

DECISION MEMO
SAVANNA/BARRENS RESTORATION PROJECT
USDA Forest Service, Region 9, Huron-Manistee National Forests
Baldwin/White Cloud Ranger Districts
Oceana and Newaygo Counties
(T13N, R15W; T15N, R12W)

I. DECISION TO BE IMPLEMENTED

Description of Decision

My decision is to conduct up to 433 acres of savanna creation and up to 17 acres of opening restoration within 3 project areas - Pines Point, Winston Road, and Hayes Road - on the Baldwin/White Cloud Ranger Districts over the next 10 years. The National Forest System lands affected by my decision are located on the Baldwin-White Cloud Ranger District of the Huron-Manistee National Forests in: Sections 8 and 17 of Greenwood Township (T13N, R15W), Oceana County, Michigan, Sections 19 and 30 of Greenwood Township (T13N, R15W), Oceana County, Michigan, and Section 6 of Monroe Township (T15N R12W), Newaygo County, Michigan (see attached Project Maps). My decision is to use a combination of mechanical equipment, hand tools, prescribed burning, and/or seeding/planting to create an interconnecting network of closed, partially closed, and open canopy areas that contain native grasses and Karner blue butterfly nectar plant species within each of the three project areas. In addition, approximately 1/3 of each project area will be left untreated to provide reference sites for use in effectiveness monitoring. See the attached Project List for locations and treatments.

The proposal includes reducing tree density to an average of <15% canopy cover in two areas to be developed as openings via commercial harvest of up to 10 acres of white/red pine on one site, non-commercial removal or suppression of individual herbaceous or woody plants using mechanical and/or hand tools (e.g., mowers, dozers, saws, loppers), and prescribed burning. Within the eight savanna development areas, tree density will be reduced to an average of 10-25% canopy cover over 70-80% of an area, and an average of 25-60% cover over 20-30% of an area. This will be accomplished via commercial harvest of up to 60 acres of white/red pine on two sites, non-commercial removal or suppression of individual herbaceous or woody plants using mechanical and/or hand tools (e.g., mowers, dozers, saws, loppers), and prescribed burning.

By reducing tree density and the encroachment of trees and shrubs, these treatments will promote the growth of native grasses such as big blue stem, little blue stem, and Indian grass, and flowering plants such as black-eyed Susan, horsemint, and wild lupine - the host plant for the federally endangered Karner blue butterfly. However, additional treatments might be required to achieve the desired coverages of native grasses and flowering plants. If wild lupine cover is $\leq 5\%$ and/or cover of other Karner blue butterfly nectar plants is $\leq 5\%$, seeding/planting activities will be conducted, including soil scarification and mechanical vegetation removal, to establish 5-15% cover of wild lupine and other nectar plants. In addition, if desired savanna plant species presence is $\leq 60\%$ and/or non-native invasive species presence is $\geq 5\%$, this proposal includes conducting seeding/planting activities, including soil scarification and mechanical vegetation removal, to establish $>60\%$ presence of desired savanna plant species and $<5\%$ presence of non-native invasive species.

Under this proposal, treatments will occur only within unoccupied Karner blue butterfly habitat. In addition, this proposal includes moving all National Forest System lands in the project that are currently within the commercial timber base, Land Suitability Class 500, to 600 (i.e., other emphasis – restoring savanna ecosystems being replaced by forest succession).

My decision includes implementation of the conservation measures noted in the attached Conservation Measure List.

Purpose of Decision

Openings, prairies, savannas, and barrens have declined on the Huron-Manistee National Forests over the past century due to extensive reforestation and fire control efforts, and the process of natural succession. Species dependent on these habitat types include the federally endangered Karner blue butterfly, numerous Regional Forester's Sensitive Species such as red-headed woodpecker, golden-winged warbler, eastern massasauga rattlesnake, eastern box turtle, frosted elfin, hill-prairie spittlebug, prairie smoke, and Hill's thistle, and game species such as wild turkey, ruffed grouse, American woodcock, and white-tailed deer. Many of these species have experienced a decline in habitat quality and quantity, and subsequently population numbers. In particular, there has been a reduction in the number, distribution, and size of Karner blue butterfly populations on the Forests; current populations are generally small and isolated.

To reverse these trends within the Forests, the Huron-Manistee National Forests' Land and Resource Plan (Forest Plan) calls for the restoration and maintenance of savannas, barrens, and prairies (page II-6). In addition, a conservation strategy for the Karner blue butterfly is provided by the U.S. Fish and Wildlife Service's Karner Blue Butterfly Recovery Plan and the Draft Karner Blue Butterfly Habitat Management Strategy for the Huron-Manistee National Forests (Recovery Plans), which provide management and monitoring measures to meet recovery goals for viable populations. The Forest Plan incorporates the recovery goals by directing the restoration and maintenance of 20,300 acres of savannas/barrens within designated Karner blue butterfly population management areas and essential Karner blue butterfly essential habitat (page II-32).

This project will create up to 450 acres of oak/pine savannas, increasing habitat quantity and quality, and subsequently population numbers, of the federally endangered Karner blue butterfly, as well as numerous Regional Forester's Sensitive Species and game species associated with openings, prairies, savannas, and barrens. Thus, the Proposed Action contributes toward meeting the goals of the Forest Plan and the Recovery Plans.

This decision is intended to respond to the objectives of Management Areas 4.3W and 6.1 by creating/maintaining large openlands and barrens, following the Karner blue butterfly management strategy, and protecting Threatened, Endangered, and Sensitive species and their habitats on the Huron-Manistee National Forests.

II. REASONS FOR CATEGORICALLY EXCLUDING THE DECISION

Decisions may be categorically excluded from documentation in an environmental impact statement or environmental assessment when they are within one of the categories identified by the U.S. Department of Agriculture in 7 CFR part 1b.3, or one of the categories identified by the Chief of the Forest Service in Forest Service Handbook (FSH) 1909.15 sections 31.1b or 31.2, and there are no extraordinary circumstances related to the decision that may result in a significant individual or cumulative effect on the quality of the human environment.

I have concluded that this decision would appropriately be categorically excluded from documentation in an environmental impact statement or environmental assessment as it is a routine activity within a category of exclusion and there are no extraordinary circumstances related to the decision that may result in a significant individual or cumulative effect on the quality of the human environment. My conclusion is based on information presented in this document and the entirety of the Record.

Categories of Exclusion

The decision is within the category of exclusion 31.2(6) that includes timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than one mile of low standard road construction.

The decision is within the category of exclusion 31.2(12) that includes harvest of live trees not to exceed 70 acres, requiring no more than ½ mile of temporary road construction.

Relationship to Extraordinary Circumstances

1. Threatened and Endangered Species or Their Critical Habitat -

The Endangered Species Act requires that federal activities do not jeopardize the continued existence of any species federally listed or proposed as threatened or endangered, or result in adverse modification to such species' designated critical habitat. In accordance with Section 7(c) of this Act, a list of the listed and proposed, threatened, or endangered species that may be present in the project areas indicated that there may be suitable habitat for Karner blue butterfly and Indiana bat. There are no documented occurrences for Karner blue butterfly or Indiana bat within the project area; however, the project areas are within dispersal distance of nearby occupied Karner blue butterfly subpopulations. As required by this Act, potential effects of this decision on listed species have been analyzed and documented in the project's Biological Assessment/Biological Evaluation. Endangered Species Act Section 7 Consultation was completed for the proposed project on March 27, 2008.

It was determined that this decision will have "**no effect**" on Indiana bat or Karner blue butterfly.

2. Floodplains, Wetlands, or Municipal Watersheds -

Floodplains: Executive Order 11988 is to avoid adverse impacts associated with the occupancy and modification of floodplains. Floodplains are defined by this order as, “. . . the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent [100-year recurrence] or greater chance of flooding in any one year.”

The project is not located in or near floodplains. This has been validated by map and site-review (Record: Project Review). This decision would not affect floodplains.

Wetlands: Executive Order 11990 is to avoid adverse impacts associated with destruction or modification of wetlands. Wetlands are defined by this order as, “. . . areas inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.”

One wetland complex is within the Pines Point Project Area (Record: Project Review). This has been validated by map and site-review. The nature and scale of the proposed activities would not have subsurface effects to the identified wetlands. To further ensure that wetlands-related impacts are minimized, existing Forest roads will be used as fire control lines, mechanical or chemical control lines will not be placed where soil or chemical residues can enter these

wetlands, and the State of Michigan's Best Management Practices will be incorporated into the project design and implementation. Similar wildlife habitat improvement projects in this area were determined to have no significant wetlands-related impacts (Record: Project Review). This decision would not result in significant wetlands-related impacts.

Municipal Watersheds: Municipal watersheds are managed under multiple use prescriptions in land and resource management plans.

There are no municipal watersheds on the Forest. This decision will not affect municipal watersheds.

3. Congressionally Designated Areas -

Wilderness:

This decision does not affect Wilderness. The project is not in or near Wilderness. Wilderness is identified on the Forest as Management Area 5.1 (Plan, pp. III-5.1-1-6). The Forests' only Wilderness, Nordhouse Dunes Wilderness Area, is 37 miles northwest of the closest project location. This decision, with impacts limited to the immediate area of activity, will not affect the Wilderness Area.

Wild and Scenic Rivers Study Areas:

There are four Wild and Scenic River Study Areas identified on the Forest (Plan, pp. III-9.2-1-4). The closest Wild and Scenic River Study Area, the White River, specifically the South Branch of the White River, is 0.1 miles east of the Pines Point Project Area and 0.3 miles east/southeast of the Winston Road Project Area. This decision, with impacts limited to the immediate area of activity, will not affect Wild and Scenic River Study Areas. To further ensure that impacts to Wild and Scenic River Study Areas are minimized, the Standards and Guidelines for Watershed Management described in the Forest Plan (pages II-17 – II-22) will be implemented during project activities.

National Recreation Areas and Wild and Scenic Rivers:

There are no National Recreation Areas on the Forest. This decision will not affect National Recreation Areas. Four Wild and Scenic Rivers are identified on the Forest as Management Area 8.1 (Plan, pp. III-8.1-4). The closest Wild and Scenic River, the Pere Marquette National Scenic River, is 9.5 miles northeast of the Hayes Road Project Area. This decision, with impacts limited to the immediate area of activity, will not affect Wild and Scenic Rivers. To further ensure that impacts to Wild and Scenic Rivers are minimized, the Standards and Guidelines for Watershed Management described in the Forest Plan (pages II-17 – II-22) will be implemented during project activities.

4. Inventoried Roadless Areas -

There are no inventoried roadless areas (RARE II or Forest Plan identified) in the Forest. This decision will not affect inventoried roadless areas.

5. Research Natural Areas -

There are two Research Natural Areas in the Manistee National Forest (Plan, pp. III-8.2-1-6). The closest Research Natural Area, Newaygo Prairies Research Natural Area, is 18 miles south of the Hayes Road Project Area and 22 miles east of the Pines Point Project Area. There are 18 Candidate Research Natural Areas in the Manistee National Forest (Plan, pp. III-9.1-1-4). The closest Candidate Research Natural Area, North Branch White River, is 1 mile west of the Winston Road Project Area. This decision, with impacts limited to the immediate area of activity, will not affect Research Natural Areas or Candidate Research Natural Areas.

6. American Indian and Alaska native religious or cultural sites -

Additionally, the Federal government has trust responsibilities to Tribes under a government-to-government relationship to ensure that the Tribes reserved rights are protected. Consultation with tribes helps ensure that these trust responsibilities are met. The Forest consulted with potentially affected tribes (Record: Scoping List). The intent of this consultation has been to remain informed about Tribal concerns.

7. Archaeological sites, or historic properties or areas

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effect of a project on any district, site, building, structure, or object that is included in, or eligible for inclusion in the National Register. Section 106 of the National Historic Preservation Act also requires federal agencies to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The Archaeological Resources Protection Act covers the discovery and protection of historic properties (prehistoric and historic) that are excavated or discovered in federal lands. It affords lawful protection of archaeological resources and sites that are on public and Indian lands. The Native American Graves Protection and Repatriation Act is applicable to the discovery and protection of Native American human remains and objects that are excavated or discovered in federal lands. It encourages avoidance of archaeological sites that contain burials or portions of sites that contain graves through “in situ” preservation, but may encompass other actions to preserve these remains and items.

This decision complies with the cited Acts. Surveys were conducted for Native American religious or cultural sites, archaeological sites, and historic properties or areas that may be affected by this decision. Two cultural resource reserve areas were identified in the Pines Point Project Area (Record: Cultural Resources Report). No ground disturbance will occur within cultural resource reserve area boundaries (60 meter of terrace/slope breaks or 30 meter from the edge of rivers or lakes) until shovel testing is completed to determine the presence/absence of heritage resources. Heritage resources were identified in the Winston Road Project Area (Record: Cultural Resources Report). A 20 meter buffer will be placed around heritage resource sites. Implementation of these conservation measures will minimize the potential for adverse effects to heritage resources (Record: Project Review).

8. No other extraordinary circumstances related to the project were identified (Record: Project Review).

III. PUBLIC INVOLVEMENT

Public involvement included listing in the Forest's Schedule of Proposed Actions since January, 2008, and a direct mailing to interested and affected parties on December 20, 2007.

The following tribal governments have been contacted for their input: Grand Traverse Band of Ottawa & Chippewa Indians, Little Traverse Bay Band of Odawa Indians, Little River Band of Ottawa Indians, Inter-Tribal Council of MI Inc., Nottawaseppi Huron Band of Potawatomi Indians, Saginaw Chippewa Tribe of Michigan, Grand River Band of Ottawa Indians, Burt Lake Band of Ottawa and Chippewa Indians, GL Indian Fish & Wildlife Commission (Record: Scoping List).

The following state and local governments have been contacted for their input: SE Michigan Council of Government, Monroe Township, Newaygo County, Michigan, Greenwood Township, Oceana County, Michigan (Record: Scoping List).

The following agencies have been contacted for their input: U.S. Fish and Wildlife Service, Michigan Natural Features Inventory (Record: Scoping List).

Property owners potentially affected by this decision have been contacted for their input (Record: Scoping List).

The following potentially interested groups were sent letters requesting their input: University of Pittsburg School of Law Environmental Law Clinic, Hydrolake Leasing and Service, NW Wilderness Recovery, MI Association of Timbermen, Cycle Conservation Club of Michigan, Mid-Union Sled Haulers, National Wild Turkey Federation, Heartwood, Pacific Legal Foundation, Sierra Club of Michigan, Ruffed Grouse Society, The Nature Conservancy, MUCC, We Love Smoke Society, BlueRibbon Coalition, Pine River Association, Trail Riders Snowmobile Club, Irons Area Tourist Association, Great Lakes Land Rover Club, Arbor 8 Association, and Sylvan Acres Association (Record: Scoping List).

One comment, from The Nature Conservancy, was received related to this decision (Record: Project File). The comment was in support of the project and was pertinent to all three project areas in Newaygo and Oceana counties.

IV. Findings under NFMA and Other Laws and Regulations

My decision would comply with all applicable laws and regulations. I have summarized some pertinent ones below.

Forest Plan Consistency (National Forest Management Act) - This Act requires the development of long-range land and resource management plans (Plans). The Huron-Manistee Land and Resource Management Plan was approved in 2006. The Forest Plan provides guidance for all natural resource management activities. The Act requires all projects and activities be consistent with the Plan. The Plan has been reviewed in consideration of this project. This decision is responsive to guiding direction contained in the Plan. This decision is consistent with the standards and guidelines contained in the Plan (Record: Project Review).

Vegetation Manipulation (National Forest Management Act) – Proposed actions often carry out management prescriptions selected and scheduled during land and resource management plan development. This decision is consistent with the requirements for management prescriptions and the National Forest Management Act of 1976 by:

- Being best suited to the goals in the Forest Plan. This decision is responsive to those goals and is best suited to meet those goals (Record: Project Review).

The Proposed Action would contribute towards meeting the goals of the Forest Plan and the Recovery Plans. This decision is intended to respond to the objectives of Management Areas 4.3W and 6.1 by creating/maintaining large openlands and barrens, following the Karner blue butterfly management strategy, and protecting Threatened, Endangered, and Sensitive species and their habitats on the Huron-Manistee National Forests.

- Assuring that technology and knowledge exists to adequately restock lands within five years after final harvest when trees are cut to achieve timber production.

Restocking is not applicable; the areas treated are being converted to non-forest land after treatment (Record: Project Review).

- Not choosing an action primarily because of the greatest dollar return or the greatest output of timber (although these factors shall be considered).

This decision was based on a variety of reasons. It was not chosen for its expected dollar return, and economics was only one of the many factors considered (Record: Project Review).

- Choosing an action after considering potential effects on residual trees and adjacent stands.

The effects on residual trees and adjacent stands were considered in development of the decision. The decision, including adherence to applicable Forest Plan Standards and Guidelines, is designed to provide the desired effects of management practices on the resource values. This decision is consistent with the Plan and provides the desired effect on residual trees and adjacent stands (Record: Project Review).

- Selecting an action that avoids permanent impairment of site productivity and to ensure conservation of soil and water resources.

This decision avoids impairment of site productivity by limiting treatment methods to those sufficient to promptly establish the desired vegetation. The nature of the decision and use of Best Management Practices will protect soil and water resources (Record: Project Review).

- Selecting an action to provide the desired effects on water quality and quantity, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation users, aesthetic values, and other resource yields.

The decision, including adherence to applicable Plan Standards and Guidelines, is designed to provide the desired effects of management practices on the resource values. This decision is consistent with Management Areas 4.3W and 6.1 vegetation management and provides the desired effect on the above resources, with emphasis on the Karner blue butterfly (Record: Project Review).

- Being practical in terms of transportation and harvesting requirements and total costs of preparation, logging, and administration.

The project area is adequately roaded, no new permanent or temporary roads are necessary to implement this decision. Two landings will be temporarily established. No roads are associated with these landings. The treatment in this decision is appropriate to accomplish savanna/barrens creation and opening restoration, and is economically practical (Record: Project Review).

Endangered Species Act - See Item 1 under **Relationship to Extraordinary Circumstances**.
(Record: Project Biological Evaluation/Assessment)

Sensitive Species (Forest Service Manual 2670) - This Manual direction requires analysis of potential impacts to sensitive species, those species for which the Regional Forester has identified population viability is a concern. In December, 2006 the Regional Forester approved an updated sensitive species list. Potential effects of this decision on sensitive species have been analyzed and documented in a Biological Evaluation/Assessment. This decision “may impact individuals, but is not likely to cause a trend to federal listing or loss of viability” for 11 animal species, will have a “beneficial impact” on 18 plant species, and will have “no impact” on 2 plant species (Record: Project Biological Evaluation/Assessment).

Clean Water Act - This Act is to restore and maintain the integrity of waters. The Forest Service complies with this Act through the use of Best Management Practices. This decision incorporates Best Management Practices to ensure protection of soil and water resources (Record: Project Review). Additionally, the decision, with impacts limited to the immediate area of the activity, will not impair water resources.

Wetlands (Executive Order 11990) - See Item 2 under **Relationship to Extraordinary Circumstances**.

Floodplains (Executive Order 11988) - See Item 2 under **Relationship to Extraordinary Circumstances**.

Federal Cave Resources Protection Act - This Act is to secure, protect, preserve, and maintain significant caves, to the extent practical. Site features and field review substantiate that no caves are in the area (Record: Project Review). No known cave resources will be affected by this decision. Subsequently identified caves will be protected.

National Historic Preservation Act - See Item 7 under **Relationship to Extraordinary Circumstances**.

Archaeological Resources Protection Act - See Item 7 under **Relationship to Extraordinary Circumstances**.

Native American Graves Protection and Repatriation Act - See Item 6 under **Relationship to Extraordinary Circumstances**.

Wild and Scenic Rivers Act - See Item 3 under **Relationship to Extraordinary Circumstances**.

Environmental Justice (Executive Order 12898) - This Order requires consideration of whether projects would disproportionately impact minority or low-income populations. This decision complies with this Act. Public involvement occurred for this project, the results of which I have considered in this decision-making. Public involvement did not identify any adversely impacted local minority or low-income populations. This decision is not expected to adversely impact minority or low-income populations.

National Environmental Policy Act - This Act requires public involvement and consideration of potential environmental effects. The entirety of documentation for this decision supports compliance with this Act.

CONTACT PERSON

Further information about this decision can be obtained from Heather L. Keough during normal office hours (weekdays, 8:00 a.m. to 4:30 p.m.) at the Baldwin District office (Address: 650 N. Michigan, Baldwin Michigan; Phone: voice (231) 745-4631 ex. 3111, TDD (231) 745-8297 (hearing impaired); Fax: (231) 745-2345; e-mail: hkeough@fs.fed.us).

V. ADMINISTRATIVE REVIEW, COMMENT AND APPEAL

Judge James K. Singleton, Federal District Judge for the Eastern District of California issued an order on July 2, 2005, in the case of *Earth Island Institute vs. Ruthenbeck*, CIVF-03-6386 JKS. In this ruling, Judge Singleton struck down the provisions of Title 36, Code of Federal Regulations (CFR) Part 215 that excluded categorical exclusions (CE) from notice, comment and appeal. On September 16, 2005, the United States District Court for the Eastern District of California issued an order clarifying its July 2, 2005 ruling. The order applies to all decisions based on a CE in the categories identified by the court that were signed after July 7, 2005 nationwide.

As a result of this court order, the Huron-Manistee National Forests provided interested publics with an opportunity to comment on the Savanna/Barrens Restoration Project. A legal notice was posted in the Lake County Star on December 27, 2007 and letters were sent to individuals and organizations who have expressed interest in receiving mailings about projects on the Huron-Manistee National Forests.

One comment in support of the project was received during the formal comment period (Record: Project File). Therefore, this Decision is not subject to appeal pursuant to *Earth Island Institute vs. Ruthenbeck*, CIVF-03-6386 JKS because no comments were received during the posted comment period meeting the intent of 36 CFR 215.11.

VI. **IMPLEMENTATION DATE**

This decision may be implemented 5 business days after publication of the Decision in the *Lake County Star*.

VIII. **SIGNATURE AND DATE**

/s/ Leslie E. Russell
Leslie E. Russell
Baldwin and White Cloud District Ranger
Responsible Official

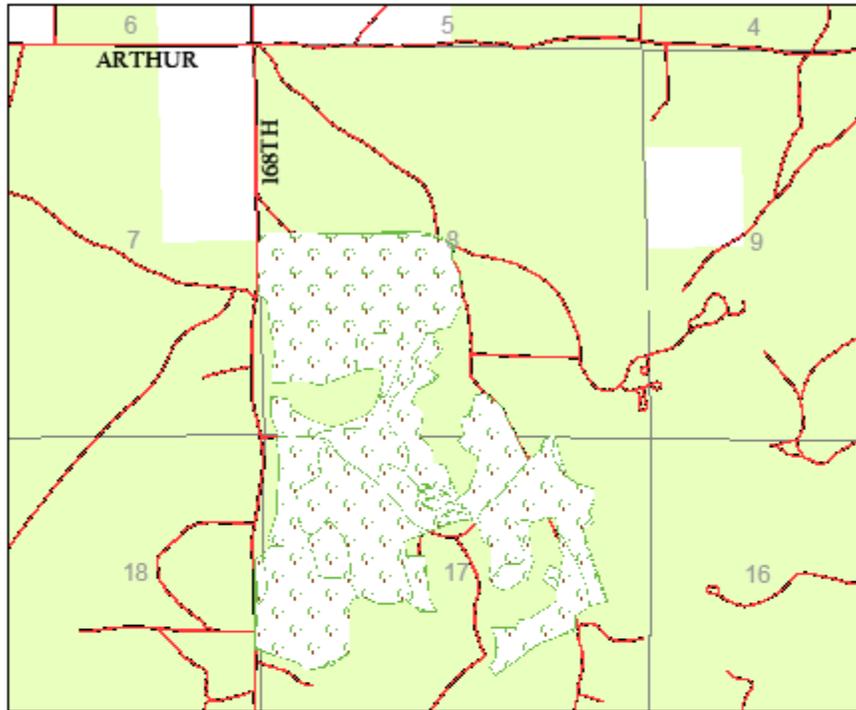
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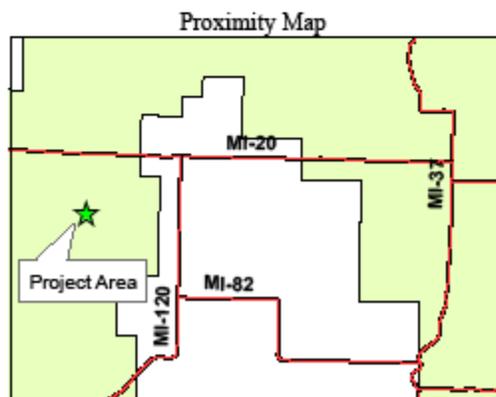
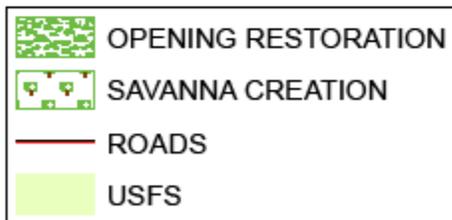
Savanna/Barrens Restoration Project Maps

The following three maps show the management activities proposed within the Pines Point, Winston Road, and Hayes Road Project Areas. The Baldwin/White Cloud Savanna/Barrens Restoration Project consists of savanna creation on up to 433 acres and opening restoration on up to 17 acres to restore the three project areas to an oak/pine savanna condition. The three project areas are located on the Baldwin-White Cloud Ranger District of the HMNF in: Sections 8 and 17 of Greenwood Township (T13N, R15W), Oceana County, Michigan, Sections 19 and 30 of Greenwood Township (T13N, R15W), Oceana County, Michigan, and Section 6 of Monroe Township (T15N R12W), Newaygo County, Michigan.

KARNER BLUE BUTTERFLY HABITAT IMPROVEMENT PROJECT PINES POINT TREATMENTS



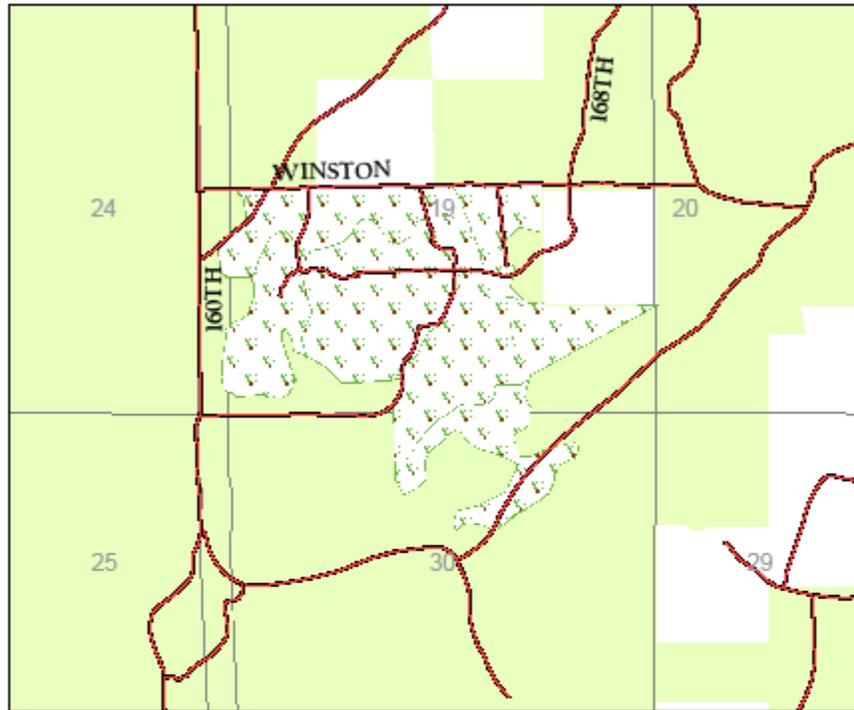
T13N-R15W
GREENWOOD TOWNSHIP
OCEANA COUNTY



The Forest Service uses the most current and complete data available. They may be developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. The Forest Service will not be liable for any activity involving this information. Provisions of other data should be consulted regarding the accuracy and scale of their data. For more information contact: GIS Coordinator, Huron-Manistee NFP, 1755 S. Mitchell Street, Cadillac, MI 49601, (231)775-2421



KARNER BLUE BUTTERFLY HABITAT IMPROVEMENT PROJECT WINSTON ROAD TREATMENTS



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T13N-R15W
GREENWOOD TOWNSHIP
OCEANA COUNTY

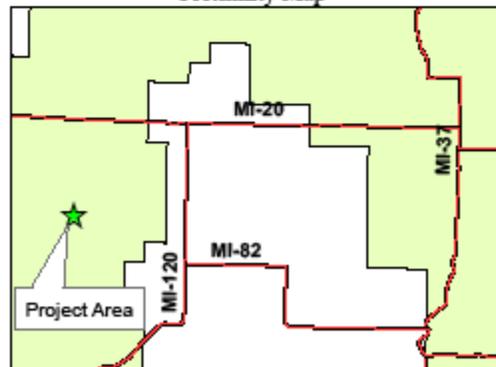


	SAVANNA CREATION
	ROADS
	USFS

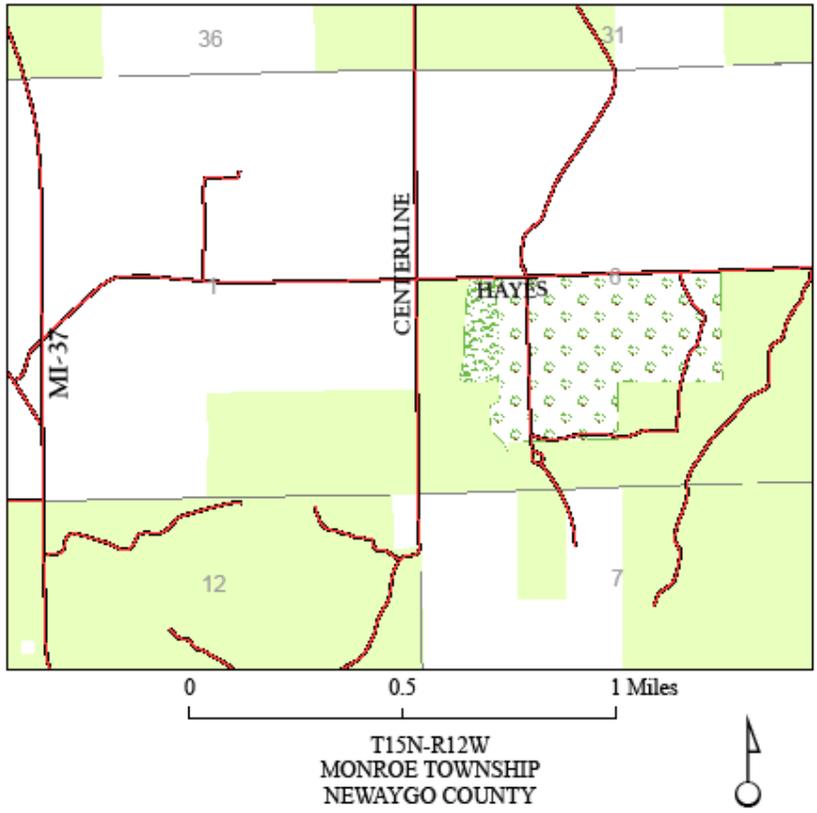
The Forest Service uses the most current and complete data available. They may be developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. The Forest Service will not be liable for any activity involving this information. Provisions of other data should be consulted regarding the accuracy and scale of their data. For more information contact: GIS Coordinator, Huron-Manistee NFP, 1755 S. Mitchell Street, Cadillac, MI 49601, (231)775-2421



Proximity Map



**KARNER BLUE BUTTERFLY
HABITAT IMPROVEMENT PROJECT
HAYES ROAD TREATMENTS**



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Savanna/Barrens Restoration Project List

Treatment Area	Township Name	Township	Range	Section	Acres	Forest Type	Proposed Action	Treatments
Pines Point	Greenwood	13N	15W	17	95	Mixed Oak	Savanna Creation	Non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Pines Point	Greenwood	13N	15W	17	15	Red Pine	Savanna Creation	Non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Pines Point	Greenwood	13N	15W	8	72	Red Pine	Savanna Creation	Commercial harvest of ≤50 acres of pine , non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Pines Point	Greenwood	13N	15W	8	5	Opening	Opening Restoration	Non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Pines Point	Greenwood	13N	15W	8	25	Mixed Oak	Savanna Creation	Non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Winston Road	Greenwood	13N	15W	19	83	Red Pine	Savanna Creation	Non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Winston Road	Greenwood	13N	15W	19	51	Mixed Oak	Savanna Creation	Non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Winston Road	Greenwood	13N	15W	19, 30	19	Mixed Oak	Savanna Creation	Non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Hayes Road	Monroe	15N	12W	6	12	Opening	Opening Restoration	Commercial harvest of ≤10 acres of pine , non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting
Hayes Road	Monroe	15N	12W	6	73	White Pine/Oak	Savanna Creation	Commercial harvest of ≤10 acres of pine , non-commercial removal/suppression of vegetation, prescribed burning, seeding/planting

Savanna/Barrens Restoration Project Conservation Measures List

Cultural Resources

- ❖ Two cultural resource reserve areas were identified in U.S. Forest Service Compartment 439 Stands 6 and 13. No ground disturbance will occur within cultural resource reserve area boundaries (60 m of terrace/slope breaks or 30 m from the edge of rivers or lakes) until shovel testing is completed to determine the presence/absence of heritage resources. Heritage resources were identified in the Winston Road Project Area, Compartment 439 Stands 14, 19, and 20. Heritage resource sites require a 20 m buffer to minimize the potential for adverse effects. If additional heritage resource sites are found during project implementation, the Zone Archaeologist will be informed and work will be suspended until adequate protection measures are undertaken.

General Timber

The following measures will be applied to all Treatment Units that are prescribed for any type of harvest treatments:

- ❖ Recommendations included in the Water Quality Management Practices on Forest Land (MDNR 1998) and Forest Service Handbook 2509.18 will be incorporated to provide protection of soil and water resources.
- ❖ Commercial timber harvesting activities will be excluded from riparian areas by a distance of approximately 100 feet. These areas are identified by the presence of water, vegetative composition, and soil type.
- ❖ Landings and skid trails will be developed in stands that do not have a history of use by Karner blue butterflies. Whether or not slash is left will be determined on a site-by-site basis. Rehabilitation of landings and skid trails will occur as needed.
- ❖ Skid trails, temporary roads, and other areas throughout the project areas will be rehabilitated, as needed, after harvest activities are completed. Landings will be rehabilitated after the harvest activities are completed to reduce erosion potential and compaction, amount of logging residue, and non-native invasive species colonization, and to promote revegetation. Slash will be redistributed at landings throughout the units so as to not exceed 3 inches in depth to promote revegetation. Landings will be treated to a minimum depth of 12 inches (where stumped), planted immediately with a cover crop, and reseeded with native seed.
- ❖ Logging slash will be removed from within 25 feet of adjacent highways and county roads and major forest roads.
- ❖ Only native species or non-persistent non-native species will be planted in areas where revegetation is needed.
- ❖ Approximately 25% of the tops will be retained within red pine thinning harvest units only to help sustain soil productivity.
- ❖ In treatment units where pine is harvested, retain dominant white and red pine and other conifers, along with dominant, well formed oaks and other hardwoods.
- ❖ Avoid damage or loss of all dens, nests, roosts, burrows, snags, and cavity trees. Retain all snags unless they are a safety hazard. Retain four wildlife trees per acre individually or in clumps including mast, cavity, cull, and conifer trees. Retain native, mast-producing shrubs where possible.

Prescribed Fire

- ❖ Prescribed burns will take place after a burn plan is written and approved by the agency administrator for the Units to be treated to safely conduct all prescribed fire applications, and to minimize the impacts on human health. The burn plan will describe the management objectives for different Units, and provide details of fire control line locations, desired weather conditions, firefighting forces required, safety concerns, and smoke dispersal. Burns will not be implemented unless weather and fuel conditions are within parameters described in the burn plans. Wind and mixing height parameters will be followed so that public contact with smoke is minimized. Required fire control

lines, described in the prescribed burn plan, will be in place before ignition begins. Control lines will be rehabilitated as soon as possible after the burns have been completed. Only native species or non-persistent non-native species will be planted where revegetation is needed. Damage or loss of all dens, nests, roosts, burrows, snags, and cavity trees during site preparation and prescribed burns will be avoided.

Recreation

The following mitigation measures will be followed in locations where management activities may conflict with recreational trail use:

- ❖ The Baldwin-White Cloud District Trails Coordinator will work with the timber marking and, layout crew in locations where harvesting efforts and recreation trails overlap to insure that scenic objectives are met and conflict of use is minimized.
- ❖ Crossing of designated trail systems with timber harvesting/hauling equipment will be minimized, with crossings occurring infrequently and at 90° angles to the trails.
- ❖ Trees harvested adjacent to motorized trail will be left 12"-18" high to prevent off-trail riding.

Threatened, Endangered, and Sensitive Species

The following measures apply to Treatment Units where threatened or endangered species could occur:

- ❖ Within the Pines Point and Winston Road Project Areas, implement the conservation measures outlined for potential Indiana bat habitat in the Biological Opinion on the Programmatic Biological Assessment for the Huron-Manistee National Forests Land and Resource Management Plan (USDI Fish and Wildlife Service 2006), the Programmatic Biological Assessment for the Huron-Manistee National Forests (USDA Forest Service 2006a), and the Forest Plan Standards and Guidelines (USDA Forest Service 2006b). Specifically, conduct vegetation management and prescribed fire, as feasible and prudent, outside the Indiana bat summer maternity period, May 1 to August 31.
- ❖ Within all three project areas, implement the conservation measures outlined for unoccupied Karner blue butterfly habitat in the Biological Opinion on the Programmatic Biological Assessment for the Huron-Manistee National Forests Land and Resource Management Plan (USDI Fish and Wildlife Service 2006), the Programmatic Biological Assessment for the Huron-Manistee National Forest (USDA Forest Service 2006a), the Final Recovery Plan for the Karner blue butterfly (*Lycaeides melissa samuelis*) (USDI Fish and Wildlife Service 2003), and the Forest Plan for the Huron-Manistee National Forests (USDA Forest Service 2006b).
- ❖ Within Compartment 497 Stand 39 and Compartment 458 Stand 1, project activities will not occur between May and August, during the two flight periods of the Karner blue butterfly.
- ❖ Implement the conservation measures for species viability for the duster skipper, eastern box turtle, red-headed woodpecker, whip-poor-will, northern goshawk, red-shouldered hawk, American marten, wood turtle, and Blanding's turtle outlined in the Programmatic Biological Evaluation for the Huron-Manistee National Forest (USDA Forest Service 2005) on sites with documented occurrences of these RFSS. Hill-prairie spittlebug and frosted elfin have documented occurrences adjacent to the Pines Point Project Area. Frosted elfin are documented to occur adjacent to the Winston Road Project Area, while eastern box turtle is documented to occur within this area. These protection measures should also be implemented if these RFSS are found during project activities.
- ❖ Implement the conservation measures described in The Northern Goshawk (*Accipiter gentilis atricapillus*) in the Western Great Lakes Region: A Technical Conservation Assessment (Roberson et al. 2003), and the Conservation Assessment for Red-Shouldered Hawk (*Buteo lineatus*) (USDA Forest Service 2002a) on sites with documented occurrences of northern goshawk or red-shouldered hawk. The northern goshawk is documented to occur adjacent to the Winston Road Project Area. These protection measures should also be implemented if these species are found during the field survey for the Hayes Road Project Area or during project activities.
- ❖ If American marten is found during project activities, implement the conservation measures described in the Marten Conservation Strategy (HMNF 1996).

- ❖ If Blanding's turtle is found during project activities, implement the conservation measures described in the Conservation Assessment for Blanding's Turtle (*Emydoidea blandingii*) (USDA Forest Service 2002b). Specifically, inform the District Wildlife Biologist, and avoid harming or harassing individuals. Individuals will be moved to a nearby safe area. Use a firing prescription during the growing season that allows only a flanking and/or backing flame so animals have a greater chance of escape from lower intensity flames.
- ❖ If wood turtle is found during project activities, implement the conservation measures described in the R9 Species Conservation Assessment for Wood Turtle (*Glyptemys insculpta*) (USDA Forest Service 2004b). Specifically, inform the District Wildlife Biologist, and avoid harming or harassing individuals. Individuals will be moved to a nearby safe area. Use a firing prescription during the growing season that allows only a flanking and/or backing flame so animals have a greater chance of escape from lower intensity flames.
- ❖ Flag or mark the locations of nests, roosts, burrows, or dens, and carefully perform management activities to avoid physical injury to such structures and less mobile wildlife. If an RFSS reptile is found, inform District Biologist, and move the individual(s) to a nearby safe area.
- ❖ If nesting activities are noted from any RFSS species, inform the District Biologist so that appropriate protection can be administered.
- ❖ All Hill's thistle will be marked prior to stand treatments to avoid impacts to individuals. Specifically, Hill's thistle will be marked prior to burn to avoid burn line construction in RFSS locations, and Hill's thistle will be marked prior to any timber removal activity to avoid damage to plants.
- ❖ If other endangered, threatened, or sensitive species are found during project implementation, the project will stop until the District Wildlife Biologist or Botanist is informed and adequate protection measures applied to avoid potential impacts.

Non-Native Invasive Species Conservation Measures

- ❖ Within Compartment 439 Stand 21, provide a "no activity" buffer around cypress spurge to avoid equipment and personnel moving within and spreading the spurge to other areas. In all possible areas of infestation, cover spurge with matting to prevent population increases. Yearly monitoring of the treatment should occur for effective treatment.
- ❖ Within Compartment 458 Stand 1, place a "no activity" buffer around Canada thistle infestation to prevent equipment and personnel moving within and spreading the thistle to other areas in the stand. In all possible areas of infestation, cover the thistle with matting to prevent population increases. Yearly monitoring of the treatment should occur for effective treatment.
- ❖ Within Compartment 497 Stand 14, remove all bull thistle prior to stand treatment. All stems should be cut prior to flowering and the tap root severed at least a foot below the surface of the soil. If flowering has already occurred, flowering heads must be double-bagged and removed from the site and the tap root severed. Treatment must be repeated the next growing season, if needed.
- ❖ Perform equipment cleaning of all equipment for burns, mowing, timber treatment, and other stand treatments prior to equipment moving into treatment stands to prevent introduction of NNIS species into future savanna stands.
- ❖ Handpulling or cutting and bagging of flowering heads of NNIS species should be done annually in all stands where nectar species and/or lupine are under management for population increase. Torch burning should also occur for species such as spotted knapweed.

Other Conservation Measures

- ❖ Implement the Standards and Guidelines for Watershed Management described in the Huron-Manistee National Forests Land and Resource Management Plan (USDA Forest Service 2006b: pages II-17 – II-22) to minimize the potential for adverse effects on the water quality of creeks and wetlands within and adjacent to the Winston Road and Pines Point Project Areas.

- ❖ To protect areas of savanna creation and opening restoration from increased recreational use, install signs explaining the benefits of restoring native plant communities and requesting recreationists to stay on designated roads and trails, and implement mitigation techniques that would limit access to managed savannas and openings such as piling brush around the perimeter of treatment areas.
- ❖ Mechanical and prescribed fire treatments will expose mineral soil horizons. Prompt revegetation with native herbaceous species will reduce direct impacts on productivity by minimizing erosion and nutrient loss. Mitigation measures include following the State of Michigan BMP's and FSH 2509.18.
- ❖ Implementation of the following conservation measures will minimize the potential for adverse effects on the transportation system. 1) Roads that are currently closed and that are utilized as fire breaks will be rehabilitated through the drawing in and leveling of the plow lines and spot-planting selected locations with native herbaceous seed. The closures on these roads will be re-enforced after the proposed projects have been implemented. If it is determined that the use of some of these roads will be needed for long-term management, then gates may be installed in some areas that previously contained permanent closures. 2) Forest roads that are currently open and that are utilized for access and/or as firebreaks will be rehabilitated to a condition that is as good, or better, than pre-project implementation. 3) "Reduced Visibility" or "Smoke Ahead" signs will be placed on roadways during prescribed burn operations. During these times, personnel will be on-site to monitor the affected roads for motor vehicles and thru-traffic.

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