United States Department of Agriculture
Forest Service
Ottawa National Forest
Supervisor's Office
E6248 US2
Ironwood, MI 49938
(906) 932-1330
(906) 932-0122 (FAX)

File Code: 1950
Date: August 31, 2012

Dear Interested Party,

Enclosed is a copy of the Eastern Off-Highway Vehicle (OHV) Connector Environmental Assessment (EA). This EA is being sent to those who provided input on the initial scoping document and to those who have requested to receive copies of project proposals on the Ottawa National Forest.

Three alternatives were evaluated in detail in the EA. Under Alternative 1 (No Action) there would be no change to the existing OHV access as shown on the current Motor Vehicle Use Map. Alternatives 2 and 3 would designate additional OHV access to provide connections to the State of Michigan Multi-Use trails.

Public participation is an important part of the analysis and, as such, I encourage you to take a look at the enclosed document. To ensure that I have an opportunity to consider your comments before I make my final decision, they must be postmarked or received within 30 days beginning the day after publication of the legal notice in the Ironwood *Daily Globe*. When the comment period would end on a Saturday, Sunday or Federal holiday, comments will be accepted until the end of the next federal working day. No comments will be accepted after the 30-day comment period ends.

Please address your comments to, Forest Supervisor, E6248 US 2, Ironwood, Michigan 49938. Office hours, for those who wish to hand deliver or provide oral comments, are 8:00 a.m. to 4:00 p.m., Monday – Friday (except Federal holidays). Oral comments must be provided at the above listed office, or by telephone at 906-932-1330, during those hours. Alternatively comments may be submitted by facsimile at 906-932-0122, or by email at comments-eastern-ottawa@fs.fed.us (please put "Comments on the Eastern OHV Connector EA" in the subject line). Comments must be submitted by 11:59 p.m. Central Time on the closing date of the comment period. It is the responsibility of the sender to ensure timely receipt of any comments submitted.

The final decision on this project will be subject to appeal pursuant to 36 CFR 215.11; unless no comments expressing concerns (or only supportive comments) are received during this 30-day comment period. In order to have standing to appeal, each individual or representative of a group or organization that submits comments must sign or provide for verification of identity according to the requirements of 36 CFR 215.6(3)(iv) and (v). Comments submitted anonymously will be accepted and considered; however, those who submit anonymous comments will not have standing to appeal the subsequent decision under 36 CFR Part 215.

Only those who provide comments or otherwise express interest, through one of the methods and including all of the information described above during this comment period, will have standing to appeal. Comments that are received on this proposal are part of the public record and therefore, they are available for public inspection upon request.

If you wish to reference scientific literature in your comment letter I request that you send a copy of the reference you have cited and include rationale as to how you feel it is pertinent to the specific project at hand. This will allow me to fully evaluate your comments; if I do not receive a copy of the literature I may not be able to utilize it in making my decision.

Copies of the decision will be mailed to those who request it and those who comment on the project. More information is also available on the Forest's website: http://fs.usda.gov/goto/ottawa/projects. If you need additional information, please contact Susanne Adams, Ontonagon District Ranger at 906-884-2085, ext. 14, or by email at smadams@fs.fed.us).

Sincerely,

/s/ *Anthony V. Scardina*

ANTHONY V. SCARDINA
Forest Supervisor

United States Department of Agriculture

Forest Service

Eastern Region

Environmental Assessment for the Eastern Off-Highway Vehicle Connector Project

Ottawa National Forest

Iron River, Kenton,
and Ontonagon Districts
Houghton, Iron,
and Ontonagon Counties, Michigan

Responsible Official: **Anthony V. Scardina, Forest Supervisor**
Ottawa National Forest
E6248 US Highway 2
Ironwood, MI 49938

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Interdisciplinary Team Leader
Bergland and Ontonagon District
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906-884-2085 ext. 14

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Chapter 1 – Purpose and Need for the Proposal

This document is an Environmental Assessment (EA) for a USDA Forest Service proposal to establish two new Off-Highway Vehicle (OHV[1]) Connector Routes, located on the eastern portion of the Ottawa National Forest. These routes would provide connections to existing State of Michigan Multi-Use trails (State Multi-Use Trails).

The Forest Service has prepared this EA in compliance with the National Environmental Policy Act (NEPA), the Ottawa Forest Plan, and other relevant federal and state laws and regulations. The purpose of an EA is to furnish sufficient site-specific information to demonstrate consideration of environmental consequences of the proposed alternatives (as they apply to the issues identified in Section 1.7) so that the Responsible Official can determine whether or not there are significant environmental impacts and if an Environmental Impact Statement is necessary. The information presented in the EA enables the Responsible Official to make decisions with an understanding of the alternatives' environmental consequences and allows the USDA Forest Service to disclose to the public, the nature and potential consequences of proposed actions.

1.1 Document Structure

The document is organized into six parts:

- **Purpose and Need for this Project:** Chapter 1 includes information on the history of the project proposal and the purpose of and need for the project. This section also details how the USDA Forest Service informed the public of the proposal and how the public responded.
- **Comparison of Alternatives, including the Proposed Action:** Chapter 2 provides a detailed description of the agency's proposed action as well as an alternative for achieving the stated purpose and need. Alternatives were developed based on issues raised by the public and agency requirements. Finally, this section provides a summary table of the activities associated with each alternative and design criteria.
- **Environmental Consequences:** Chapter 3 describes the environmental effects of implementing the proposed action and other alternatives. This analysis is focused on 1) the issues identified through the public comment period and scoping; and 2) analysis required for compliance with other laws and policies.
- **Monitoring and Adaptive Management:** Chapter 4 describes the monitoring measures and adaptive management process for this proposal.
- **Agencies and Persons Consulted:** Chapter 5 provides a list of agencies, preparers and staff consulted during the development of this EA.
- **Appendices:** The appendices include maps to support the analyses presented in the EA.

[1] OHV is defined as an all-terrain vehicle (ATV), a subset of an OHV, and is generally considered to be 50 inches or less in width.

A reduction of paper as specified by 40 Code of Federal Regulations (CFR) 1500.4 has been an important consideration in the preparation of this EA. Additional documentation is located in a project file (e.g., a compilation of documents prepared for this project), which can be reviewed upon request. This document, as well as the scoping letter and other information, is also available on the Internet at http://fs.usda.gov/goto/ottawa/projects.

Definitions of the terms used in this document are located in the glossary section of the Ottawa National Forest's 2006 Land and Resource Management Plan (Forest Plan), which is available on the Ottawa National Forest website at:
http://www.fs.usda.gov/main/ottawa/landmanagement/planning.

1.2 Background

The Eastern OHV Connector project is located on the east side of the Ottawa National Forest (Ottawa), crossing portions of the Iron River, Kenton, and Ontonagon Districts in Iron, Houghton, and Ontonagon Counties, Michigan (see Maps 1, 2, and 3). The project proposal described in this EA is the result of several years of planning efforts, beginning with the 2005 National Travel Management Rule (TMR) and the 2006 Ottawa National Forest Land and Resources Management Plan (Forest Plan).

In 2005, the USDA Forest Service published the National Travel Management Rule (TMR), which revised regulations for travel management on National Forest System (NFS) lands (36 CFR 261.15). This rule requires the designation of roads and trails available for motor vehicle use, by class of vehicle and time of year, if applicable. The TMR prohibits motor vehicle use off of designated roads and trails. The TMR also requires annual publication of a Motor Vehicle Use Map (MVUM) to display those roads and trails designated as open for various classes of motor vehicles, including OHVs.

In May 2006, the Ottawa completed revision of its Forest Plan, which incorporated the TMR regulations. As a result of those regulations, the Forest Plan prohibits cross country use of motor vehicles. The Forest received requests from the public during the Plan Revision process for additional roads to be open for OHV use and to provide connectors between the State Multi-Use trails. As a result of those requests and public involvement at that time, the Forest Plan also provides direction for future designation of roads and trails for OHV use – namely to provide connections to existing designated public roads and trails, and to utilize existing corridors to the extent possible in order to minimize new construction.

In April 2007, the Ottawa produced its first MVUM. This map reflected the existing condition with most of the lower maintenance level roads open to OHVs, unless resource conditions or other decisions lead the Forest to prohibit motor vehicle use. This result of the first MVUM was a set of forest roads that provided access to much of the Forest; however, these routes alone did not provide the connections that are described in Forest Plan objectives.

In an effort to meet this Forest Plan objective, planning for an OHV Connector Routes project also began in 2008, with an initial scoping effort to seek public input. This public involvement assisted the project's Interdisciplinary (ID) Team and helped to develop several proposed OHV connector routes throughout the Forest. Two EAs and Decisions were released for the OHV Connector Route Project between 2009 and 2010. However, both of these decisions were

reversed by the Regional Forester as a result of two appeals filed and unresolved concerns that remained.

The Ottawa staff has reviewed the previous work and re-evaluated the events and documents that led up to the second reversal of the OHV Connector Route project. This internal review, in addition to discussions with the appellants and partners about their concerns and needs, has led to the current proposal - The Eastern Off-Highway Vehicle Connector Project.

1.3 Purpose and Need for Proposal

This project seeks to designate additional OHV access on roads and trails managed under Forest Service jurisdiction, used in conjunction with other routes open to OHVs, to provide connections to the State Multi-Use trails (e.g., the Iron River to Marenisco Trail, Sidnaw to Bergland Trail, and Bill Nicholls Trail).

Connecting to other open routes (Forest Service and other jurisdictions) would improve the recreational riding experience and provide connections between communities nestled within the Ottawa. For this reason, the Forest Plan included emphasis on providing connections to existing designated public roads and trails (Forest Plan, pp. 2-4 and 2-14 to 2-15). The Forest Plan also provides direction to utilize existing corridors to the extent possible to minimize the need for new construction (Forest Plan, pp. 2-4). The Final Environmental Impact Statement (FEIS) prepared for the Forest Plan also noted that the selected alternative "would also include designating new north-south connector routes, primarily for ATV use, between the established State of Michigan east/west multi-use trails" (FEIS p 2-11). The FEIS estimated the selected alternative would all for 25-75 miles of new routes, with a priority of providing connections to existing trail systems. The Forest Plan and FEIS clearly established a need for north-south connector routes and an objective to achieve these connections.

The Eastern portion of the Ottawa (east of Forest Highway 45), in particular, offers an opportunity to utilize primarily existing forest roads to designate as routes that would provide connections between State Multi-Use trails.

The purpose and need of this project is to determine which roads and trails would best serve to provide a connection between existing State of Michigan Multi-Use trails and other existing OHV routes on the eastern portion of the Ottawa (east of US Highway 45). Selected routes would need to be designated as open to OHV travel on the Ottawa's MVUM.

1.4 Proposed Action

The proposed action includes the establishment of two OHV connector routes that would allow for contiguous OHV travel between the State Multi-Use trails on the eastern side of the Ottawa. This would be accomplished via the use of forest roads and minor segments of new trail on NFS lands, as well as roads of other jurisdictions (i.e. county roads) that are currently open to OHV use. The Eastern OHV connector includes the two following routes (which are described in more detail in Chapter 2):

Iron River – Sidnaw Route: This route would allow motorized travel between the Iron River to Marenisco and Sidnaw to Bergland State Multi-Use trails, as well as between the communities of

Iron River, Sidnaw, and Kenton, Michigan. The proposed action would designate portions of roads under Forest Service jurisdiction on the route for travel by all motor vehicles when incorporated on the Ottawa's MVUM. This proposal would also call for the construction of about 150 feet of new trail. The route would provide a connection between the State Multi-use trails when used in conjunction with segments of Houghton and Iron County jurisdiction roads that are currently open to OHV use (see Maps 1 and 2).

Sidnaw – Rousseau Route: This route would connect the State Multi-Use trails; Sidnaw to Bergland and Bill Nicholls Trail. This route would allow OHV travel between the communities of Sidnaw and Rousseau, Michigan. The proposed action would designate portions of roads under Forest Service jurisdiction on the route for travel by all motor vehicles when incorporated on the Forest's MVUM. The proposed routes would create a connection when used in conjunction with forest Roads that are already designated for OHV travel and segments of Houghton and Ontonagon County jurisdiction roads that are currently open to OHV use (see Map 3).

The proposal also includes maintenance and reconstruction of the proposed routes, design criteria to protect natural resources, and monitoring and adaptive management. Refer to Chapter 2 for more detail.

1.5 Decision Framework

The Responsible Official will consider the purpose and need, Forest Plan direction, public input, and the results of the resource specialists' analyses in order to make the following decisions:

- Whether to open additional Forest Service jurisdiction roads to OHVs to provide connection to the State of Michigan's Multi-Use trail;
- Whether to construct new road and trail;
- What, if any, design criteria or site-specific monitoring are needed; and
- Whether preparation of an Environmental Impact Statement (EIS) is needed.

1.6 Public Involvement

Scoping Process

Scoping began when the ID Team reviewed previous OHV Connector proposals, public input, and project documentation; determined where more information was needed; identified new information or changed circumstances; and worked with partners to understand if needs or concerns had changed. During this time, the Responsible Official and project staff met with a few local groups that have been involved and provided input on OHV projects in the past on the Ottawa. The result of this work was the proposal for the Eastern OHV Connector, described in detail in Chapter 2.

A scoping letter explaining the purpose and need for action, as well as the location and description of the initial set of proposed actions, was sent to more than 170 interested and affected parties in April 2012. The scoping documents were also posted on the Ottawa's internet web page and listed in the Forest's Schedule of Proposed Actions (e.g., the *Ottawa Quarterly)*,

which is a Forest-published document used to inform the general public about proposed projects. The *Ottawa Quarterly* is sent to approximately 130 individuals, groups and public agencies.

Twelve replies were received as a result of the scoping process. All comments were given careful consideration (Project Record) and many comments were used in the development of the issues and alternatives presented in Chapter 2.

***Tribal Input*:** The Forest Service shares in the United States' legal responsibility and treaty obligations to work with federally-recognized Tribes on a government-to-government basis in order to protect the Tribes' ceded territory rights on lands administered by the Forest Service. As such, the policies of the Forest Service toward federally recognized tribes are intended to strengthen relationships and further tribal sovereignty through fulfilling mandated responsibilities. The Ottawa outlines its policies and responsibilities on tribal relations in a 1999 Memorandum of Understanding, including tribal consultation on proposed Forest projects.

The scoping documentation was sent to local tribal representatives, including members of the Lac Vieux Desert Band of Lake Superior Chippewa and Keweenaw Bay Indian Community, as well as the Great Lakes Indian Fish and Wildlife Commission (Project Record).

Other Agencies: The scoping documentation was sent to local government agencies, including the county offices for Baraga, Iron, Ontonagon, Houghton, and Gogebic County; Township Supervisors for Duncan Township; as well as the Michigan Departments of Natural Resources and Environmental Quality. Notification of this project was sent to other government agencies via the *Ottawa Quarterly*.

Public Notice and Comment Periods

As described in the cover letter accompanying this EA, there is now an opportunity to provide your input, during a 30-day comment period, on the proposed alternatives disclosed in this document and on the analysis contained in the EA. To gain standing to appeal this project, interest or comment must be received during this 30-day comment period. This period will begin upon release of a legal notice publication in the Ironwood *Daily Globe* newspaper.

1.7 Issues

All comments received during the scoping process were evaluated by the interdisciplinary team and the Responsible Official per the Forest Service Handbook direction (FSH 1909.15 Chapter 10). The comments were categorized as either a concern or an issue. These comments and the resulting documentation of the issue identification process are located in the project record.

Issues serve to highlight the effects or unintended consequences that may occur from the proposed action, providing opportunities during the analysis to explore alternative ways to meet the purpose and need for the proposal while reducing adverse effects (FSH 1909.5 12.42). Issues are used to highlight a direct cause and effect relationship between the proposed action and forest resources. A list of indicator measures (IM) was developed to serve as a means to compare the effects of different aspects of each issue. Indicator measures serve as tools to quantify the effects and to offer a basis for comparing the effects of management practices.

The Responsible Official identified the following key issues. The effects analysis in Chapter 3 focuses on these two issues:

> ***Issue 1 –*** *How would noise from OHVs on the proposed routes impact the non-motorized recreational experience of Forest visitors?*
>
> ***Issue 2 –*** *How would OHV use of the proposed routes impact the spread of non-native invasive plants?*

Concerns are defined as the questions and/or comments submitted during public scoping that were determined not to require detailed analysis because they are either already decided by other laws and regulations or because impacts that could be used to compare alternatives are not anticipated. In some instances, concerns can be addressed through implementation of Forest Plan direction, project design criteria, or clarification of the project's intent.

Comments received expressed concern that the proposed connector routes would increase OHV use of roads that are currently closed to OHVs that intersect with the proposed routes and that the proposed routes would lead to increases in cross-country OHV travel. Concerns were also voiced about safety, law enforcement, water quality and dust. These concerns, which were within the scope of the project, are addressed in the analysis framework and assumptions section of Chapter 3.

Chapter 2 – Alternatives

This chapter includes descriptions of the alternatives. In addition, information is presented to assist with comparing alternatives on the basis of the proposed activities.

Three alternatives were developed and analyzed in detail. A no action alternative (Alternative 1) serves as a baseline for alternative comparison and documents the existing condition. The action alternatives consist of the Proposed Action (Alternative 2) and one additional alternative (Alternative 3) that was developed to address the issues and concerns identified from public scoping and internal discussions.

2.1 No Action Alternative

Alternative 1 was developed as required in 40 CFR 1502.14(d), and serves as the baseline for evaluating all other alternatives. Under the No Action alternative there would be no changes to the existing designation for motorized use on the proposed routes. County roads and forest roads (Forest Service Jurisdiction) currently open to OHV use would continue to be open but there would be no road connection on NFS lands for OHV travel between the State Multi-Use trails. The MVUM would not be changed and the design criteria would not be implemented.

2.2 Action Alternatives

To meet the purpose and need for this project, the following alternatives are being proposed; the selected alternative would be implemented in accordance with applicable Forest Plan standards and guidelines (pp. 2-4 and 2-14 to 2-15).

Alternative 2

As described in Chapter 1, the proposed Iron River- Sidnaw and Sidnaw- Rousseau OHV routes would provide a connection to the State Multi-Use trails. To create the connection, the proposed routes would use 41 miles of existing forest roads that join with 28 miles of county roads currently open to OHV travel. This alternative would require some additional road and trail construction to ensure resource protection and provide for increased public safety. Upon completion, the routes would be open to all motorized vehicle traffic (see Map 1 and Tables 1 and 4).

The additional miles of new OHV access on existing forest roads provided under this alternative would offer more OHV access than what currently exists to respond to public requests; meet the desired conditions outlined in the Forest Plan for providing OHV connector routes; and provide opportunities for OHV travel between local communities.

***Modifications made since scoping*:** A few modifications were made to the proposal to improve connectivity between the routes in the Sidnaw area.

- **Forest Road (FR) 2009-A:** From FR2009 on the Iron River- Sidnaw Route, a short segment of FR2009-A would be added from which a segment of new trail construction would connect to the Sidnaw to Bergland State Multi Use Trail. Further field review determined that this new trail construction would be approximately 150 feet in length,

which is shorter than the 300 feet as previously proposed. FR2009-A is open to all vehicles on the current MVUM.

- **FR2011-G:** This forest road is currently open to OHVs only; it is proposed to be added to the Iron River -Sidnaw route as open to all vehicles. FR2011-G connects to the Crystal Lake Road (Houghton County jurisdiction) which is open to OHVs.

- **FR2020:** FR2020 would be added to the Iron River to Sidnaw route to connect Crystal Lake Road to the proposed Sidnaw-Rousseau route. FR2020 would be open to all vehicles.

Alternative 3

Alternative 3 addresses public comments that requested a reduction in the amount of roads open as part of the Eastern OHV Connector by primarily not including Forest Roads 3270 and 3660 as part of the proposed Iron River - Sidnaw route. In lieu of FR3270, the Ponozzo Road and the Winslow Lake Road to FR2127 (which are currently open to OHVs) would offer a connection between the State Multi-Use trails. However, it should be noted that portions of the Ponozzo Road are paved and travelers from the west (i.e. the Watersmeet area) would have to travel farther east on the Iron River to Marenisco State Multi-Use trail to access the connector route.

Alternative 3 proposes an alternate road segment to connect the Sidnaw to Bergland State Multi-Use trail to the Crystal Lake Road instead of utilizing FR2011-G as proposed in Alternative 2. This connection would occur through upgrading an unclassified (UNC) road to FR2011-K and adding a segment of new road construction to complete the connection to the Crystal Lake Road (see Map 2). FR2011-K would be proposed open to OHVs and utility terrain vehicles (UTVs[2]).

This alternative proposes allowing OHV use on 34 miles of forest roads that would connect to 35 miles of county roads open to OHV travel (see Maps 2 and 3, and Table 1). With fewer routes proposed as part of this alternative, there would be less road reconstruction. In turn, the cost to implement this alternative would be less than Alternative 2 since it offers fewer miles of OHV connector routes on existing forest system roads.

[2] UTVs, which are defined as a subset of OHV, are any motorized vehicle manufactured and used exclusively for off-highway use that has four or more low pressure tires (of 15 psi or less), including a vehicle width of 65 inches or less.

Alternative Comparison: Tables 1 through 4 provide a summary of actions under each of the action alternatives considered in detail.

Table 1. Description of Proposed Actions

Forest Road or Trail	OML[3]	Miles	Current Motorized Access Allowed	Proposed Motorized Access Allowed	Other Actions	Alternative
Iron River – Sidnaw Route						
3270	4	6.9	Highway Legal Vehicles Only[4]	All Vehicles[5]	Maintenance & mixed use signing	2
2127	3	3.9	Highway Legal Vehicles Only	All Vehicles	Reconstruction to 18' min. & mixed use signing	2 and 3
3500	4	5.7	Highway Legal Vehicles Only	All Vehicles	Reconstruction to 18' min. & mixed use signing	2 and 3
2009	3	2.8	Highway Legal Vehicles Only	All Vehicles	Maintenance & mixed use signing	2 and 3
3660	3	0.7	Highway Legal Vehicles Only	All Vehicles	Maintenance & mixed use signing	2
New Trail	Trail	~ 150'	Not applicable	All Vehicles	Construction	2 and 3
2011-G	2	.2	OHV Only	All Vehicles	None	2
2011-K (upgrade UNC)	2	.2	No motor vehicles	OHV and UTV	Reconstruction	3
2011-K New Construction	2	0.1	Not applicable	OHV and UTV	Construction	3
2020	2	.2	No motor vehicles	All Vehicles	Reconstruction	2 and 3
Sidnaw – Rousseau Route						
1300	4	4.9	Highway legal Vehicles Only	All Vehicles	Maintenance & mixed use signing	2 and 3
1439	1	1.4	OHV Only	OHV and UTV	Reconstruction	2 and 3
1462	1	1.0	OHV Only	OHV and UTV	Reconstruction	2 and 3
1460	3	3.0	Highway legal Vehicles Only	All Vehicles	Maintenance & mixed use signing	2 and 3
1100	3	7.4	Highway legal Vehicles Only	All Vehicles	Maintenance & mixed use signing	2 and 3

[3]OML = Operational Maintenance Level and describes the current level of maintenance to be received by each road commensurate with the planned function of the road. OML 1s are generally closed to highway vehicle traffic and are generally not maintained whereas OML 3s and 4s are generally open to most highway vehicles.

[4] Roads "Open to Highway Legal Vehicles Only": These roads are open only to motor vehicles licensed under State law for general operation on all public roads within the state.

[5] Roads "Open to All Vehicles": These roads are open to all motor vehicles, including smaller off-highway vehicles that may not be licensed for highway use (but not to oversize or overweight vehicles under State traffic law).

Table 2. Miles of Forest Service Jurisdiction Roads by Proposed Route

Proposed Route	Alternative 1	Alternative 2	Alternative 3
Iron River to Sidnaw	0	20.3	12.8
Sidnaw to Rousseau	0	20.9	20.9
Total Miles	0	41.2	33.7

Table 3. Total Miles Proposed by Alternative

Alternative	Miles of Existing Access (Open to OHV on Current MVUM)	New Access	County	Total
1	NA	0	0	0
2	5.6	35.6	27.6	68.8
3	5.4	28.3	35.0	68.7

Table 4. Miles/Feet of Reconstruction and Construction by Alternative

Proposed Activity	Alternative 1	Alternative 2	Alternative 3
Road Maintenance and Mixed Use Signing	0	25.7	18.1
Road Reconstruction to 18' and Mixed Use Signing	0	9.6	9.6
Road Reconstruction	0	1.6	1.5
Trail Construction	0	150'	150'
Road Construction	0	0	0.1

2.3 Activities Common to All Action Alternatives

Both action alternatives would offer more OHV access than what currently exists in order to respond to public demand, while striving to maintain the remote character of the Ottawa (FEIS, p. 3-204). The proposed activities would also meet the desired conditions outlined in the Forest Plan for providing OHV connector routes, enhance the Forest user's recreational riding experience, and provide opportunities for OHV travel between local communities.

All Operational Maintenance Level 3 and 4 roads (higher level roads designed for passenger vehicles) being considered for OHV use are required to have dual use analysis by a certified

engineer (Forest Service Manual 7715.77). This is because highway legal vehicles may be traveling at higher speeds on these roads. A dual-use analysis has been conducted by the project engineer for all OML 3 and 4 roads identified in this proposal. This analysis determined what type of activities may be needed to ensure safe driving conditions on those roads where OHV access is proposed to occur along with highway vehicles. Both Action Alternatives include the maintenance and reconstruction necessary to provide a safe situation for mixed motorized use.

Each proposed route includes segments of roads and/or trails that would require varying amounts of improvements prior to designation on the MVUM. In some instances, design criteria (such as hazard tree removal, brushing and mowing) have been proposed, and in other areas, construction and reconstruction activities are needed to ensure a safe riding experience. Table 1 displays a summary of the lengths of road and trail activities proposed under the action alternatives. Some OML 1 road segments shown as part of the proposed routes are currently designated open to OHV access; this EA proposes reconstruction to these road segments.

As part of both action alternatives, adjacent unclassified roads, trails, and closed forest roads would be signed and closure devices (such as gates or berms) may be installed, as needed**.** This is consistent with the 2012 Ottawa National Forest Travel Management Rule Strategy and will make clear that these roads are closed to travel. Determinations for which routes would receive signing or closure devices will be made based on pre-opening monitoring (See Chapter 4). These signs closure devices would be used only to enforce existing closures - this proposal does not include prohibiting motor vehicle use on any roads or trails that are currently open to public use.

It is important to note the Eastern OHV Connector EA focuses on only those roads and trails under Forest Service jurisdiction. Portions of the proposed connector routes are comprised of roads managed under different jurisdictional authority (County Roads); the action alternatives assume that roads under other jurisdiction currently available for OHV access would continue to be open to this type of access in the future.

2.4 Design Criteria

The following list of design criteria would address any potential resource concerns related to implementation of the selected actions and would be applied with all action alternatives. These criteria will be in addition to all Forest Plan direction and other applicable laws and regulations.

Transportation

1) For OML 3 and 4 roads selected to allow dual-use travel (e.g., all vehicle traffic), the following design criteria will be performed where prescribed by the project's Engineer to provide safe road conditions (see also "other actions" in Table 1 above): Road shoulder mowing and brushing;
    a. Hazard tree removal and branch trimming;
    b. Rehabilitation of roadside ditches;
    c. Removal of loose rock, 4 inches or larger, within clearing limits; and
    d. Road resurfacing and rehabilitation, including spot surfacing.
2) Placement of "Share the Road" signs on any proposed route allowing dual-use travel.

3) Placement of "Narrow Road" signs on roads with narrow clearing limits.
4) Post speed limit signs on OML 3 and 4 roads proposed as part of the connector routes to encourage safe dual-use speeds (Forest Roads: 3270, 2127, 3500, 2009, 3660, 1300, 1460, and 1100). The speed limit will be consistent with those limits imposed by the State of Michigan, county or township, as applicable.
5) When the OML 3 and 4 routes are being used for commercial log hauling, or other resource management projects involving heavy equipment use, provide signage or restrict the use of OHVs, UTVs and off-road motorcycles (vehicles weighing 1,750 pounds or less) as needed to ensure a safe, dual-use environment.

Non-Native Invasive Plants (NNIP)

1) For any ground-disturbing activities, such as road maintenance, reconstruction, and construction, clean equipment and vehicles so they are free of soil, seeds, vegetative matter, and debris that could contain or hold non-native invasive plant seeds. Equipment shall be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. For internal equipment surfaces, sweep vehicle cabs and deposit refuse in waste receptacles prior to movement onto the Ottawa NF.

Heritage Resources

The majority of heritage resource properties are unevenly distributed along the different connector routes. The selected connector routes have been designed to exclude cultural resource sites, which includes a 30-meter buffer area for each site. The following design criteria will further protect cultural resource sites:

1) Avoidance of archaeological resources and traditional cultural properties is the first measure of protection. If these resources cannot be avoided, adverse effects will be assessed through determination of eligibility under National Register Historic Places Listing (with State Historic Preservation Officer concurrence), and surface collection of artifacts, or if warranted data recovery (excavation) will be conducted. Additional measures will be developed if necessary.
2) The Heritage Resource Program will monitor sensitive cultural sites prior to, during, and after project implementation.
3) Archaeological sites on or in close proximity to connector routes will be marked for avoidance prior to road construction or implementation of new construction.
4) Recreation staff and Law Enforcement Officers regularly patrol OHV trails. These employees will be advised of the location of cultural resources in order to identify potential disturbances.
5) There is always potential for unidentified cultural resource sites to be encountered as the project proceeds. If such sites were encountered, immediately notify the Forest Archaeologist.

2.6 Forest Plan Consistency

The Forest Plan includes goals, objectives, standards and guidelines related to recreation, non-native invasive species, rare plants, wildlife, soil and water resources, and cultural resources. This project complies with all applicable Forest Plan guidance. The Analysis Framework in the project record contains more detail.

A Forest Plan guideline generally prohibits OHV use of OML 4 roads. OHV use of high-level roads does pose some safety concerns due to the speed of vehicles traveling the road and the width of these roads. The Forest Plan uses guidelines to move the Ottawa toward goals in a way that permits operational flexibility. Guidelines are followed in most situations, however, when the Forest Plan was developed it was assumed that guidelines may need to be "*modified or not implemented if site-specific conditions warrant a deviation*" and thus a Forest Plan amendment is not required if there is a need to deviate from a guideline (Forest Plan, p. 2-2). By completing a dual use analysis and implementing design criteria; we would ensure public health and safety is protected and reduce the safety concerns raised by designating an OML 4 road open to mixed uses. Thus, the project is consistent with the intent of Forest Plan guidelines.

There are two Wild and Scenic River (WSR) corridor segments, classified as recreational, that are crossed by the proposed routes. Designated motorized routes for OHVs in recreational segments are permitted by the Forest Plan when necessary to connect to established trails outside the river corridors when consistent with the protection and enhancement of river values (Forest Plan, p. 3-81.6).

Chapter 3 – Environmental Consequences

3.1 Introduction

This chapter describes the affected environment, and presents the effects analyses related to the issues identified and legal requirements. This chapter also forms the scientific and analytic basis for comparison of the alternatives, including the No Action Alternative. Additional information is located in the project file.

3.2 Affected Environment

The project area is located within the eastern portion of the proclamation boundary of the Ottawa and encompasses portions of Gogebic, Houghton, Iron, and Ontonagon counties. The proposed routes travel through several management areas (MAs) on the Ottawa, including MAs 1.1a, 2.1, 2.2, 4.1a, 4.2a, and 8.1.

The MAs that the proposed OHV routes are within are classified as Roaded Natural in the Recreation Opportunity Spectrum (ROS) which is a nationally recognized classification system for identifying, describing, planning, and managing a range of recreation settings, opportunities, and experiences. The Forest Service uses ROS classifications as course "zoning" areas within which actions and uses are managed over time to achieve desired conditions described in the Forest Plan. ROS classifications range from primitive (where there is little evidence of other people, more difficult access) to more developed areas. See Appendix B to the Forest Plan for more information. The ROS classification of "Roaded Natural" means there is moderate evidence and interaction with other users, including sights and sounds.

The Iron River-Sidnaw route (Forest Service jurisdiction) has 5 stream crossings: South Branch Paint WSR, Bush Creek, Glitter Creek, East Branch Ontonagon WSR, and Smith Creek. For the Sidnaw to Rousseau route, under Forest Service jurisdiction, there are 2 creek crossings: New Holm Creek and Leveque Creek.

Starting from south to north, the proposed routes travel through a variety of natural community types beginning with rich mesic northern hardwood/hemlock forest on fertile and well-drained soils transitioning to sandy loam soil supporting red pine, white pine, and aspen and ending on outwash sands with jack pine forests with an understory of sweet fern and blueberry. Descriptions of all the natural community types may be found in Michigan Natural Features Inventory (MNFI 2007).

Roadside vegetation is a mix of native and non-native plants. Moist to mesic roadsides often include native grasses and sedges, goldenrods, asters, strawberry, raspberry, blackberry, bracken fern, and other plants of adjacent natural communities. Native roadside shrubs often include speckled alder, beaked hazelnut, serviceberry, dogwood, and willows. The disturbed soil and edge conditions are suitable for many non-native plants. Common exotic but non-invasive plants include clovers, ox-eye daisy, bird's-foot trefoil, tall buttercup, hawkweeds, and dandelion. Non-native invasive plants known along connector routes include crown vetch, spotted knapweed, European swamp thistle, exotic honeysuckle, and whitecrack willow. The Forest has

prioritized invasive plants and uses a variety of methods to treat the high priority infestations each year, following the Ottawa National Forest Non-Native Invasive Plant Control Project (USDA Forest Service 2005). In recent years this has included treating crown vetch along the Sidnaw - Rousseau Route.

The majority of the proposed routes currently receive highway vehicle use and maintenance with the exception of Forest Roads 2011-G, 1320, 1440, 1439, and 1462 which are only open to OHVs. The routes are also connected to county roads which are open to highway legal vehicles and OHVs.

The proposed routes intersect with other forest roads currently shown on the MUVM as open to OHV use. Of these roads, approximately 128 miles are restricted to OHVs and about 27 miles are designated for use by all vehicles. OHV and Motor vehicle use is prohibited on approximately 8 miles of adjacent routes. Some routes with restricted or prohibited travel are bermed or gated, but not all restricted routes are currently physically closed with a closure device.

Non-motorized recreational opportunities are available in the project area. Examples of the types of activities are: canoeing and fishing on area lakes and rivers; hiking or walking; wildlife viewing; and hunting. Developed recreational sites within the area of the proposed routes allow for camping, boat launching, and picnicking.

3.3 Analysis Framework and Assumptions

Assumptions used for the analysis include the following:

Design criteria that are part of the Proposed Action will be implemented as soon as feasible (pending availability of funding) to ensure safety, as follows.

- Mowing, brushing, and tree trimming will occur prior to designation.
- The minor amount of trail and road construction would be completed prior to opening for use or as soon as possible in the field season.
- Road reconstruction (widening) will be prioritized based on highest safety needs. A five year schedule has been prepared to ensure completion, as funding becomes available (see Project Record).
- Signing would be completed prior to opening for use (or as soon as possible in the field season). Signing of existing designations can occur prior to the Decision for this project, following the Ottawa TMR Strategy.
- The existing forest roads that are proposed to be designated for OHV use through this project are currently open to car and truck traffic, except in the case of small segments proposed for new trail construction. In addition, the proposed routes would provide connections between currently designated (open to OHVs) county roads. By completing the connection the proposal would likely increase traffic volume (OHVs) on the county roads.

Unless otherwise specified in the dual use recommendations and design criteria, all roads designated for OHV use through this decision will continue to be maintained per the Forest's

maintenance schedule consistent with their operational maintenance level classification. Regular maintenance of forest roads improves the road condition, but also protects natural resources.

Though it is known that some unauthorized use[6] has occurred on the Ottawa, we do not currently have complete data regarding the amount and location of illegal use that may be occurring. Due to variable conditions, there is no method that we could use to accurately predict where and when unauthorized use may occur. Unauthorized uses are not part of the proposal, but rather are private, individual actions outside the control of the Forest Service, and thus are not evaluated for direct and indirect effects of the proposal. Therefore, any assumptions that unauthorized use would occur adjacent to the proposed routes would be speculative and would not be possible or appropriate to analyze (See CFR 1502.22 regarding incomplete or unavailable information). However, measures are being taken as part of this proposal to ensure unauthorized use would be minimized via signage and installation of appropriate closure devices. Monitoring and adaptive management would be used to prevent and resolve any illegal, unauthorized, or cross-country use that occurs after the routes are open. (Refer to Section 4 of this EA).

Forest Service Law Enforcement Officers (LEOs) and Forest Protection Officers (FPOs) are responsible for enforcement of Forest Service regulations related to proper use of the designated road system on the Ottawa. Currently, there are two LEOs assigned to the Ottawa and 30 staff members serve as Forest Protection Officers (FPOs). Existing law enforcement efforts would continue and additional monitoring of Forest-wide roads and trail will aid in identification of problem areas and trends in unauthorized use.

Issues were identified (as discussed in Chapter 1 above) through public scoping efforts. For each issue, an indicator measure was identified as described in table 5 below.

Table 5. Issues and Indicator Measures used for Analysis of Environmental Consequences

Issue	Indicator Measure
1: How would noise from OHV use on the proposed routes adversely affect the non-motorized experience of other Forest users?	The Distance that noise can be heard by non-motorized recreation users.
2: How would opening the proposed roads to OHV use affect the spread of non-native invasive plants?	Miles of OHV Connector proposed to be open to OHVs.
	Miles of each natural community type transected.

Effects analysis boundaries, which provide a spatial and temporal bound for the effects analysis, were identified by the ID Team for each resource with an issue identified (See Tables 6 and 7)

[6] Unauthorized use is any use of a motor vehicle that is not consistent with the designations on the unit's Motor Vehicle Use Map (MVUM), which may include: inappropriate use of a forest road on which travel is restricted or prohibited; motorized use of a non-system road or trail; motorized use of skid trails or closed temporary roads; motorized use of user-created trails; or cross-country travel through the Forest.

Table 6. Effects Analysis Boundaries for Issue 1

Analysis Area	Time	Space
Direct Effects Boundary	2020 – for the life of the existing Forest Plan	Adjacent to the trails on FS segments where noise can be heard (1/2 mile)
Indirect Effects Boundary	2020 – for the life of the existing Forest Plan	Adjacent to the trails on FS segments and county roads which are currently open to OHV use where noise can be heard (1/2 mile).
Cumulative Effects Boundary	2020 – for the life of the existing Forest Plan	Adjacent to the trails on FS segments and county roads which are currently open to OHV use where noise can be heard (1/2 mile).

Table 7. Effects Analysis Boundaries for Issue 2

Analysis Area	Time	Space
Direct Effects Boundary	2020 – For the life of existing Forest Plan.	Road corridors. [Direct effects will include the establishment of sites along the OHV routes.]
Indirect Effects Boundary	2020 – For the life of existing Forest Plan.	Adjacent native plant communities; [Indirect effects would include the possible spread to nearby natural areas.]
Cumulative Effects Boundary	2020 – For the life of existing Forest Plan.	Adjacent native plant communities

3.4 Summary of Environmental Impacts Related to the Issues

This section provides the effects analysis related to the issues identified through public and internal scoping. See section 1.7 to read about how these issues were identified for further study.

3.4.1 Issue 1 - Noise impacts to non-motorized recreation opportunities for Forest visitors:

Comments received during scoping identified a concern that OHV noise would impact Forest users participating in non-motorized recreation activities. Noise from OHVs and its potential impacts to non-motorized forest recreation opportunities were identified by the ID Team as an issue to be analyzed in detail.

Forest visitors choose recreational activities to meet their expectations. Expectations are a function of people's values; they can influence what people define as acceptable or unacceptable. Thus, a person's expectations are used to judge the importance of an event or feeling and assist one to assign values, such as the importance of solitude or privacy. People that seek solitude in a forested setting or engage in non-motorized activities can be affected by the use of OHVs. One effect could be the displacement of some users seeking solitude, such as hikers, mountain bikers, backpackers, primitive campers, bird watchers, and some hunters. This anticipated displacement

is generally attributed to sound that can be generated from OHVs, as it can be disturbing for recreationists engaging in non-motorized activity, particularly in isolated or secluded areas.

The proposed OHV routes are within Forest Plan MAs that are classified as Roaded Natural in the ROS. The ROS classification of "Roaded Natural" means there is moderate evidence and interaction with other users, including sights and sounds. The classification also provides for motorized use. It is the most developed setting managed for on the Ottawa and the majority of the Ottawa is managed for a Roaded Natural setting. When compared to other MAs outside of the proposed routes, approximately 18% of the ONF are managed with ROS classifications of "semi-primitive motorized" and "semi-primitive non-motorized." These areas of the Forest are managed for more limited motorized uses and to provide non-motorized recreation experiences (respectively).

With the exception of about 0.1 miles of new construction, the proposed routes are on existing forest roads which are currently open to highway legal vehicle traffic. These forest roads connect to county roads which currently allow OHV traffic. Speed limits on forest roads are limited to 35 mph, and county ordinances restrict the speed limit for OHVs to 25 mph. Table 8 below identifies Michigan State noise emission standards for various vehicles driven on highways or streets at speeds of 35 mph or less (Michigan Vehicle Code).

Table 8. Michigan State Noise Emission Standards

Gross Vehicle Wt.	Speed (mph)	Decibel Level (dB)
$\geq$ 8,500	$\leq$ 35	86
Motorcycle	$\leq$ 35	82
All other vehicles	$\leq$ 35	67

The State of Michigan's vehicle code for noise emissions (static test), measured at 20 inches from the exhaust pipe, is 95 decimals for motorcycles and 88 decimals for motor vehicles (Michigan Vehicle Code, 1978). State standards for OHVs noise must not exceed 94 or 99 decibels, depending on manufactured year (MDNR 2012). Table 9 lists decibel levels of some common sounds.

Table 9. Noise Levels of Common Sounds

Sound	**Decibel (dB)**
Jackhammer	130
Chain Saw, Thunder	120
Leaf Blower	110
Snowmobile	100
Lawnmower	95
Alarm Clock	80
Normal Conversation	60

Rainfall	50
Quite Residential Area	40
Whisper	30

There is limited documented information on the effects of OHV sound impacts to Forest visitors in relation to OHV detectable distance. One study found that under normal forest conditions, no more than 5 percent of the vehicles on an off-road vehicle track would be detected at distances equal to or greater than 0.5 miles from the track (USDA Forest Service, 1975). Although motorcycles are not classified as an OHV in this analysis, comparison noise studies for smaller motorized vehicles is available for reference. For example, one study found that high performance motorcycle noise (101 dB) is not detectable beyond 1,900 feet (< 0.5 mi.) in forest conditions (USDA Forest Service, 1993). Although in some cases motorcycles were audible at the measured locations (could be detected as being present by carefully listening observers who knew what they were listening for), no measureable sound increase occurred (USDA Forest Service, 1993).

There are several variables that can influence sound levels at a distance. These include wind speed and direction, temperature, vegetation, topography, and humidity. Detecting sound at a distance also depends upon the background or surrounding noise level at the location of the listener.

Alternative 1: The connector routes would not be established and no additional miles for OHV traffic would be established. Vehicle traffic would be audible along the existing Forest and county roads. OHV use would continue to travel those county roads open to OHVs. Current sound levels are within the State of Michigan and Environmental Protection Agency (EPA) noise and emissions standards. As the level of motorized use is not expected to change under this alternative, these standards would continue to be met.

Alternatives 2 and 3: OHV sound effects would be concentrated on designated roads and trails. It is assumed that OHVs would meet State of Michigan noise and emissions standards, which are consistent with the Environmental Protection Agency standards. The sound effects from OHV use, in addition to the existing highway legal vehicle traffic, are not expected to exceed these standards.

Based on the literature review (described above), it can be expected that hikers and other non-motorized recreationist may encounter OHV noise within 0.5 miles of the proposed routes, depending on the variables at the time the OHV travels by the hiker's location. Forest visitors should expect to hear traffic noise along the open roads. The sound, however, should be minor (< 5% of all vehicle traffic) when about 0.5 miles away from the proposed route. About 5% of the OHV traffic volume would be detected around 0.5 miles of the proposed routes. Therefore, the sound level of OHVs would be expected slightly higher (< 10 dB, less than a whisper) than the surrounding forest at this distance.

Considering the information in Tables 7 and 8, the sound level of motorized uses beyond 0.5 miles would be equivalent to the sound level of a normal conversation or that of moderate

rainfall, and only about 5% of the overall sound level of motorized traffic volume would be detected. Compared to busy city streets or even residential neighborhoods, the amount of traffic on forest roads open to OHV use is relatively low, which further limits the actual potential impacts on non-motorized users' recreation experiences.

Vehicle noise and frequency may slightly increase within 0.5 miles from each route due to the addition of OHVs traveling on forest roads currently prohibited to their use. OHV traffic may increase on county roads due to the establishment of open forest roads which provide a connection between the two grades. Since the county roads are currently open to OHV travel, the frequency of noise (not necessarily the level of noise) may increase on county roads. There may be a slight increase in noise level and frequency within 0.5 miles of each side of the proposed routes.

Non-motorized recreational opportunities are available in the project area. Examples of the types of activities in the project area are: canoeing and fishing on area lakes and rivers, hiking or walking, wildlife viewing, and hunting. In close proximity to the proposed routes are opportunities for fishing on the East Branch Ontonagon and hiking along the North Country Trail; these areas may be most likely impacted by a slight increase in noise. Recreational camping opportunities also exist at Lake Saint Kathryn campground, and Lower Dam dispersed site, though these sites are already accessed by motor vehicles and would not be considered non-motorized uses.

Impacts to non-motorized visitors would be about the same under both alternatives, though eight fewer miles of new OHV trail on forest roads would be opened under Alternative 3 (See Table 3).

Cumulative Effects:
Under Alternative 1 (No Action Alternative) the level of noise from the routes would not change and thus there would be no effect, and no cumulative effects.

Alternatives 2 and 3 both provide additional miles of forest roads open to OHV travel, and would connect to several miles of county roads currently open to OHVs. Past and present vehicle use would be expected to continue as described in the affected environment, however, there are no additional reasonably foreseeable actions that would increase the vehicle noise within the project area.

Conclusion: Motor vehicle noise and frequency may increase slightly from the existing condition along the proposed route; however, this is consistent with the Forest Plan Guidance for these MAs, the Wild and Scenic River Comprehensive River Management Plan, and the Roaded Natural recreation environment.

3.4.2. Issue 2 - Non-Native Invasive Plants:

Some comments from initial scoping expressed concerns about how OHVs could spread non-native plants (NNIP) along the connector routes. Invasive plants can replace native vegetation, decreasing biodiversity with adverse impacts to wildlife and forest regeneration (Westbrooks 1998; Forest Plan 2006).

OHVs could contribute to the spread of NNIP by spreading seeds from infestations already occurring along the routes, and by bringing in new seeds (Rooney 2005). Motor vehicles can pick up and spread NNIPs with small seeds that can be trapped in dirt in tire treads or vehicle undercarriages (Von der Lippe, Moritz, and Kowarik 2007). In addition to the typical roadside weeds listed in Section 3.2, vehicles could introduce garlic mustard, wild chervil, Garden valerian, and purple loosestrife. OHVs are considered a particular risk for spreading NNIP because they may often travel on road shoulders or other vegetated areas, where they are more likely to pick up NNIP seeds.

As mentioned under the Affected Environment, some NNIP infestations, such as crown vetch, are known to occur along the proposed routes. The Ottawa would continue to prioritize and treat the most ecologically invasive plant infestations, as authorized under the Ottawa National Forest 2005 NNIP Control Project.

Alternative 1: The connector routes would not be established, and no additional OHV traffic would occur. NNIP would continue to spread by wind, wildlife, growth, and passenger vehicles, as well as by OHVs along county roads. Existing infestations of spotted knapweed and European swamp thistle would continue to spread. Crown vetch would continue to be treated, as would one site of whitecrack willow, pending funding and staff time. There would likely be some new introductions of NNIPs from ongoing vehicle use along the routes, but we cannot predict the species, location, or number of sites.

Alternative 2: This alternative would result in an increase in OHV traffic along the whole route (69 miles), including forest roads currently open to OHVs and county roads (see Table 3). A direct effect of the proposed action would be OHVs moving NNIP seeds, both spreading existing infestations and bringing in new seeds from other areas. We cannot predict the species, location, or number of sites that may be established, but the miles of new OHV route can serve as a relative indicator to compare the alternatives.

The approximately 11.2 miles of proposed road reconstruction and widening and approximately 0.12 miles of new road and trail construction could also contribute to the introduction and spread of NNIP. These improvements include a risk of spreading NNIP by equipment used, in fill material, or by disturbing the seed bank in the soil. Design criteria NNIP number 1 specifies that road reconstruction and construction equipment will be cleaned prior to arrival on the project area.

The NNIPs that may establish would depend upon the habitats along the roads. Habitats are defined by the Michigan Natural Features Inventory. Table 10 lists the miles of native plant communities (MNFI 2007) through which the connector routes pass, based on Ecological Land Type Phase (ELTP) data. Mesic northern forest and dry-mesic northern forest roadsides would be vulnerable to new sites of crown vetch, spotted knapweed, garlic mustard, and wild chervil. Roadside wetlands such as northern hardwood swamp, poor conifer swamp, and rich conifer swamp would be vulnerable to purple loosestrife and garden valerian, for example.

Table 10. Length of Natural Community Types Transected by the Proposed Routes (miles)

Habitat Community Type	Alternative 1	Alternative 2	Alternative 3
Dry-mesic northern forest	0	31.2	30.1
Mesic northern forest	0	35.4	35.9
Northern hardwood swamp	0	1.6	1.8
Poor conifer swamp	0	0.1	0.1
Rich conifer swamp	0	0.5	0.8
Total	0	**68.8**	**68.7**

We acknowledge that new infestations brought in by OHVs may grow larger and spread to the adjacent plant communities. We therefore consider the spread of NNIPs to adjacent forest to be an indirect effect of the proposed action. Some plants, like spotted knapweed, crown vetch, and wild chervil, require disturbance and abundant sunlight so would not be expected to spread into the adjacent forest. The greatest risk would come from NNIP such as garlic mustard, which could be brought onto the routes with the additional OHV traffic, deposited as a seed along the road edge, and then spread into the adjacent forest. Existing sites of garlic mustard on the Ottawa appear to have arrived that way. Wetland NNIP such as purple loosestrife and garden valerian could also be brought in by OHVs and spread in the roadside ditches. However, there is relatively little wetland habitat adjacent to the proposed routes.

Alternative 3: Effects would be similar to those described for Alternative 2. As shown in Tables 3, fewer miles of new forest roads proposed to be open to OHVs in Alternative 3 would result in slightly less risk of NNIP spread into the adjacent plant communities.

Cumulative Effects:
Past actions (such as prior introduction and spread of exotic plants) were considered a part of the Affected Environment. Likewise, current and ongoing actions (such as the movement of NNIP by wind, wildlife, and vehicles) were also considered. No other reasonably foreseeable future actions are known that would affect the spread of NNIPs along the routes or within the adjacent habitats. There are scheduled timber harvests near the routes in the coming years, but the associated vehicle traffic along the routes would pose no greater or lesser risk of spreading NNIPs than the use that these roads typically receive every year.

Conclusion: The addition of OHVs to the proposed routes would increase the risk of NNIP introduction and spread along the routes and into adjacent habitats. Roadsides would likely becoming "weedier" with more new sites of spotted knapweed, crown vetch, and other roadside exotic plants. Over the coming years, under all alternatives, new introductions of higher priority NNIP such as garlic mustard could occur. The likelihood of such an introduction would be greater under Alternatives 2 and 3 compared with Alternative 1. Highly invasive plants like garlic mustard could replace native vegetation in the adjacent habitats, perhaps outcompeting native tree seedlings. Ongoing public education, including work with OHV user groups, could help these sites be detected early and controlled. In addition, the Non-Native Invasive Plant Control Project would assist to address problem areas.

Pages 3-86 to 3-97 of the FEIS discuss the impacts of NNIPs on the Ottawa and acknowledge that allowing more OHV access will contribute to the spread of NNIPs to areas not infested. No additional impacts, not already disclosed by the FEIS, are expected from designating these two specific routes.

3.5 Summary of Environmental Impacts Related to Non-Issues

There were no issues identified for the following resources. These resources were evaluated by the interdisciplinary team and resource specialists for any potential impacts from the project and to identify mitigation measures that would avoid or minimize impacts. However, detailed analysis is not included for these resources because either they were not raised as potential issues during public scoping or the impacts are expected to be immeasurable, inconsequential, or non-existent. In some cases, design criteria were used to minimize potential effects. More detailed information can be found in the analysis framework documents for each resource, which are located in the project record.

- *Cultural resources* – No effects would occur as a result of the proposed action when design criteria applied.
- *Soils Resources* – Design criteria for construction and reconstruction of roads, trails and water diversion structures would minimize the effects of the road/trail system to the soil resource. Forest roads and trails (including their shoulders) are dedicated land uses and not considered detrimental soil conditions. Erosion from existing roads and trails may occur, however, this amount would be small in nature, and would be weather dependent and seasonal in nature. Monitoring existing roads and making improvements to allow for proper drainage where needed will aid in preventing further erosion and minimizing any impacts.
- *Water Resources* - With implementation of the proposed project, the amount of sediment and dust would increase slightly from increased vehicle traffic due to OHV route designation. However, the amount would remain very small and changes to water quality would be undetectable, water quality would remain good to excellent, and there would be no risk of our actions leading toward water quality impairment.
- *Wildlife and Rare Plants* (see section 3.6.1)

3.6 Summary of Environmental Impacts Related to Findings Required by Law

The following were not identified as issues which required detailed analysis because either they were not raised as potential issues during public scoping or the impacts are expected to be immeasurable, inconsequential, or non-existent. In some cases, design criteria were used to minimize potential effects. However, analysis of these resources is required by other laws and policies that govern Forest Service management of National Forest Systems Lands and resources.

3.6.1. Rare Plants and terrestrial and aquatic wildlife

The Endangered Species Act (ESA) requires site specific evaluation of projects' impacts on Federally-listed Threatened and Endangered Species. Where projects may affect Threatened and Endangered (T&E) species, consultation with the Fish and Wildlife Service is required. Forest Service policy requires evaluation of project impacts to Regional Forester Sensitive Species

(RFSS). Below are summaries of the project-level evaluation for T&E and RFSS species. The full Biological Evaluation (BE) is in the Project Record.

Rare Plants: The proposed connector routes cross many different habitats, which provide suitable habitat for many RFSS plants. Road edges can also provide suitable habitat for rare plants that prefer open habitats or forest edges, including species such as grapeferns, arrowleaf sweet coltsfoot, large monkeyflower, and pinedrops.

Most of the additional OHV use would occur on existing un-vegetated roadbeds, already in use by passenger vehicles. Allowing OHVs onto these roads would pose no risk to rare plants. However, rare plants could be harmed by proposed road construction and reconstruction. The construction and reconstruction segments were surveyed and it was verified that suitable habitat exists for the eleven RFSS plants listed in Table 11. No rare plants were found, but if an undetected population of a sensitive plant occurs in the area, it could be harmed by road construction or reconstruction. Therefore, both alternatives may impact individuals of some RFSS plants.

Table 11. RFSS Plants that may be impacted by proposed actions for both alternatives

Species	Common name	Status
Botrychium michiganense [hesperium]	Michigan moonwort	RFSS/ST
Botrychium minganense	Mingan moonwort	RFSS
Botrychium rugulosum	Ternate grapefern	RFSS
Botrychium simplex	Least grapefern	RFSS
Cypripedium parviflorum var. *pubescens*	Greater yellow lady's- slipper	RFSS
Huperzia selago	Fir clubmoss	RFSS/SSC
Pterospora andromedea	Giant pinedrops	RFSS/ST
Sisyrinchium montanum var. *montanum*	Strict blue-eyed grass	RFSS/SSC
Vaccinium cespitosum	Dwarf huckleberry [bilberry]	RFSS/ST
Viola novae-angliae ssp. *grisea*	New England violet subspecies	RFSS/ST
Zizia aptera	Meadow Zizia	RFSS/ST

No impacts would occur from Alternative 1. RFSS = Regional Forester Sensitive Species. ST = State Threatened. SSC = State Special Concern.

Wildlife: Potential impacts to T&E species, Kirtland's warbler and Canada lynx, were reviewed in the Biological Evaluation. Determinations of No Effect were made for both species.

Habitat for ten RFSS wildlife species occurs within the project area. For the following species, the project may impact individuals of a species but not likely to cause a trend to federal listing or a loss of viability: gray wolf, little brown bat, northern bat, tri-colored bat, spruce grouse, wood turtle and all four Sensitive butterflies. Gray wolves are widespread throughout the Forest and would likely avoid the Connector Route during periods of widening and brushing, and during high traffic volumes, thus equating to a disturbance to individual wolves. The three bat species may roost in trees along the corridor and thus may be disturbed during day-time roosting, however, they would likely relocate to adjacent habitat during periods of widening and brushing, and during high traffic volumes. Spruce grouse may be indirectly impacted by additional hunter

access and accidental shooting increases (being mistaken for ruffed grouse). Wood turtles have habitat in the Ontonagon and Paint rivers and may nest in areas near the bridge crossings, thus passing vehicles and maintenance activities may impact individuals. All four Sensitive butterflies (Chryxus arctic, tawny crescent, West Virginia white and Nabokov's blue) are at risk by adults being hit by motorized vehicles or by the loss of larvae (caterpillars) feeding on food plants along the road ditches during brushing, grading and widening activities.

The project will have no impact on the remaining terrestrial species.

Aquatic Wildlife: Habitat for four aquatic invertebrates (creek heelsplitter mussel, and the forcipate emerald, rapids clubtail, and pygmy snaketail dragonflies) occurs within the project area. Direct effects of the action alternatives on these species would be minimal, since no actions are proposed within the streams. Sediment and dust would likely slightly increase due to increased use of primarily OML 3 roads, possibly increasing the delivery of sediment to streams, although the regular maintenance of roads would reduce this risk. The effect these actions would have on sensitive aquatic species populations would be very small. However, because these four species have been documented within the Paint River system, the BE determination is "May Impact Individuals but would not likely cause a trend to federal listing or a loss of viability".

3.6.2 National Historic Preservation Act

The area was surveyed in 2008 and there are 45 historic or archaeological sites in the area. Only one site has been determined eligible for the National Register of Historic Places. Two sites have been determined Not Eligible for the National Register of Historic Places. The eligibility of remaining sites has not been determined. These sites will be avoided by all OHV activities. Any road widening or improvements must also avoid these sites through use of design criteria listed in Chapter 2.

In addition to the above sites, the Lac Vieux Desert to L'Anse Trail (LVD-LA) crosses the area. There is a Memorandum of Understanding (MOU, 2010) governing management of the LVD-LA. The MOU provides that the Forest:

- Minimize soil disturbance.
- Where practicable, locate new road, trail and utility corridors construction or reconstruction outside of trail corridor.
- Recognize pre-existing rights and Ottawa National Forest responsibility to provide reasonable access.

The project complies with the agreement in the MOU and impacts to cultural resource sites can be avoided, therefore, there will be no effect to cultural resources. Consultation with the State Historic Preservation Office (SHPO) will be initiated to comply with the National Historic Preservation Act.

3.6.3. Wild and Scenic River

The proposed routes cross segments of the South Branch Paint (Alternative 2) and East Branch Ontonagon (Alternative 2 and 3) WSR corridors that are classified as Recreational. Recreational segments have more developed shorelines and roads may parallel the river. The ROS classification for each segment is Roaded Natural. The corridors are part of MA 8.1 which

emphasizes protection and management of WSR corridors via direction provided by the Ottawa's Wild and Scenic River Comprehensive River Management Plan (CRMP). The CRMP provides a management approach that identifies the free-flowing natural character, water quality, and associated "outstandingly remarkable values" as those river values that are to be protected and enhanced (CRMP, pp. 2-1 to 2-3) and outlines the river values per segment (CMRP, pp. 2-6 to 2-19).

The South Branch Paint River outstandingly remarkable values are Recreation, Fish, and Wildlife. This segment is a popular canoe route and is known for its fine mix of brown and brook trout. High quality spring complexes and associated wetlands are key features of this segment, providing wildlife habitat to a variety of wetland wildlife species. Wildlife viewing opportunities are abundant along this river.

The East Branch Ontonagon River outstandingly remarkable values are Fish and Wildlife. This segment is known for its brook and brown trout fisheries. The riparian corridor for this segment is important to wintering deer and the predators that prey or scavenge them. Nesting wood turtles are common, utilizing gravel bars and sandy cutbanks where available.

Alternative 2's proposed routes travel through approximately 0.4 miles of the South Branch Paint River WSR corridor via FR3270 and approximately 2.0 miles via FR3500 with one bridge crossing each, and 0.6 miles via FR2900 of the East Branch Ontonagon River WSR corridor. There is no bridge crossing for FR2900.

Alternative 3 does not include FR3270 as part of its proposed routes; thus, the South Branch Paint River WSR corridor would not be crossed.

Free Flowing Condition, Water Quality and Fish: The Wild and Scenic Rivers Act and Forest Service manual direction require that we protect and enhance free-flowing condition, water quality and outstandingly remarkable values of designated rivers. There are no proposed activities within a WSR and therefore there would be no effects on free-flowing condition.

Water quality of the WSRs is good to excellent (MDEQ 2003, MDEQ 2004, MNDR1999) although there are impairments associated with atmospheric deposition (MDNRE 2010, pages 52, 89, 93, 94, 97, Appendix C) which are not related to National Forest management.

The South Branch Paint WSR has paved asphalt approaches to the FR3270 bridge (50 feet each side of the bridge) that greatly reduce sediment and dust, although a very small amount still exists. Implementation of the proposed action would likely result in increasing vehicle traffic. However, there would be little to no change from the existing condition due to the asphalt approaches and therefore water quality would remain in good to excellent condition and the fish outstandingly remarkable values protected.

The East Branch Ontonagon WSR does not have paved approaches to the crossing and there is currently a small amount of sediment and dust entering the river from vehicle roadway use. This may slightly increase with implementation of the proposed action due to increased traffic. However, the increase in sediment and dust would be very small and water quality changes

would be imperceptible. Water quality would remain in good to excellent condition and there would be no risk of our actions leading toward water quality impairment. Hence, WSR water quality and the fish outstandingly remarkable value would be protected.

Recreation: Recreation is an outstandingly remarkable value for the South Branch Paint WSR. It is a popular canoe route, especially during spring run-off. Wildlife viewing opportunities are good along the South Branch and hunting for bear, deer, and grouse occur within the river corridor (CRMP, pp.2-19). Establishing an OHV route on FR3270, which crosses the Paint River, would not have a direct or indirect affect to the recreation outstandingly remarkable value for this WSR. There is existing use of the FR3270 by highway vehicles in addition to the existing use of the State Multi-Use trail by OHVs and snowmobiles parallel to the river. The addition of OHVs to FR3270 would not substantially increase the noise and other impacts these vehicles may have for recreationists within the river corridor.

Wildlife: Designating existing travel ways across the WSR corridors as open to OHVs would not affect the Wildlife outstandingly remarkable value of either river segment. The OML 3 and 4 roads that are part of Alternatives 2 and 3 are already open to larger vehicles, including logging trucks, so adding the use of OHVs would not result in any measureable effects, above what is already occurring, to wildlife using the river corridors or the rivers themselves. Furthermore, additional tree and brush clearing or minor widening to improve sight distances along roads within the WSR corridors would not result in any additional measurable effects to wildlife using the river corridors. Roads within the WSR corridor currently receive routine road maintenance, therefore this proposal would not appreciably change that activity.

3.6.4 Watersheds and Soil Resources (Clean Water Act, Executive Orders)

The Clean Water Act and State Water Quality Standards provide direction for protection of water quality. The existing routes have small, immeasurable amounts of sedimentation to adjacent water resources. Vehicle use would likely increase with implementation of the proposed action and there may be potential for random and occasional road shoulder use due to dual use. This could cause a very slight increase in sediment if vehicles consistently use the road shoulders near water resources. However, the Transportation Dual Use Analysis indicates there would be surfacing and ditch work in some locations, which would reduce sediment potential and it would be unlikely that road shoulder use would consistently occur near water resources. Therefore, the integrity of the decision area's water and riparian features would be maintained and water quality would remain in good to excellent condition.

Executive Orders 11990 and 11988 provide specific language for the protection of wetlands and floodplains (respectively). There would be no new route construction in wetlands or floodplains. Existing routes may have small, immeasurable amounts of sedimentation to adjacent wetlands and floodplains. However, the Transportation Dual Use Analysis indicates there would be surfacing and ditch work in some locations, which would reduce sediment potential. Therefore, wetlands would not be degraded and effects to floodplains would be minimal. There would be no change from the existing floodplain function.

Chapter 4 - Monitoring and Adaptive Management

Monitoring and adaptive management are important pieces of this project proposal. Monitoring will be used to identify areas were OHV use may be causing resource damage or if any unauthorized use is occurring adjacent to the routes. Adaptive management will be used to take actions to prevent and correct issues as they are identified in monitoring.

Monitoring measures:

The Forest-wide Monitoring Strategy will aid the Forest in understanding if and how unauthorized OHV use is occurring on or adjacent to the Connector routes. Per the Forest-wide OHV Monitoring Strategy (see Project Record), the roads would be monitored before and after implementation to identify unauthorized use and any resource damage. Implementation of the proposed project would occur when the Connector Routes were added to the MVUM and opened for public use (after May 15 during the year an updated MVUM is published).

Pre-opening - Currently, pre-opening monitoring along the proposed routes is occurring (summer through fall of 2012). This monitoring effort is utilizing the OHV monitoring form that is included in the Forest-wide monitoring strategy. The monitoring data collected will include: estimates of types and amounts of current use, presence and effectiveness of signs or closure devices, resource damage, presence of user-created routes, and presence of unauthorized use. Monitoring is focused on the open and closed routes which directly intersect the proposed routes.

Under the proposed action, pre-opening monitoring (in addition to field surveys completed by ID Team members) would be used to identify areas where there are needs for improved signage and/or closure devices prior to implementing the proposed routes. Areas that would be prioritized for signage or closures are those where there is evidence of unauthorized use or resource damage. Additional areas would be signed or closed if clear signage is lacking. The overall goal of this work would be to ensure that it is clear to forest visitors which types of motorized uses are allowed or prohibited on forest roads.

Post-opening - Post-opening monitoring would occur annually for at least 2 years following implementation of the project, as described in the Forest-wide OHV Strategy. The monitoring form and protocol would mirror what is being completed pre-opening. Post opening monitoring would be used to support adaptive management.

Adaptive Management:

Per the Forest-wide OHV Monitoring Strategy, adaptive management, if needed, would focus on improving areas where unauthorized use or resource damage is found. Corrective measures to address unauthorized use would be established based on the assessment of conditions and identification of the causes leading to issues. Measures may include: establishment of effective closure devices (berms, gates, or other native materials), signing or other public education efforts, and increased law enforcement patrols. These activities could proceed immediately upon identifying a need. If the Responsible Official determines that considerable adverse effects are occurring on roads that are designated for motor vehicles use, an emergency closure would be implemented until the damage could be mitigated or eliminated (as required by the Travel Management Rule, 36 CRF 212.52(b)(2)). In addition, adjacent routes that are currently closed, may be considered for motor vehicle use designation (adding to the MVUM) if they would

provide a good recreation opportunity without cause impacts to resources. If such proposals are made in the future, additional environmental analysis and public involvement would be required.

Monitoring and Adaptive Management would be reported on in the Forest's Monitoring and Evaluation Reports, annually.

Chapter 5 – Contributors and Agencies and Others Contacted

Contributors

USDA - Forest Service, Ottawa National Forest:

Anthony V. Scardina, Forest Supervisor, Responsible Official

Susanne M. Adams, Bergland and Ontonagon District Ranger, ID Team Leader

Amy Jo Amman, Soil Scientist

Bill Baer, Recreation Program Manager

Mike Bigelow, Forest Engineer

Brian Bogaczyk, Wildlife Biologist

LeAnn Colburn, Environmental Coordinator

Ellen Lesch, Hydrologist

Holly Jennings, Fisheries Biologist

Marlanea French-Pombier, Environmental Coordinator

Christine Handler, Forest Planner

Robin McCartney, Environmental Coordinator

Jeff Mell, ORA-Recreation

Cari VerPlanck, Archeologist

Agencies and Others Contacted

State and Local Units of Government:

Baraga County Commissioners

Duncan Township

Houghton County Road Commission

Iron County Commissioners

Michigan Department of Natural Resources

Ontonagon County Commissioners

Tribal Units of Government and Tribal Organizations:

Lac View Desert Band of Lake Superior Chippewa

Keweenaw Bay Indian Community

Bad River Chippewa Tribe

Bay Mills Indian Community

Lac Courte Oreilles Band of Lake Superior Chippewa Indians

Lac du Flambeau Chippewa Tribe

Sokoagon Chippewa Community, Mole Lake Chippewa Tribe

St. Croix Chippewa Tribe

Red Cliff Chippewa Tribe

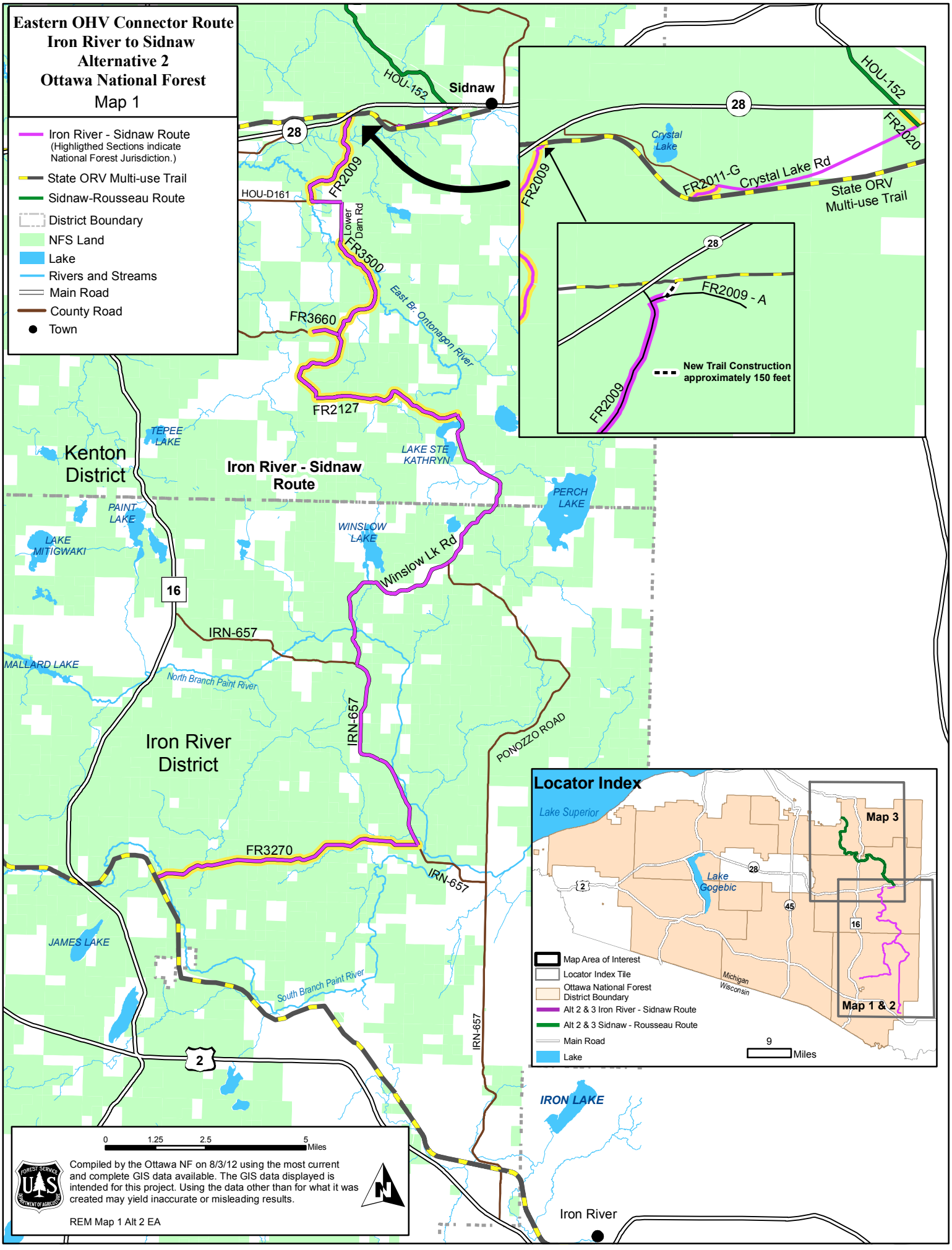
Great Lakes Indian Fisheries and Wildlife Commission

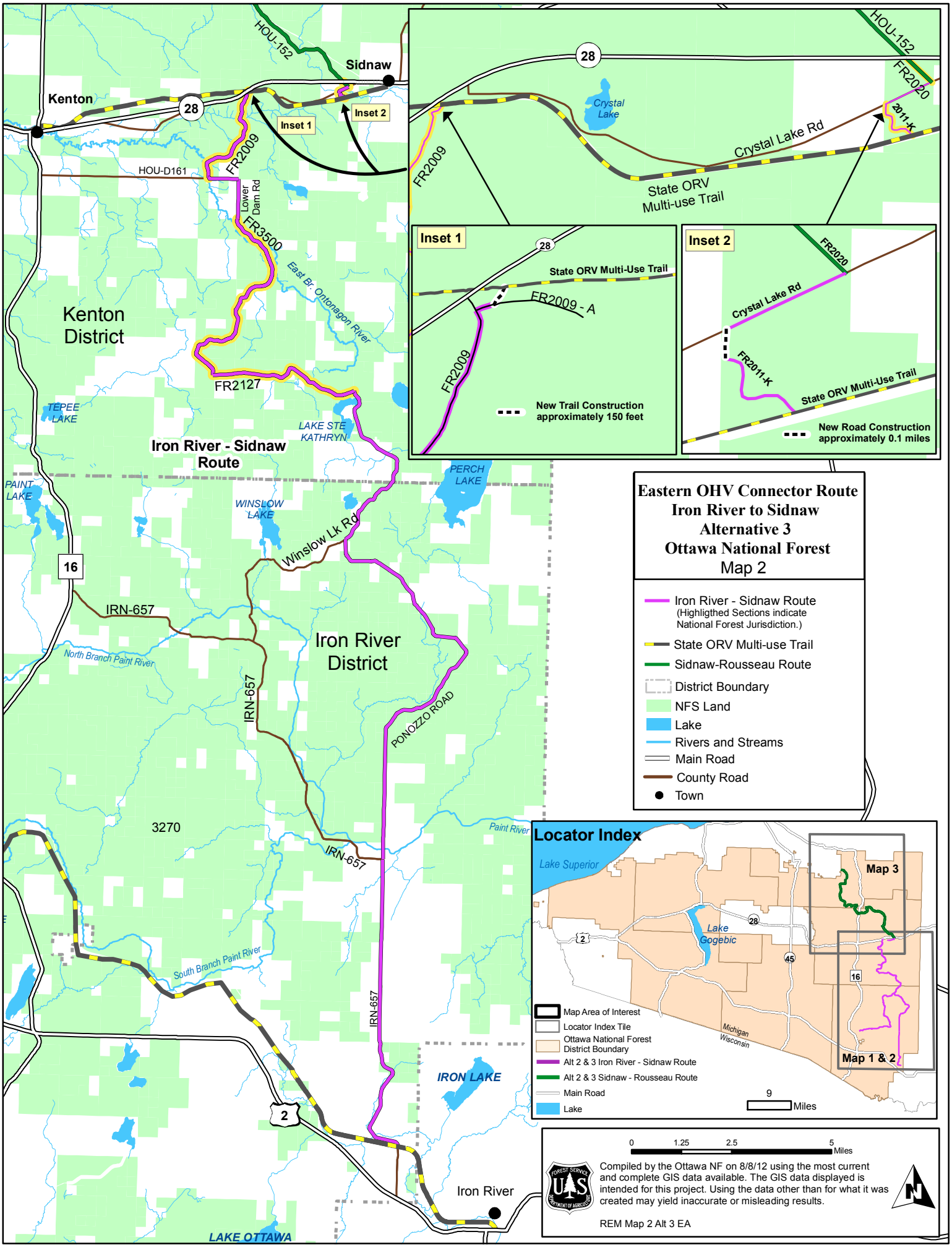
Other Local Organizations:

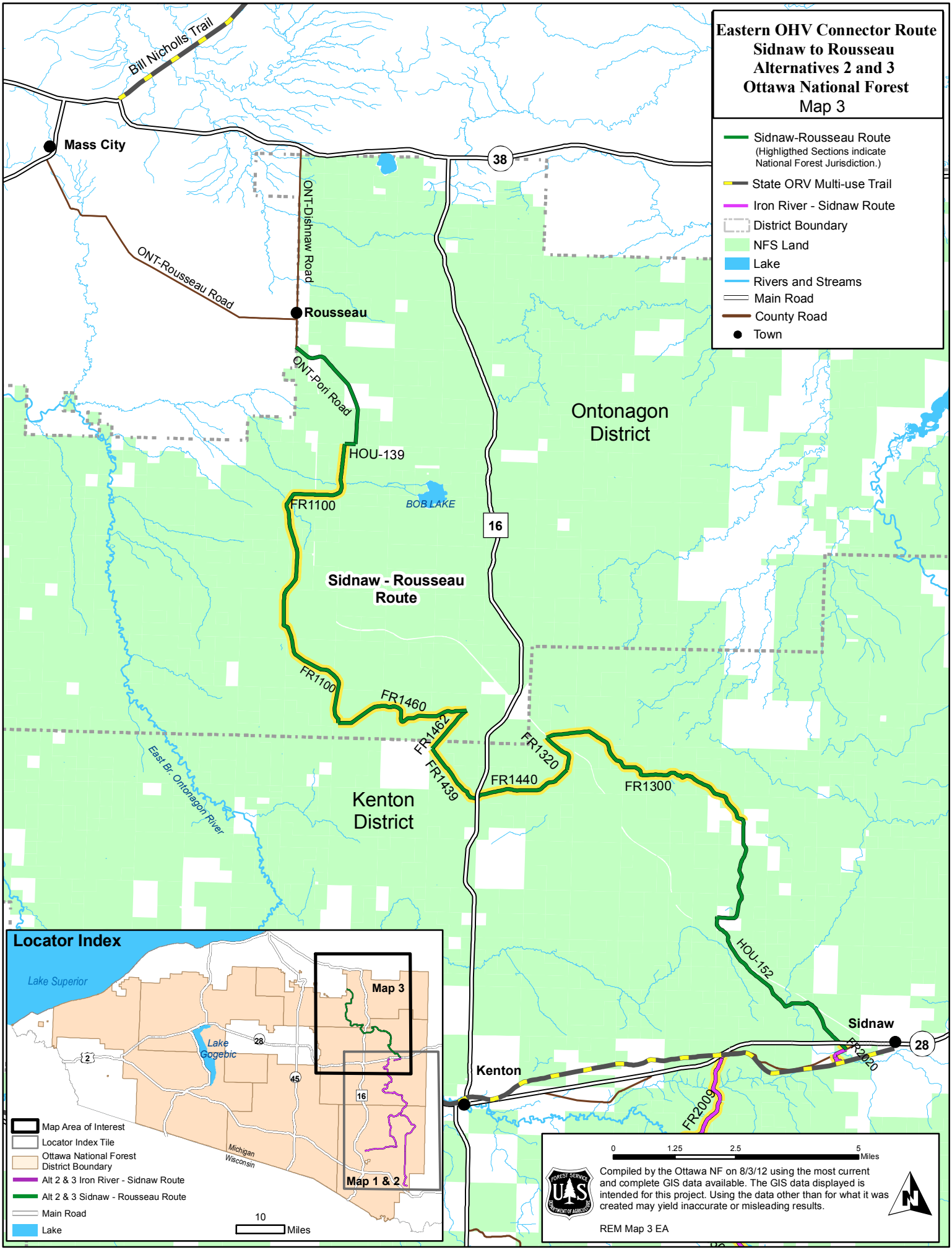
MI-TRALE

Northwood's Alliance, Inc.

Appendix 1 – Maps


Eastern OHV Connector Route
Iron River to Sidnaw
Alternative 2
Ottawa National Forest
Map 1
Iron River - Sidnaw Route
(Highligthed Sections indicate National Forest Jurisdiction.)
State ORV Multi-use Trail
Sidnaw-Rousseau Route
District Boundary
NFS Land
Lake
Rivers and Streams
Main Road
County Road
Town
Sidnaw
HOU-152
28
HOU-D161
FR2009
Lower Dam Rd
FR3500
East Br. Ontonagon River
FR3660
FR2127
TEPEE LAKE
LAKE STE KATHRYN
Kenton District
Iron River - Sidnaw Route
PERCH LAKE
PAINT LAKE
WINSLOW LAKE
LAKE MITIGWAKI
Winslow LK Rd
16
IRN-657
MALLARD LAKE
North Branch Paint River
Iron River District
PONOZZO ROAD
FR3270
JAMES LAKE
South Branch Paint River
2
IRON LAKE
Iron River
Crystal Lake
FR2020
FR2011-G
Crystal Lake Rd
State ORV Multi-use Trail
FR2009 - A
New Trail Construction approximately 150 feet
Locator Index
Lake Superior
Map 3
Lake Gogebic
45
Map 1 & 2
Michigan
Wisconsin
Map Area of Interest
Locator Index Tile
Ottawa National Forest District Boundary
Alt 2 & 3 Iron River - Sidnaw Route
Alt 2 & 3 Sidnaw - Rousseau Route
Main Road
Lake
9
Miles
0
1.25
2.5
5
Miles
Compiled by the Ottawa NF on 8/3/12 using the most current and complete GIS data available. The GIS data displayed is intended for this project. Using the data other than for what it was created may yield inaccurate or misleading results.
REM Map 1 Alt 2 EA


Kenton
Sidnaw
HOU-152
28
Inset 1
Inset 2
FR2009
HOU-D161
Lower Dam Rd
FR3500
East Br. Ontonagon River
Kenton District
FR2127
TEPEE LAKE
LAKE STE KATHRYN
Iron River - Sidnaw Route
PAINT LAKE
WINSLOW LAKE
PERCH LAKE
Winslow Lk Rd
16
IRN-657
North Branch Paint River
Iron River District
PONOZZO ROAD
3270
Paint River
South Branch Paint River
IRON LAKE
2
Iron River
LAKE OTTAWA
Crystal Lake
Crystal Lake Rd
FR2020
2011-K
State ORV Multi-use Trail
Inset 1
FR2009 - A
New Trail Construction approximately 150 feet
Inset 2
New Road Construction approximately 0.1 miles
Eastern OHV Connector Route
Iron River to Sidnaw
Alternative 3
Ottawa National Forest
Map 2
Iron River - Sidnaw Route
(Highligthed Sections indicate National Forest Jurisdiction.)
State ORV Multi-use Trail
Sidnaw-Rousseau Route
District Boundary
NFS Land
Lake
Rivers and Streams
Main Road
County Road
Town
Locator Index
Lake Superior
Lake Gogebic
Map 3
Map 1 & 2
45
Michigan
Wisconsin
Map Area of Interest
Locator Index Tile
Ottawa National Forest District Boundary
Alt 2 & 3 Iron River - Sidnaw Route
Alt 2 & 3 Sidnaw - Rousseau Route
Main Road
Lake
9
Miles
0
1.25
2.5
5
Miles
Compiled by the Ottawa NF on 8/8/12 using the most current and complete GIS data available. The GIS data displayed is intended for this project. Using the data other than for what it was created may yield inaccurate or misleading results.
REM Map 2 Alt 3 EA


Eastern OHV Connector Route
Sidnaw to Rousseau
Alternatives 2 and 3
Ottawa National Forest
Map 3
Sidnaw-Rousseau Route
(Highligthed Sections indicate National Forest Jurisdiction.)
State ORV Multi-use Trail
Iron River - Sidnaw Route
District Boundary
NFS Land
Lake
Rivers and Streams
Main Road
County Road
Town
Bill Nicholls Trail
Mass City
38
ONT-Dishnaw Road
ONT-Rousseau Road
Rousseau
ONT-Pori Road
HOU-139
FR1100
BOB LAKE
16
Ontonagon District
Sidnaw - Rousseau Route
FR1100
FR1460
FR1462
FR1439
FR1440
FR1320
FR1300
East Br. Ontonagon River
Kenton District
HOU-152
Sidnaw
28
FR2020
Kenton
FR2009
Locator Index
Lake Superior
Map 3
Lake Gogebic
28
2
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Map 1 & 2
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Map Area of Interest
Locator Index Tile
Ottawa National Forest District Boundary
Alt 2 & 3 Iron River - Sidnaw Route
Alt 2 & 3 Sidnaw - Rousseau Route
Main Road
Lake
10
Miles
0
1.25
2.5
5
Miles
Compiled by the Ottawa NF on 8/3/12 using the most current and complete GIS data available. The GIS data displayed is intended for this project. Using the data other than for what it was created may yield inaccurate or misleading results.
REM Map 3 EA
N

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