

# Appendix C – Wilderness Evaluation

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## Appendix C – Wilderness Evaluation

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### Introduction

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This appendix displays the process used to conduct a wilderness evaluation and the results of that analysis. This appendix is divided into two parts: *Part One* discusses the wilderness evaluation, including an overview of the process and specific criteria used to evaluate an area's capability, availability and need for wilderness; and *Part Two* presents the wilderness evaluation for the Ehlco area (Area 2 as identified in the roadless inventory process). This appendix summarizes the wilderness evaluation including a discussion on benefit and impact. The final Forest Plan's (herein referred to as Forest Plan) potential roadless inventory is documented in Appendix B of the FEIS.

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### Part One - Wilderness Evaluation Process

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Minimum standards for Wilderness Evaluation of Roadless Areas may be found in Forest Service Handbook 1909.12 (Land and Resource Management Planning Handbook), WO Amendment 1909.12-92-1, and Chapter 4.19c.

#### Step 1 – Overview

Provide an overview that includes basic information about each roadless area.

#### Step 2 – Wilderness Capability

Indicate each roadless area's capability for wilderness by describing the basic characteristics that make the area appropriate and valuable for wilderness, regardless of the area's availability or need.

#### Step 3 – Availability for Wilderness

Indicate availability of the roadless area by describing other resource potential and by summarizing pertinent quantitative and qualitative information. Include current use, outputs, trends, and potential future use and/or outputs.

#### Step 4 – Need for Wilderness

Summarize the factors considered and the process used in assessing the need for each area. Include the public involvement process (both past and present), assumptions made, the social and economic factors considered and interest expressed by proponents, including Congress. Discuss nearby wildernesses and their uses, nearby roadless areas, distance from population centers, and use trends.

#### Step 5 – Wilderness Evaluation Summary

This section includes a capability summary, availability summary, values foregone, and description of biological and social need.

## Step 6 – Alternatives and Environmental Consequences

Describe the potential environmental consequences of a wilderness and a non-wilderness recommendation.

- Include a table displaying the acreage assignment of prescriptions by alternative.
- Discuss the impact on the roadless area of a wilderness designation and the impact of each non-wilderness prescription. Show the social and economic effects in each case. Include mitigation, if any, for the loss of wilderness characteristics and the effects on plant and animal communities.
- Track roadless areas through each alternative considered in detail in the environmental impact statement.

### **Capability, Availability, and Need**

Specific criteria required to determine an area's capability, availability and need for wilderness designation are outlined in Forest Service Handbook 1909.12, Chapter 7.2.

## Capability

### Solitude

Degree to which an area provides visitors with the opportunity to gain a wide range of experiential benefits such as a feeling of solitude and serenity, a spirit of adventure and awareness, and a sense of self-reliance (FSH 1909.12).

High, but not extremely high, probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk (USDA Forest Service 1982).

Solitude may be defined by stating gross acres and describing the topography of the roadless area; stating gross core area, shape, and percent of core area to entire roadless area; describing amount of existing travel patterns and degree of use within the core area; and describing other factors such as noise (USDA Forest Service 1997b).

### Degree of Disturbance

Degree to which an area is natural or appears to be natural and free from disturbance so that the normal interplay between biotic species inhabiting the area continues (FSH 1909.12).

Degree of disturbance may be described by stating the percent of the area harvested within the past 10 years; percent of the area in non-native, planted vegetation; improvements in the area and whether they are regaining natural character; and stating if management activities are occurring on a widespread basis (USDA Forest Service 1997b).

### Geological Strata

Describe unique geological features or distinctive landscape, such as gorges, caves, waterfalls, and cliffs (USDA Forest Service 1997b).

**Biological Strata**

Describe by identifying the current national forest conditions found in each roadless area. A coarse/fine filter approach is used to identify broad forest cover types, successional classes, rare communities, special species and grouping these species according to ecological units or community types (USDA Forest Service 1997b).

**Biotic Species Requiring Primitive Surroundings**

The ability of certain biotic species to compete with increasing public use and developmental projects that affect their habitats. Consider means available, other than wilderness designation, for meeting this need. The need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific values or phenomena (FSH 1909.12).

Determine relationship of roadless areas to habitat availability needs for plant and animal species. This includes determining the proportion of the acreage of suitable habitat or species occurrences contained within the roadless areas as compared to the national forest as a whole; and documenting the species habitat conditions or individual species which are dependent on or benefit from wilderness designation (USDA Forest Service 1997b).

**Ecological Strata**

An area's ability to provide for preservation of identifiable landform types and ecosystems. Consideration of this factor may include utilization of Edwin A. Hammond's subdivision of landform types and the Bailey-Kuchler ecosystem classification. This approach is helpful from the standpoint of rounding out a National Wilderness Preservation System (NWPS) and may be further subdivided to suit local, subregional, and regional needs (FSH 1909.12).

Using Edwin A. Hammond's subdivision of landform types and the Bailey-Kuchler ecosystems classification, state the number of and acres of ecoregional Sections and Subsections present, and state if a roadless area includes an ecosystem section and/or subsection that currently has no representation in wilderness (USDA Forest Service 1997b).

**Scientific/Educational Values**

Describe the roadless area's capability to provide outdoor education and scientific study, both formal and informal, in a manner that is compatible with wilderness (FSH 1909.12).

Describe the presence of designated Research Natural Areas, Experimental Forests, and potential for study of ecosystem sections and subsections not represented in wilderness (USDA Forest Service 1997b).

**Historical/Social/Cultural Values**

State presence of designated cultural, heritage, paleontological areas, and/or the presence of old grave sites, cemeteries, historic cabins, etc. (i.e., a sense of place) (USDA Forest Service 1997b).

**Challenge**

Challenge is the degree to which the area offers visitors the opportunity to experience adventure, excitement, challenge, initiative, or self-reliance. Most desirable areas offer many outstanding

opportunities for adventure and challenge (FSH 1909.12). Describe the opportunity to experience a level of risk; state the probability of having the feeling of being the first one in the area; state if there is an opportunity to get off the travel way and away from human influences in the area; describe the probability of being dependent on use of outdoor skills; state if there are signs of trails, travel corridors, blazes; describe the extent that physical elements and natural forces interact with the individual use of the area (i.e. terrain, high volume stream flow, etc) (USDA Forest Service 1997b).

### **Primitive and Unconfined Recreation**

Determine an area's capability of providing primitive or unconfined types of recreation such as camping, hunting, fishing, mountain climbing, ski touring, canoeing, boating, river rafting, backpacking, hiking, riding, photography, and other outdoor activities (FSH 1909.12).

State the range and uniqueness to the recreation activities available; describe what characteristics of the area create the opportunities for the different activities (USDA Forest Service 1997b).

### **Special Features**

Abundant and varied wildlife may enhance an area's wilderness capability. If the primary objective should be the protection or management of one or more wildlife species, analyze the relative values of wilderness and wildlife management. In some instances, particularly where nonconforming structures or activities are necessary for management of the wildlife or its habitat, wilderness designation may not be appropriate. Special scenic features contribute to an area's wilderness capability (FSH 1909.12). Describe any special features that have not been described in any other section; state presence of designated scenic areas, features, focal points, or distinctive landscapes (USDA Forest Service 1997b).

### **Manageability**

The Forest Service's ability to manage an area as an enduring resource of wilderness, untrammelled by humans, retaining its primeval character, and to protect and manage its natural character are all factors to consider. Also consider such factors as size, shape, and juxtaposition to external influences (FSH 1909.12).

State size of area; describe amount of and character of private land within the area; describe presence of and character of special use permits in the area; describe adjacent area and state if privately owned or Forest Service ownership; state if there are any outstanding mineral rights within the area (USDA Forest Service 1997b).

Additional capability characteristics for areas in the East (FSH 1909.12, 7.21a):

National forests east of the 100th meridian may contain limited nonconforming uses and/or nonconforming structures and improvements while retaining capability for wilderness designation. Standards for desirable capability characteristics east of the 100th meridian are:

- Nonconforming uses are of such a nature that they can be effectively mitigated or terminated. Examples include a variety of uses, such as logging, special-use facilities, vegetation treatment, fences, log or frame cabins, or corrals that can be terminated and

the improvements easily removed or ignored because they are rapidly disappearing through natural deterioration.

- Nonconforming structures and improvements, except range improvements, are generally lacking. If present, they are rapidly disappearing through natural processes, or it would be practical to remove them and permit the site to return to a near-natural condition. Examples include buildings, power lines, dams, borrow pits, and lower standard roads that, if closed, would recover naturally.

## Availability

The determination of availability is conditioned by the value of and need for the wilderness resource compared to the value of and need for other resources. To be available for wilderness, the values of the wilderness resources, both tangible and intangible, should offset the value of resources that formal wilderness designation would forego (FSH 1909.12).

Describe and discuss non-wilderness resources, current uses, outputs and potential uses available within a roadless area that may affect its availability for inclusion in the National Wilderness Preservation System (USDA Forest Service 1997b).

Note that additional criteria for wilderness evaluation address demand and capacity of existing wilderness. These criteria include: existing demand, recreation capacity, practical maximum capacity, existing condition capacity, accessibility, visitor pressure, and other unconfined recreation opportunities/experiences. These are all quantitative and objective values generated from use and acreage figures.

### **Lands Generally Unavailable for Wilderness (FSH 1909.12, 7.22a)**

Following are examples of lands that are generally best suited for development and intensive management for sustained yield production of resources other than wilderness. Depending on the seriousness of the resource needs, these lands may be considered unavailable for wilderness:

- Areas where the need for increased water production and/or additional onsite storage is so vital that the installation or maintenance of improvements that would be incompatible with wilderness is an obvious and inevitable public necessity.
- Areas where designation would seriously restrict or prevent the application of wildlife management measures of considerable magnitude and importance.
- Highly mineralized areas that are of such strategic or economic importance and extent that restrictions or controls necessary to maintain the wilderness character of the land would not be in the public interest.
- Areas containing natural phenomena of such unique or outstanding nature that general public access and special development to facilitate public enjoyment should be available.
- Land needed to meet clearly documented resource demands such as for timber or mineral production or for developed recreation areas such as winter sports sites.
- Lands committed through contractual agreements for use, purposes, or activities not in concert with the requirements of the Wilderness Act of 1964.

Limitations on roadless area recommendations in the East (FSH 1909.12, 7.24):

Evaluation of roadless areas east of the 100th meridian as part of the forest planning process yields one of the two following decisions:

1. Manage the area for multiple uses other than wilderness.
2. Recommend the area to Congress as a wilderness study area.

## Need

### Wilderness Evaluation - FSH 1909.12, Chapter 7: 7.23 – Need

Determine the need for an area to be designated as wilderness through an analysis of the degree to which it contributes to the local and national distribution of wilderness. There should be clear evidence of current or future public need for additional designated wilderness in general in the area under consideration. Demonstrate this need through the public involvement process, including public input to environmental analysis and its resultant documentation. Deal with “need” on a national basis and evaluate such factors as the geographic distribution of areas, representations of landforms and ecosystems, and the presence of wildlife expected to be visible in a wilderness environment.

It is not possible to consider the need for the wilderness resource wholly apart from the demand for other uses of the land that might be compatible with wilderness. Nevertheless, considering that the purpose of wilderness designation is to provide an enduring resource of wilderness for the American people, it is essential to analyze the need for wilderness in order to establish its relative value.

#### 7.23a – Assumptions

In evaluating the need for wilderness, planners can make certain assumptions with reasonable assurance, specifically:

1. Wilderness demand increases with both increasing population and growing awareness of wilderness.
2. Some undeveloped lands provide many opportunities for a primitive type of recreation outside wilderness.
3. These lands are going to decrease in acreage as the demands on public lands increase.
4. Some visitor use that occurs in wildernesses is not dependent upon the wilderness resource.
5. Within social and biological limits, management may increase the capacity of establishing wildernesses to support human use without unacceptable depreciation of the wilderness resource.
6. To survive, some biotic species and/or associations may require the environment found only in a wilderness.



### 7.23b – Factors

In determining whether there is a need to designate a roadless area as wilderness, consider:

1. The location, size, and type of other wildernesses in the general vicinity and their distance from the proposed areas. Consider accessibility of areas to population centers and user groups.
2. Present visitor pressure on other wildernesses, the trends in use, changing patterns of use, population expansion figures, trends and changes in transportation, and nationwide travel patterns.
3. Extent to which non-wilderness lands on National Forest System lands, other federal lands, state lands, and private lands other than wildernesses are likely to provide opportunities for unconfined outdoor recreation experiences.

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## Part Two – Ehlco Wilderness Evaluation

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### Overview

#### Description

Acres Forest Service: 16,074

Acres Private: 290

Percent Surface Ownership: 99%

Percent Subsurface Ownership: 4%

Roads: Forest Road (FR) 366 four miles, FR 393 three miles, FR 361 one mile

Trails: 12 miles of the North Country National Scenic Trail, and 20 miles of the Ehlco Mountain Bike Trail

#### History

The lands that make up the 16,000 acre Ehlco area were purchased in small parcels between 1937 and 1969 from various lumber companies. The area is commonly known as Ehlco because the majority of the lands were purchased from the Edward Hines Lumber Company (hence the name Ehlco). This company, which is still in business today, was founded in 1892 with the objective of providing and distributing lumber products. Based out of Chicago, the companies' holdings included mills, Great Lakes lumber fleets, and extensive timberlands in Wisconsin, Michigan, Minnesota, the South, and the far West. Forest Service certificate of possession purchase notes for the Elcho area include the presence of logging roads, bridges, logging camps, horse sheds, and warming sheds. The lands were extensively cutover prior to purchase by the Forest Service. None of the lands in the Ehlco area were included in the RARE II Roadless Area Review and Evaluation of 1979 nor did it meet roadless inventory criteria in the Final Environmental Impact Statement for the 1986 Forest Plan.

#### Location, Vicinity, and Access

The Ehlco area is located on the Bergland Ranger District of the Ottawa National Forest (the Ottawa), Ontonagon County, Michigan. The area is located along the Ottawa boundary in the northwest portion of the Forest and is south of the Porcupine Mountains Wilderness State Park. The White Pine Mine is about two air miles to the east. Nearby communities include White Pine

(about one air mile to the east) and Bergland (about six air miles to the south). The Ehlco area is about six miles long and four miles wide and is found primarily on the Aldridge Creek and Bergland NE USGS quadrangle maps.

Primary vehicle access is on FR 360 which forms a portion of the southern boundary. From its junction with Michigan State Highway M 64, FR 360 can be traveled by an automobile for approximately five and a half miles. From the west and north, the area can be accessed from the South Boundary Road, a county road, which is also a snowmobile trail in the winter. Overall access to the area is limited due to the location, dense relatively young forest, and wet soils. Access is primarily by OHVs on old roads and trails, hiking on the North Country National Scenic Trail, and biking on the Ehlco Mountain Bike Trail.

The White Pine mine operates in the community of White Pine. The area consists of an underground copper mine, processing facilities, and approximately 6,500 acres of tailings. Underground operations were suspended in 1995, and in large part the mine is closed. However, the surface electrolytic copper refinery and the power plant are still in operation. Restoration projects have been undertaken to help revegetate tailings, however; the majority of the tailings have remained barren for the past 20 years.

### **Geology, Topography, and Vegetation**

The Ehlco area is in the Iron River Basin Landtype Association which is characterized as a higher basin of the Iron River drainage system on a lake-modified, glacial till plain. Bedrock geology is underlain by Freda Sandstone, Oronto Group, Kewseenawan Super group; Middle Proterozoic; Precambrian age. The neighboring White Pine mine area also has bedrock geology of Freda Sandstone and the Nonesuch Formation which is the host rock for stratiform copper deposits.

The topography is gently sloping and ranges from nearly level in the majority of the area to moderately steep in the two main river drainage systems (West Branch Big Iron River and the Big Iron River). Elevation ranges from about 880 feet in the river bottomlands to about 1,120 feet. About 45% of the area is relatively flat and consists of wet drainways, depressions, low lying areas, and floodplains with fine textured and organic soils. About 20% of the area consists of stream valleys and associated stream bottomlands. The remainder of the area is made up of flat to gently sloping uplands with fine-textured soils including clays, silts, and loams. The area is a young to mid-successional growing forest consisting of upland hardwoods, lowland conifers, lowland hardwoods, and small amounts of hemlock, aspen, and paper birch. The understory vegetation varies with soil and tree species and includes ferns, grasses, sedges, spring ephemerals and later blooming wildflowers, a variety of shrubs and tree seedlings, and forest floor mosses.

### **Current Uses**

This area is currently managed under MA 6.1, which emphasizes a long-term goal for a semi-primitive non-motorized recreation setting. The area is primarily used for undeveloped recreation activities such as hunting, hiking, mountain biking, and access to private hunting camps. Portions of this area are popular with white-tailed deer hunters and black bear hunters who commonly use OHVs for access for baiting and hunting.

Current uses include OHV use for access to private camps and by hunters. Noted routes include FR 366 and several minor trails heading east and west off this road. Several private camps are located within the area. Access to a 120-acre private inholding with a hunting camp in Section 21, Township 50N, Range 43W is on about four miles FR 366 which is within the Ehlco boundary. This road can be traveled utilizing a 4x4 type vehicle for approximately two miles, and then access is by OHV to reach the camp. There are several improvements on this road such as culverts and spot graveling, however, the road is in poor condition due to the fine textured soils and locations with mud holes and standing water in the road bed. FR 366 is also part of the Ehlco Mountain Bike Trail. There is another main OHV trail going north of the Big Iron River bridge crossing in Section 2, Township 49N, Range 43W that is used to access a camp on private land located in Section 34. It follows an old road.

### **Key Attractions**

Twenty miles of the Ehlco Mountain Bike Trail circumnavigates the interior portion of this area and 12 miles of the North Country National Scenic Trail (NCT). These trails are separate corridors. The NCT crosses east/west through the area. There are two new steel frame foot bridges located on the NCT at the Big Iron River and West Branch of the Big Iron River crossings. Use is low on these trail systems. This area is popular with black bear and white-tailed deer hunters. There are limited other attractions in this area.

## **Capability**

### **Natural Integrity and Appearance**

Most of the area appears to be a natural early to mid-successional forest. However, there are signs of human disturbance, use by humans, visible road corridors (system and non-system roads), and recreation management. There has been no Forest Service timber harvest in this area because the area was heavily cut prior to Forest Service ownership in the 1960s. There are about 100 miles of unclassified roads and some old railroad grades that are remnants of prior ownership and uses. Most of the unclassified roads have or are in the process of disappearing. Within the area Forest Roads 366, 361, and 393 are in use by OHVs, 4x4 type vehicles, and/or mountain bikes. They are still quite visible and some have improvements as described elsewhere in this appendix; however, no roads are considered “improved” as defined in the FSH 1909.12, Chapter 7.11(b)(5) and the Eastern Region Direction, August 1997 (USDA Forest Service 1997b).

In 2003, two steel frame bridges with wood abutments were installed on the NCT over the Big Iron and West Branch of the Big Iron Rivers. These bridges are 120 feet and 100 feet long respectively with life expectancies of about 50 years. The project included improved bridge approaches. In order to protect the integrity of the NCT special access for an excavator that was used to install the bridges was created. Although the access route was obliterated and naturalized, evidence of the route remains. There are several occurrences of user created crossings on the other streams and creeks in the area, metal culverts on old roads, and evidence of old buildings within and adjacent to the area.

## **Opportunity for Solitude, Challenge and Primitive Recreation**

The Ehlco area is about 16,000 acres in size. The area offers an individual the opportunity for solitude and remoteness because of the large size, however there are impacts to solitude.

Surface operations at the White Pine Mine, about two air miles away, includes the electrolytic copper refinery and power plant. When in operation a person can hear this noise from most everywhere in the Ehlco area.

The South Boundary Road (a paved county road) forms a portion of the western boundary and runs along the northern edge of the area. In winter this road is closed to passenger vehicles, but is part of the designated snowmobile system and noise from snowmobiles can be heard within the Ehlco area. Although use is low, it is concentrated in a few key areas: on the trails, roads, and areas that are not too wet for hunting and OHV access.

The Ehlco Mountain Bike Trail is considered one of the more challenging trails on the Ottawa. The very things that make the trail challenging are the things that do not attract a lot of people including mud holes, overgrown trail sections, and beaver dams on the trail. Overall use in the Ehlco area is higher from late August through November and recreationists are likely to encounter black bear and white-tailed deer hunters.

Aside from access on trails and roads, visitors would find general forest access difficult due to the dense young forest, brushy areas, and wet soils. There are limited views and few scenic vistas. The most scenic views can be found from the bridges that cross the Big Iron and West Branch of the Big Iron Rivers on the North Country National Scenic Trail.

## **Special Features**

There are few special features in this area. There are no designated or candidate Research Natural Areas or candidate Special Interest Areas. There may be some occurrences of rare plants in the area and there is potential habitat for several species as described in the “Botanical Characteristics” section under Availability. However, no surveys have occurred to document any such populations. Some of the Ottawa rare plants prefer more northern, colder microsites, which could occur in the Ehlco area.

## **Manageability and Boundaries**

The area is about six miles by four miles with a variable boundary that meanders around private industrial timber lands to form a “short wide horseshoe” shape (see Figure C-1, Elcho Area Map). The boundary follows roads, water course features, the Ottawa boundary, and private lands. There would be about 36 miles of boundary to identify and maintain including about 19 miles of roads (classified and unclassified roads), 14 miles of property lines, and about three miles of water course features.

The majority (96%) of the subsurface mineral rights are outstanding or reserved. Reference the “Minerals” section under Availability on mineral resources and activities in the area and potential future developments.

There are two separate private inholdings consisting of 120 acres with a camp in the interior of the area and 40 acres near the north east part of Ehlco. Access to the 120 acre camp is on about four miles of Forest Road 366. This camp has a main cabin building and several outbuildings. Another 40-acre inholding is undeveloped at this time. A large parcel of private timber company lands (about 2,000 acres) owned by two companies forms the center of the “short fat horseshoe” shape outside and adjacent to the area. These lands are actively managed for timber resources and open to the public for recreation and hunting purposes. There are at least three private camps on these lands with main cabins and other outbuildings.

The Ehlco area is located adjacent to and just south of the Porcupine Mountains Wilderness State Park (“Porkies”). Although this 60,000-acre area has a Michigan State designation as wilderness, management and use are very different from that of a NWPS Wilderness. There are 90 miles of trails, and uses include: hiking, backpacking, camping in trailside cabins, mountain biking, groomed cross-country ski trails, snowmobiling, a developed downhill ski area, a developed camp ground, visitor center, paved trails, and road access to name a few. Mountain bikers from the Porkies trail systems venture to the Ehlco system.

The landforms of the Porkies and the Ehlco area are stark in contrast. The Porcupine Mountains Wilderness State Park is unique because of the geology, mountain-like topography, old growth conditions, scenic overlooks from bluffs, rivers, Lake of the Clouds, a variety of recreation opportunities, and it is adjacent to Lake Superior.

In summary, numerous established uses, private inholdings, outstanding and reserved mineral rights, commercial forest land bordering the central part of the area, and differing management in the Porcupine Mountains Wilderness State Park bordering on the north, increase the risk of encroachment and non-conforming uses within the area.

## **Availability**

### **Recreation Including Tourism**

Ehlco is a low use area. Beyond hiking the NCT, mountain biking, or hunting there is little opportunity for recreation. The rivers and creeks within the area are not navigable. Although water levels are higher in spring, they would be difficult to use for recreational purposes. In summer, the rivers and streams can become nearly dry rock beds. Most use begins around late August when the hunters begin to bait for black bear. OHV use is moderate and access routes are apparent. OHV access is mainly limited to roads and user developed trails. Any type of cross-country travel is made difficult by the dense forest and wet soils. In summer, the wet nature of the area leads to an abundant population of black flies, mosquitoes, and other biting insects.

Recreation trail managers on the Ottawa describe the section of the NCT that passes through the Ehlco area as one of the least accessible sections of the NCT on the Ottawa. They also describe it as the least scenic. The main scenic features are the two river corridors that can be viewed from steel foot bridges.

## Wildlife and Fisheries

Abundant and diverse wildlife inhabit the Ehlco area. White-tailed deer, black bear, and fisher are common and the area is part of at least one wolf pack's territory. Numerous species of birds that are common on the Ottawa also inhabit the area. There are no known eagle or goshawk nests. The wildlife habitats within the area are well represented on the Ottawa and surrounding lands. The low road density in conjunction with the proximity of the Porcupine Mountains Wilderness State Park provides remote habitat. This remoteness is an essential part of the habitat for some species of wildlife such as wolves. The area does not contain habitats that are unique to the Ottawa. Forest cover types found within the area are also common in other areas on the Ottawa. There have been few fisheries surveys in the area but steelhead and brook trout can be found upstream from where the NCT crosses the Big Iron River.

## Water Availability and Use

The Ehlco area is entirely within the Big Iron 5<sup>th</sup> level watershed (Hydrologic Unit Code HUC 0402010104), which is nested within the Black-Presque Isle 4<sup>th</sup> level watershed (HUC 04020101). There are no municipal watersheds within the area. There are no known developed water uses in the area (Michigan DEQ 2004a). However, there are some camps on private lands within and adjacent to the area with unknown drinking water sources.

Most of the intermittent streams flow across relatively flat or very gently sloping topography. Generally, when streams in the area begin to flow perennially they acquire sufficient energy to begin cutting down toward Lake Superior, creating deep and incised valleys with steep valley walls that tend to be landslide prone. The three largest valleys within the Ehlco area contain rivers including the Big Iron River, West Branch Iron River, and Little Iron River and all streams within the area flow into these rivers. The West Branch Iron River flows into the Big Iron River outside the area a short distance to the north and eventually flows into Lake Superior north of the Ehlco area. The Little Iron River remains separate and also flows into Lake Superior north of the Ehlco area.

Rivers in the area tend to have large bottom material often consisting of cobbles and boulders. Although the rivers are perennial, flows range widely with spring runoff creating large fast moving flows that quickly dissipate into summer flows where much of the river bottom is dry and the wetted channel is narrow, shallow, and very slow moving.

There are numerous small un-named lakes or ponds within the Ehlco area, all of which are associated with streams or wetlands. Most of these ponds were created by beaver damming streams, which commonly occurs in this part of the Ottawa.

- Intermittent stream miles: approximately 30 miles
- Perennial stream miles: approximately 50 miles
- Lake acres: approximately 50 acres

Some system roads within the Ehlco area are heavily rutted, do not drain water sufficiently, and are lacking wetland and stream crossing structures. Some old abandoned (unclassified) roads and railroads also have similar problems. Some of these system and unclassified roads are used by 4x4 type highway vehicles and OHVs, which are creating ruts and large mud holes in the

roads. Some OHV users have placed unsanctioned crossing structures across small streams and wetlands to facilitate crossing. These structures can fail during high flow events causing erosion and sedimentation downstream. Highway vehicle and OHV use is also causing erosion and subsequent sedimentation in streams, rivers, and wetlands. Some sites may require restoration in the future.

### **Livestock**

No livestock operations.

### **Timber**

The Forest Plan suitability analysis identified about 54% of the area (or around 9,000 acres) as suitable for timber management. In the past 20 years, no timber has been harvested from the area due to heavy past harvest under previous industrial ownership resulting in the current young condition of the forest. The eastern third of the Ehlco area has been identified as one of two potential sites on the Ottawa for mesic conifer regeneration.

### **Minerals**

There are no active mineral operations within the area at this time. Private outstanding and reserved mineral rights account for 96% of the area including about 10,300 acres that have all rights outstanding, about 2,600 acres with coal rights outstanding, and about 500 acres with gas rights outstanding.

The 1984 Ottawa National Forest Mineral Inventory report provides information on mineral resource potentials (Tiblin 1984). Although the report states copper ore is generally concentrated in the Nonesuch Formation, this document states that “National Forest System lands immediately surrounding the White Pine Copper Mine are potential leasing areas for copper.” A “potential leasing area” is defined as areas that have moderate potential for exploration and future development. The potential leasing area is generally less than 10 miles from past or current production. Nearly the entire Ehlco area is within the 10 mile radius of the mine, with the eastern area about 2 miles from the mine.

During its history, the White Pine Mine produced more than 4 billion pounds of copper and 45 million ounces of silver (Rosemeyer 1999). Tiblin estimated that 9.2 billion pounds of copper still remain in the White Pine District. The Nonesuch formation is known to be oil bearing and the Nonesuch/Freda deposits are considered “speculative” meaning these areas have a low potential for future oil developments.

### **Heritage Resources**

Heritage resource evaluations within the Ehlco area have been minimal. Approximately 10% of the area has been surveyed for heritage resources with 14 archeological sites identified and recorded. These sites consist of historic structures (homesteads) and associated logging camps. In order to determine if additional historic or prehistoric sites exist within this complex, extensive surveys and evaluations would need to be conducted.

## Landownership and Special Uses

There are two main inholdings consisting of 120 acres with a camp in the interior of the area and 40 acres near the north east part of the area. Access to the 120 acre camp is on about four miles of Forest Road 366. This road can be traveled for approximately two miles with a four wheel drive type vehicle. Due to the wet conditions thereafter, access is by OHV. It is evident that access is currently by OHV use on this road. The 40-acre inholding is currently undeveloped. There are no issued recreation or non-recreation special uses within the area.

## Botanical Characteristics

No botanical field surveys have been conducted by the Ottawa in the Ehlco area to date. No occurrences of state or federally listed plant species are known based on the Ottawa database and the Michigan Natural Features Inventory database (accessed 11/16/04).

Based on forest stand type mapping, the dominant cover type is mapped as hardwoods-yellow birch. Other common cover types include mixed hardwoods, black ash, aspen, hemlock, lowland brush, sugar maple, hemlock-hardwoods, and mixed swamp conifer. These cover types provide potential habitat for several Regional Forester's Sensitive Species (RFSS). For example, the following 12 RFSS are typically associated with hardwood forest:

Scientific Name	Common Name
<i>Adlumia fungosa</i>	Allegheny vine
<i>Botrychium mormo</i>	little goblin moonwort
<i>Botrychium oneidense</i>	blunt-lobed grapefern
<i>Cardamine (Dentaria) maxima</i>	large toothwort
<i>Disporum hookeri</i>	drops of gold, fairy bells
<i>Erythronium albidum</i>	white trout-lily
<i>Geum macrophyllum</i> var. <i>macrophyllum</i>	large-leaved avens
<i>Juglans cinerea</i>	butternut
<i>Panax quinquefolius</i>	American ginseng
<i>Phegopteris hexagonoptera</i>	broad beech fern
<i>Tiarella cordifolia</i>	heart-leaved foamflower
<i>Cetraria aurescens</i>	a lichen

The nearby Porcupine Mountains Wilderness State Park has documented occurrences of fairy bells, Allegheny vine, and northern gooseberry (*Ribes oxycanthoides*, state special concern). It is reasonable to expect some of these plants to occur within the Ehlco area. Another 17 RFSS plants typically occur in wetlands, like the black ash and mixed conifer swamps and open wetlands in the Ehlco area. Some of these rare plants could occur in the area.

There are numerous small lakes and several rivers within the area, which could provide habitat for any of eight aquatic RFSS plants.

The steep river valleys in the area (e.g. West Branch Big Iron) may provide some habitat where deer are unable to reach plants for browsing. In other places on the Ottawa where there are steep slopes preventing deer browse, there is often greater plant diversity and representation of certain species such as Canada yew and plants in the orchid and lily families that are less frequent elsewhere.



There is a high likelihood some non-native invasive plants also occur in the area, however, no surveys have been conducted. Two occurrences of the invasive bush honeysuckle, *Lonicera* species, were recorded along the North Country National Scenic Trail within the area.

Overall, the area is expected to have a similar potential for rare plants to occur as does much of the Ottawa. There are no particular habitats or conditions for plants occurring in the Ehlco area which do not also occur elsewhere on the Ottawa.

### **Need**

Since passage of the Wilderness Act in 1964, the NWPS has grown from about 9 million acres in 54 areas to about 105.6 million acres in 662 areas. The National Park Service manages 44 million wilderness acres (41%), the US Fish and Wildlife Service manages 21 million acres (20%), the Forest Service manages 35 million acres (33%) and the Bureau of Land Management manages 7 million acres (6%). The Forest Service manages the most wilderness units at 406. About 61% of the wilderness in the lower 48 states is managed by the Forest Service. One acre in six of National Forest System is now lands within the NWPS. An estimated 5% of all lands in the United States are federally designated wilderness, with less than 10% occurring in the east (www.wilderness.net 2004).

### **Proximity to Designated Wildernesses and Population Centers**

The Ehlco area is about 150 miles from Duluth, 300 miles from Minneapolis/St. Paul, 370 miles from Milwaukee, 300 miles from Madison, and about 450 miles from Chicago. These population centers are even closer to at least seven of the 23 other NWPS areas in Wisconsin, Michigan and Minnesota.

The Ottawa has approximately 400,000 US residents living within an hour of the border and nearly 1.5 million within two hours of the border. Of the three Michigan National Forests, the Ottawa impact area experienced the slowest population growth from 1980-2000 at 1.4%. The six Michigan counties in the Ottawa impact area actually lost population during that period; however a 12% increase in the northeast Wisconsin counties offset the Michigan decline to show a slight increase (Leefers et al. 2003).

The population of the United States is redistributing itself from the Northeast and Midwest to the South and West. In 1900, 62% of the US population resided in the Northeast and Midwest, but by 1990 only 44% of the population resided in these two regions. During the 1980s, the concentration of the growth was in the Western and Southern regions. While the West represents 22% of the American population, it represents 43% of the nation's population growth during the 1980 to 1990 period. The South represents 34% of the American population and represents 45% of the nation's growth during the period of 1980-90 (Stewart 1999).

The Lake States (Michigan, Wisconsin, and Minnesota) have 23 areas in the NWPS encompassing about 1.1 million acres. These areas are located in the Ottawa, Chequamegon-Nicolet, Superior, Hiawatha, and Huron-Manistee National Forests, and on National Park Service and Fish and Wildlife Service lands. Michigan has fourteen NWPS areas, Wisconsin has six NWPS areas, and Minnesota has three NWPS areas. In addition, the recently approved

Forest Plan (2004) for the Chequamegon-Nicolet National Forest identifies an additional 15,500 acres as recommended for wilderness study.

The State of Michigan has a state wilderness program. The Porcupine Mountains Wilderness State Park, which is adjacent to the Ehlco area, has about 60,000 acres of state managed wilderness.

The Ottawa provides about 50,000 acres of wilderness in the following areas: Sylvania, McCormick, and Sturgeon River Gorge, accounting for about 5% of lands on the Ottawa. There are also over 64,000 acres of the Ottawa in management area 6.1 semi-primitive non-motorized recreation emphasis or about 8% of lands on the Ottawa.

There are many wildernesses in the Lake States, some large, some small. Aside from the Boundary Waters Canoe Area Wilderness in Minnesota at 810,000 acres, Isle Royale National Park Wilderness in Michigan at 132,000 acres, and Michigan's Seney National Wildlife Refuge Wilderness at 25,000 acres, the 20 other Lake States Wildernesses are each less than 19,000 acres in size with several less than 6,000 acres ([www.wilderness.net](http://www.wilderness.net) 2004). In the Lake States, the national forests, and to a lesser extent the state-owned properties are almost the exclusive providers of primitive or semi-primitive non-motorized type of recreation opportunities. Recreation is one of the many values associated with wilderness. Other values include the importance of natural environments for people and the protection of biological diversity/ecological units.

### **Recreation Use**

The National Forest Visitor Use Monitoring (NVUM) results for 2002 indicate that nationally there are about 12.7 million recreation visits to national forest managed wilderness annually, with 0.9 million visiting wildernesses in the Eastern Region. The 2004 NVUM survey results for the Ottawa reported 19,700 wilderness visits (USDA Forest Service 2004h).

Visitor use of Sylvania Wilderness is described as moderate to high and has remained relatively stable over the past 10 years. Sylvania Wilderness has 50 designated campsites and receives the highest occupancy rate as compared to any other overnight camping area on the Ottawa at just over 60% (USDA Forest Service 2003d). Overnight use in Sylvania has remained stable and day use continues to rise. Visitor use rates for McCormick and Sturgeon River Gorge Wilderness are substantially lower but slowly increasing (USDA Forest Service 2003a).

### **Natural Environments**

In addition to recreation use in wilderness, there are non-users that value wilderness, and this fact is important to consider when analyzing roadless areas, allocations and the need for additional wilderness. Studies have shown that a large portion of the non-visiting public values the knowledge that natural environments exist and are protected. This perception can be considered an existence benefit. These wilderness advocates also have the off-site benefit of knowing that protection today will provide wilderness for future generations to enjoy. These values are reflected in the National Survey on Recreation and the Environment (USDA Forest Service 2001c) finding that about 70% of those surveyed agreed or strongly agreed to the question: "How do you feel about designating more federal lands in your state as wilderness?" Over 96%

agreed or strongly agreed with the statement: “I enjoy knowing that future generations will be able to visit and experience wilderness areas.”

### **Biological Diversity/Ecological Units**

The context for determining the need for ecosystem representation NWPS is based upon the eco-region descriptions developed by Robert G. Bailey in *Descriptions of the Ecoregions of the United States* (Bailey 1995, USDA Forest Service 1994a). Nationwide, 261 different ecosystem types have been identified based on biophysical factors. Of these, an estimated 157 eco-regions, also referred to as provinces, are now represented in the NWPS. The goal of ecosystem representation is to represent different ecosystem types in a preservation-oriented system such as the NWPS, to meet biological (landform representation and biodiversity conservation) and social needs (outdoor recreation opportunities) (Cordell et al. 1999).

The Ehlco area is located in the Laurentian Mixed Forest Province Ecological Unit 212 and more specifically the Southern Superior Uplands Section Unit 212J (USDA Forest Service 1994a). The three existing wildernesses on the Ottawa, totaling about 50,000 acres, are also located in Unit 212J. In addition, five wildernesses on the Chequamegon-Nicolet National Forest in northern Wisconsin (about 44,000 acres) and Isle Royale National Park Wilderness in Michigan (about 132,000 acres) are also located in Unit 212J.

The Forest Service defines adequate wilderness representation of an ecosystem to include two or more distinct examples of at least 1,000 acres (Loomis 1999). However, there are no absolute “minimums” for representation. The 212J Ecological Subregion is represented with wilderness in approximately 226,000 acres including nine separate examples of at least 1,000 acres.

### **Public Interest**

#### **Pre Notice of Intent (NOI) Public Comment**

Over a 360 responses were received. Fifteen (15) percent of the comments received prior to issuing the NOI to revise the Forest Plan were related to wilderness, the majority of this number came as an organized (form letter) response. Representative wilderness comments included: designate the Trap Hills as wilderness (mostly through organized response); preserve wilderness; limit the number of wilderness visitors; create additional wilderness across the Ottawa with no developed recreational facilities; no motor boats in Sylvania; allow motorboat use in Sylvania to continue; identify new RNA candidates in wilderness; use wilderness to accomplish long term ecological health.

#### **Post Notice of Intent Public Comment**

There were 130 wilderness category comments, mostly in three different sets of organized (form letter) responses accounting for 81% of wilderness comments. In summary, organized responses included: support high numbers of wilderness acres; if Congress does not act on proposals for potential wilderness within a specific time period, the lands should return to management; support the recognition of the need for analysis of additional wilderness and roadless lands; and designate the Trap Hills as wilderness.

Other individual comments included: Oppose additional wilderness; would like more areas designated wilderness such as Trap Hills; include substantial effort and emphasis to maintain and expand wilderness characteristics; limit motorized access; oppose motorized trail within the perimeter or wilderness area of Sylvania; and assess all SPNM for wilderness.

There was no specific public interest in the Ehlco area as potential wilderness.

### **Post DEIS Public Comment**

There were over 1,600 total comments received in response to the Proposed Forest Plan and DEIS of which 81% were organized response form letters. Many of the form letters addressed the roadless inventory and wilderness evaluation. In summary, concern was expressed about the process used for identifying roadless areas and evaluating potential wilderness. Some requested the Trap Hills and Ehlco as wilderness study area. Other individual comments oppose any new wilderness designation.

One organization proposed that a portion of the Forest, including the Trap Hills and adjacent lands be considered for a National Recreation Area, in lieu of the Trap Hills being considered for wilderness. It was determined that this general area of the Forest does comprise features that would be managed for a similar type of recreational opportunity, and therefore this proposal was dropped from further consideration (see Chapter 2 of the FEIS). See FEIS Appendix J for a review of public involvement including analysis of and response to public comment.

### **Summary of Wilderness Evaluation: Benefit and Impact**

The Ehlco area has a low to moderate wilderness potential. Although the area is large (about 16,000 acres) and remote, few people are attracted to the area. The area is not particularly scenic due to the young dense forest growing on relatively flat terrain. Access is difficult and there are few desirable recreation qualities. The majority of the area is wet and the finer textured soils limit areas and type of use. There are opportunities for solitude but it is affected by the noise and the operation of the nearby White Pine Mine.

Designation may preclude effective treatment methods (mechanical) for mesic conifer regeneration. Future values associated with 9,000 acres of suited timber lands would be foregone with wilderness designation.

Reasonable access would continue for individuals with private inholdings which could entail motorized uses, roads, and trails within and immediately adjacent to Ehlco.

Ninety-six percent of the area has privately owned outstanding or reserved mineral rights. These rights remain valid and could be exercised regardless of wilderness designation.

This area has a lower intensity of uses including hiking, mountain biking, baiting and hunting for big game, and private inholding access needs; however, many of these uses occur in the same areas. If this area were designated wilderness, mountain bike use would be eliminated; this use is currently low, but is established, and interest in mountain biking in the area appears to be increasing. Trail maintenance, construction and reconstruction on the mountain bike trail and the North Country National Scenic Trail would be limited to non-mechanized equipment.

Currently access is mainly via OHVs. Although the area has a long-term goal for a semi-primitive non-motorized recreation class, hunters often utilize OHVs. Even with a change in these uses, this area would provide a low contribution to the NWPS. The area is not ecologically unique to the Ottawa or to the NWPS. The remote challenges the area provides to recreationists and hunters would remain if the area were not designated wilderness.

The wildlife habitats within the area are well represented on the Ottawa and surrounding lands. The area does not contain habitats that are unique. Forest cover types found within the area are also common in other areas on the Ottawa.

Numerous established uses, private inholdings and associated access needs, outstanding and reserved mineral rights, adjacent commercial forest lands, and the Porcupine Mountains Wilderness State Park bordering on the north, increase the risk of encroachment and non-conforming uses within the area.

Figure C-1. Ehlco Area Map

