce the project’s GHG emissions.

The proposed project has mitigated GHG emissions through the following:

- Efficient routing of trails
- Utilizing existing trail corridors and previously disturbed areas
- Minimization of tree-clearing and land conversion

Gravel fill would be utilized for areas of the trail that require improvement. According to the National Stone, Sand, and Gravel Association¹⁹, greenhouse gas emissions from the aggregates industry are inherently low. The facilities that produce these products use relatively little electrical energy or fossil fuels. Aggregate is not heated or thermally treated and unlike other mining operations, the extraction of stone and sand is conducted with a recovery ratio of more than 90%, which reduces the amount of material that must be handled, thereby reducing energy requirements.

The project proposer will encourage the selected contractor to reduce GHG emissions from construction, which would include minimizing idling equipment and properly maintaining equipment. Construction-related emissions would be temporary in nature.

In addition, the Club encourages trail stewardship, including the maintenance of vehicles to maintain emission standards and the use of electric machines, as well as minimizing the practice of idling.

ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the project’s GHG emissions. Explain why the selected mitigation was preferred.

The following activities may be considered to help mitigate the project’s GHG emissions:

- Efficient routing of trails
- Use of existing trail corridors and previously disturbed areas
- Minimization of tree-clearing and land conversion
- Use of low emission aggregate fill for trail improvements
- The proposer plans to encourage proper maintenance of ATVs in their system maps and kiosk signage, with the intention to use this as a strategy to prevent increases in emissions due to mechanical problems and deferred ATV maintenance.

iii. Quantify the proposed projects predicted net lifetime GHG emissions (total tons/#of years)

¹⁹ [NSSGAGreenhouseGasEmissionsReport04-26-21.pdf](#)

and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.

Estimates indicate operational ATV use of the trail segments included in this project could generate 555 to 558 metric tons of GHG emissions annually. For comparison, in 2020, total transportation GHG emissions in Minnesota were roughly 35 million metric tons²⁰. Over the predicted net lifetime of 50 years for the project, this equates to a total of 27,750 to 27,850 metric tons of GHG emissions. Overall, the Project is anticipated to have minimal impact on the State of Minnesota’s GHG reduction goals.

Description	CO ₂ e (metric tons)	CO ₂ e (short tons)
Project First Year Total Emissions	555-558	612-615
2020 MN Emission & Next Generation (NGA) Goal ²¹	140,000,000	154,320,000
Project’s First Year % of NGA Goal	0.0004%	0.0004%
Project Annual Emissions/50 Year Net Lifetime	27,750 to 27,850	30,589-30,700
Project’s Annual Lifetime % of NGA Goal	0.02%	0.02%

19. 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.

Local trail managers estimate that when the VCATV System is complete, it will attract 100 to 150 machines per week, or 400 to 600 per month. Generally, ATV noise is regulated by MN Rule 6102.0040, Subp. 4.B²¹, 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.”

Ambient noise on existing snowmobile trails is currently generated by winter vehicle (snowmobile) traffic. A change in use to allow ATVs would involve new or increased noise due to ATV traffic in the spring, summer, and fall.

The region surrounding the VCATV System is mostly sparsely populated, and surrounding land use is mostly natural vegetation, timber management, and recreation. Sensitive receptors include the public recreating near the segments and private landowners adjacent to trail segments. Most trail segments are distant from private residences.

For the proposed trail segments, any private parcel within 0.25 mile was considered “nearby” for purposes of evaluating noise effects. The numbers of private landowners and parcels with structures within 0.25 mile of a proposed trail segment are summarized below. Numbers displayed are based on available parcel and tax data for

²⁰ [Greenhouse gas emissions in Minnesota 2005-2020 \(state.mn.us\)](https://state.mn.us/greenhouse-gas-emissions-in-minnesota-2005-2020)

²¹ [6102.0040 - MN Rules Part](https://www.psr.state.mn.us/rules/6102.0040)

parcels within 0.25 mile of a trail segment. On a given parcel within 0.25 mile of a proposed trail segment, the structures therein may be more distant than 0.25 mile from the trail.

Trail Segment	Number of Private Landowners within 0.25 mile	Buildings / Structures Present
Blue Ox to Pelland Junction	28	20
Ray Spur	19	12
Ericsburg to I-Falls	469	426
FR 612A to Black Duck Connector	2	0
Galvin Spur	19	11
Kab Store to Ericsburg	179	77
Littlefork Connection	220	144
Ranier Connector	240	213

Most residences near the trails are concentrated near developed areas. Overall, the ATV traffic near private residences is anticipated to be similar to other traffic noise sources in the area. ATV traffic is anticipated to be intermittent and temporary in nature as the riders travel along the trail segments. Minor seasonal increases in noise are expected for areas not in proximity to existing highways. Buffering vegetation would remain between the trail and private structures, and 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. Increased background noise can affect wildlife behavior and physiology. Noise generated by trail use would be temporary and short in duration. The short and temporary increases in noise could temporarily dislocate wildlife not conditioned to noise generated by ATVs. Species present would have a varying level of tolerance to disturbance in general and noise in particular. Noise-sensitive species such as bats may be temporarily displaced or change roosting/foraging habits in vicinity of the trails. Bats roosting in trees may be disturbed by ATV noise; however, suitable roosting forested habitat away from the trails is neither unique nor rare in the surrounding area, and if impacted by noise adjacent to the trail there should be suitable roosting locations nearby. Impacts to the bat's ability to feed are not anticipated as trail use would primarily occur during daylight hours.

Construction 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.

20. 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 125 miles of trail, with eight miles of new trail (including alternative routes). The peak hour traffic is not expected to exceed 250 vehicles or 2,500 total daily trips.

Increases in traffic would occur because of new ATV use and vehicles trailering ATVs to the project area. These increases would be sporadic and intermittent and restricted to spring, summer, and fall when these segments would be open for ATV use. There is no plan for winter use by ATVs, therefore no conflicts are anticipated with snowmobile use or groomer operations within System trails. Seasonal ATV traffic is anticipated to be similar to current snowmobile user traffic, in which users access trailheads from System parking areas. Construction-related traffic effects would 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 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance,

Traffic within and near the project area is not expected to change substantially because 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 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.

21. 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 is the trail segment corridors shown 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 50 years related to on-going use of the trail system, but more immediately, the first five years of construction and early operations. The primary construction window for the trail segments is approximately six months. In practice, duration and timing of the construction phase would depend on several factors, including but not limited to 1) accessibility to the project area; 2) avoidance of threatened and endangered species; and 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 traffic, dust and noise, greenhouse gas emissions, spread of noxious/invasive species, impacts on native plant communities and MBS sites, wildlife, 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 use. The proposed project would increase traffic and greenhouse gas emissions related to the operation of ATVs and vehicles. Expansion of trails, increasing connectivity among existing trails, and extending ATV use to existing roads and trails that currently do not allow ATV use could increase habitat

fragmentation, increase direct mortality to some wildlife populations through encounters with ATVs on the trails, and increase negative impacts on wildlife populations through increased noise and general disturbance from the presence of humans. Routine use of the trails may increase erosion and thereby impact water quality. ATVs and vehicles in the project area have the potential to introduce or spread noxious/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.

Timber

Timberlands owned by the State of Minnesota, Koochiching and St. Louis counties, and the Superior National Forest within the proposed project area may be used for logging. Forest cover types on the lands managed for timber across the project area consist of upland and lowland timber cover types that are actively managed. Lands within the project area are subject to ongoing, active timber sale contracts.

ATV Trails

Voyageur Country ATV System

The Voyageur Country ATV Club's Master Plan identifies future segment connectivity of the System, that could provide additional connections to communities and amenities in the region. Any construction effects from these segments would not overlap in the timeframe of review of this EAW. Ongoing use of the System would have geographic overlap with these future segments at connection points.

Prospectors Trail Alliance

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 Park areas, as part of the Prospector Loop Trail. The Prospector Trail Alliance plans to construct new segments of trail and will conduct regular maintenance on their existing trails. Construction and maintenance of the Prospector Loop Trail will have no geographic overlap with the segments described in this EAW. It is plausible that ATV riders accessing the Prospector Loop Trail could also travel on the Voyageur Country ATV System. These trail systems have separate project proponents, and each individual trail system is not dependent on the existence of another.

Quad Cities, Northern Traxx and Ranger ATV Clubs

Quad Cities ATV Club, Northern Traxx ATV Club, and Ranger Snowmobile & ATV Club are other ATV clubs that use and maintain ATV trails in the same geographic region as the Voyageur Country ATV Club. Currently, Quad Cities ATV Club has proposed improvements to two ATV trail segments in St. Louis County: a 7-mile segment of trail improvements from Virginia to County Road 303; and a 4-mile segment of trail improvements from Pfeiffer Lake Forest Road to County Road 361. The Northern Traxx ATV Club is currently proposing to develop a 5-mile designated ATV route from Chisholm to Hibbing. The Ranger Snowmobile & ATV Club recently completed a connection from Gilbert to Biwabik with eight miles of trail improvements and plans to connect Hoyt Lakes to existing ATV routes with improvements to six miles of trail.

The above trail clubs will have ongoing maintenance on their trails, but construction effects will not overlap in geographic scale. These trail systems have separate project proponents, and each individual trail system is not dependent on the existence of another.

Additional Trails

There are numerous other trails in the vicinity of the VCATV System including the North Country Trail, DNR hunter walking trails, state forest trails, national forest trails, state park trails, etc. The routes for the VCATV System have been planned to not intersect trails that are used for other types of recreation. Although these additional types of trails may be in the same geographics setting, there are no anticipated conflicts with the

VCATV System.

The aggregate existence of these ATV trails, in combination with existing recreational and utility roads and trails of various kinds throughout Koochiching and St. Louis Counties, contributes to an increased pattern of habitat fragmentation and ongoing disturbance to wildlife populations from human activities.

Projects by state and local governments

The cities of Littlefork, Ranier, and International Falls, and the counties of Koochiching and St. Louis were contacted to determine whether they had any plans to pursue projects in the proposed project area in the reasonably foreseeable future. None of the cities have any projects planned that could have potential cumulative effects with the proposed project.

Koochiching County plans to engage in spot graveling, grading, and ditching on the Ericsburg Access County Forestry Road, along the Kab Store to Ericsburg segment. The county also plans to replace a bridge on CR 145 near the intersection with CR 97, approximately 3-5 years from now.

The [St. Louis County Construction Viewer](#) and MnDOT Construction websites were reviewed for information on reasonably foreseeable projects in the proposed project area. Neither the county nor MnDOT has any posted information on planned projects in the area.

- 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 trail 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 major summer holidays, special events (e.g., organized ATV rides), and weekends.

Greenhouse Gas Emissions

Long-term emissions related to ATV use of the trails are estimated at 555 to 558 metric tons (612-615 short tons) annually. Cumulative potential effects of GHG emissions would persist over the lifetime of the use of the trails proposed for this project, in combination with other recreation-oriented reasonably foreseeable projects.

Dust and Noise

Cumulative dust and noise effects are possible if any of the road construction or timber harvest projects overlap 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 would overlap with this project. State noise standards are not expected to be exceeded in these cases. ATV noise may increase; however, it is expected to be temporary and sporadic in nature and the proposer does not believe that noise levels would constitute a nuisance under state law (see Minnesota Rules Chapter 7030).

Noxious/Invasive Species

Cumulative noxious/invasive species effects are possible, both during construction and use of the trails

by ATVs. Both construction equipment and ATVs can create the opportunity for establishing and transporting noxious/invasive species both inside and outside the proposed project area. Reasonably foreseeable ATV trail improvements/expansions would provide additional possible infestation sources, as would new ATV use on the existing trail system. The increased connectivity and expanded trail network that would stem from this project also increases exposure and provides additional areas for spread of noxious/invasive species. Species generally of concern in the project area and surrounding region include Canada thistle (*Cirsium arvense*), common tansy (*Tanacetum vulgare*), spotted knapweed (*Centaurea stoebe*), purple loosestrife (*Lythrum salicaria*), and wild parsnip (*Pastinaca sativa*). Trailheads and parking lots are the most likely sources of noxious/invasive species during ongoing trail use. Fill and aggregate brought in from offsite may be a source of noxious/invasive species for trail segments requiring construction or improvements. The spread of noxious/invasive species is an ongoing possibility and would require routine monitoring and maintenance of the trails to mitigate and manage. Trail managers should work with area partners such as the DNR Trail Ambassador program to monitor and reduce the spread of noxious/invasive species in the VCATV System. Contractors would be instructed to clean equipment before and after use, and the construction would require the use of native, naturally sourced aggregate material free of invasive species propagules.

The project proposer is responsible for ongoing trail monitoring and maintenance, which includes noxious/invasive species. Through the GIA program, the Club would work in collaboration with and be held accountable to DNR for maintenance planning and use of maintenance funds. Measures to prevent the spread of noxious/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 media which allow noxious/invasive plants to easily take root would not be used for the trail system. Where infestations are identified, control methods would be applied to limit the spread and impact of noxious/invasive species. Native seed mixes would be used to stabilize disturbed land. Native seed mixes would be installed anywhere where there aren't requirements contrary to the landowner / administrator. Keeping riders on designated trails would limit the potential of transporting noxious/invasive species to other areas.

Native Plant Communities and MBS Sites

Several MBS sites and Native Plant communities are adjacent to or are intersected by existing trails (Category 1 and Category 2) in the proposed project. These could be negatively impacted from the increased ATV traffic expected from the proposed project, and if any trail widening or other construction activities (e.g., fill, installation of culverts, construction of bridges or boardwalks) required to make these Category 2 segments compatible with ATV traffic occurs within these sites, this could negatively impact them as well. Finally, ATV riders straying off the trail in these areas could cause negative impacts. These possible negative effects would be mitigated by avoiding work or trail improvements in these sites to the extent practicable; rerouting trail paths within the review corridor to avoid these areas, where practical; regularly monitoring trail activity to encourage responsible trail use and promptly identifying and mitigating any problems; and placing boulders or other robust barriers to block access to sensitive areas where necessary and appropriate.

Old Growth Forest Stands

Designated Old Growth Forest is adjacent to the Ericsburg to International Falls segment. The proposed project could cause negative potential effects to this stand. To mitigate the potential for negative effects, the proposer has been and would continue to consult the MN DNR Old Growth Forests Committee on guidance and best practices to avoid harm to these forest stands. These guidelines and best practices include:

- No additional clearing of trees beyond the existing trail corridor;
- The corridor would not be widened;
- A culvert inventory would be conducted to determine whether any culverts require replacement;
- Any gravel used for reconstructing the trail bed would be certified free of invasive species propagules (this would preclude the use of local gravel);
- The area would require post-construction monitoring and treatment, if necessary, to identify and remove invasive species; and
- Any existing trails that could allow access from the proposed trail into other parts of the stand would be blocked off with boulders or other substantial barriers;
- Trail construction would follow MFRC Voluntary Site Level Guidelines on Forest Road Construction and Maintenance (2012, red tab, beginning on page 234);
- MN DNR State Land Rutting Guidelines would be followed.

These conditions would be included as requirements in the lease.

Wildlife

The expansion of ATV trails, increased connections among currently separate ATV trails, and increased ATV usage in the proposed project area could have a negative cumulative effect on area wildlife by increasing noise disturbances, increasing habitat fragmentation, and increasing accidental mortality from ATVs running over wildlife. The negative effect due to direct animal mortality from ATVs could be mitigated by constructing culverts, bridges, and other structures that give vulnerable wildlife such as turtles and snakes an alternative to crossing on the trail.

Expansion of and increasing interconnectedness among existing trails in this area could have a positive effect on those species that would use the trails for travel and hunting.

Portions of the proposed Category 2 routes along the Kab Store to Ericsburg segment pass through cedar stands that are important for deer wintering yards. Introduction of ATV traffic outside of the winter snowmobiling season may affect the hydrology of these stands, which could have a negative impact on shelter and food sources for white tailed deer during the winter months. This impact would be avoided by pursuing the alternative Category 3 route along Highway 53.

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 includes 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 may take place in the same geographic scale and timeframe for construction and ongoing use. As an administrative BMP, coordination with loggers would occur to determine if these activities would overlap. Where the VCATV 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 meets

conditions of permitting including conditions of a WCA replacement plan and the 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. To prevent project-related 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 would be implemented.

22. 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 known or potential environmental effects that were not addressed in the above EAW items.

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.

Signature 

Date 11/19/24

Title MN DNR Project Manager- Environmental Review