

**DECISION MEMO**  
**Great Lakes Geophysical**  
**Pilot 3-D Project**

USDA Forest Service, Eastern Region, Huron-Manistee National Forests  
Cadillac-Manistee Ranger District  
T20N, R17W, Sections 5-8, 17-20; and T20N, R18W, Sections 12, 13, and 24;  
Grant Township, Michigan

**I. DECISION**

**A. Description of Decision**

Issue a short-term (one year or less) mineral, energy, or geophysical special use authorization to Great lakes Geophysical, Inc. to conduct a 3-D seismic survey on approximately 3,570 acres (approximately 6 square miles) of National Forest System lands in T20N, R17W, Sections 5-8, 17-20; and T20N, R18W, Sections 12, 13, and 24, Grant Twp, Michigan. The attached Exhibit A - Location Map displays the proposed seismic testing area.

Great Lakes Geophysical will survey the 3-D grid by magnetic surveying and by GPS. Brushing will be required to establish a line of sight for conventional surveying. The seismic survey will include the placement of seismic cables, geophone sensors, and the use of shot holes as the energy source to map geophysical activity. The cables and sensors will be placed on the ground in a straight line with one receiver line placed 600 feet apart, running in an east-west direction. At each station on the receiver there will be a string of geophones sensors. In between every receiver line there will be a line with 4 flags. Each flag is an energy source where a shot pattern is drilled. The source lines will be 990 feet apart in a staggered brick pattern. Receiver stations and source points will be 165 feet apart in a 660 foot (receiver line) x 990 foot (source line brick pattern). The recording crew will spot equipment, lay out the receiver lines with seismic cables and geophones, and connect to a recording truck. The shooting crew will connect the first pattern, detonate, and record. They will proceed through the project until all source points are shot. Upon completion of the 3-D, the crew will pick up the cables, geophones, flagging, pin flags, and cap wire. Access for the work will be on existing roads. The geophysical exploration is proposed for implementation in 2009.

The following Conditions of Approval will be incorporated into the special use authorization:  
Areas excluded from the seismic activities are displayed on Exhibit A map.

- Motorized access for the seismic work will be on existing roads.
- No trees or snags will be cut, only brushing of small vegetation is permitted to establish a line of sight for surveying.
- Surface disturbance is prohibited in wetlands, streams, and riparian areas.
- Exclude seismic activities within a 30 meter buffer zone from center of cultural resource sites.
- Exclude seismic activities within ¼ mile of Lake Michigan shoreline to protect dune habitat.
- Exclude seismic activities around known dusted skipper location.
- Exclude seismic activities near Martin Marietta brine pipeline along Modjeski Road.
- Protect known endangered, threatened, or sensitive species and the immediate habitat in which they are found. If any of these species are found during project implementation, the project would stop until the District Wildlife Biologist or Botanist is informed and adequate protection measures applied to avoid potential impacts.
- Employ Best Management Practices (BMP's) to minimize the influx of non-native invasive plants into the Project Area.

**DECISION MEMO**  
**Great Lakes Geophysical**  
**Pilot 3-D Project**

**B. Purpose of Decision**

Executive Order 13212, May 18, 2001 directs agencies to take appropriate actions to expedite projects that will increase production, transmission, or conservation of energy.

One of the objectives of the Forest Service Minerals Program is to facilitate the orderly exploration, development, and production of mineral and energy resources within the National Forest System on lands open to these activities. These activities are to be conducted in an environmentally sensitive manner and integrated with the planning and management of other resources.

The *Huron-Manistee National Forests' Land and Resource Plan* (Forest Plan) allocates the Forest into Management Prescription (MA) Areas and outlines a desired future condition for each of these MAs in the Forest Goals and Objectives and Prescription Area direction. The seismic survey is in MA 4.2 – Roaded Natural Sandy Plains and Hills, and 4.3 – Roaded Natural Wetlands.

The description of the Goals and Objectives for MA 4.2 on page III-4.2-3 and for MA 4.3 on page III-4.3-6 states, “Provide opportunities for mineral exploration and development”.

The purpose of this project is to inventory subsurface formations. Issuing Great Lakes Geophysical a permit will allow them to assess the potential of mineral resources in the project area in an environmentally sound manner which supports the objectives of the Forest Service Minerals Program.

**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 Secretary at 7 CFR part 1b.3 or within a category listed in 36 CFR 220.6 (d) and (e), and there are no extraordinary circumstances related to the decision.

I have concluded that this decision is appropriately 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 the document and the entirety of the project file.

**A. Category of Exclusion**

The project is within the category of exclusion 36 CFR 220.6 (e)(8) that includes “*Short-term (one year or less) mineral, energy, or geophysical investigations and their incidental support activities that may require cross-country travel by vehicles and equipment, construction of less than one mile of low standard road (Service Level D, FSH 7709.56), or use and minor repair of existing roads.*”

**DECISION MEMO**  
**Great Lakes Geophysical**  
**Pilot 3-D Project**

**B. Relationship to Extraordinary Circumstances**

1. Steep Slopes or Highly Erosive Soils -

The majority of the soils in the project are sandy. Slopes are not steep (less than 10%) nor are the soils highly erosive. This is supported by the Soil Survey of Mason County, a topographic map review and field visits.

2. 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. A Biological Evaluation was prepared for this project. The following determinations were made concerning the threatened and endangered species that could potentially occur in the project area:

- 1) The project would have "no effect" on the Indiana bat, Pitcher's thistle, piping plover, and piping plover critical habitat.
- 2) The project would have no impact on the bald eagle, red shouldered hawk, northern goshawk, prairie warbler, cerulean warbler, and red-headed woodpecker.
- 3) The project may impact individual wood turtles, eastern box turtles, eastern massasaugas, and dusted skippers but is not likely to cause a trend towards federal listing or a loss of viability.
- 4) The project may impact individual RFSS plants that inhabit Dry to Mesic Forested Habitat or Dry to Mesic Openings but is not likely to cause a trend towards federal listings or a loss of viability.
- 5) The project would have no impact on RFSS plants that inhabit Riparian or Wetland Habitat.

3. 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 or greater chance of flooding in any one year." This decision will 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."

This decision will not negatively affect wetlands. Impacts to wetlands will be mitigated by Conditions of Approval which states: Surface disturbance is prohibited in wetlands, streams, and riparian areas.

Municipal Watersheds: Municipal watersheds are designated by Congress, and managed under multiple use prescriptions in forest plans. There are no designated municipal watersheds within the proclamation boundaries of the Manistee National Forest; therefore, this decision will not affect municipal watersheds.

**DECISION MEMO**  
**Great Lakes Geophysical**  
**Pilot 3-D Project**

4. Congressionally Designated Areas -

Wilderness:

This project is located about 1 mile from Nordhouse Dunes Wilderness Area. Therefore, this decision, with impacts limited to the immediate area of activity, will not affect the Wilderness Area.

Wilderness Study Areas:

There are no Wilderness Study Areas in or near this project. This decision will not affect Wilderness Study Areas.

National Recreation Areas:

There are no National Recreation Areas on the Huron-Manistee National Forests.

Wild and Scenic Rivers:

There are no Wild and Scenic Rivers in or near this project. This decision will not affect Wild and Scenic Rivers.

5. Inventoried Roadless Areas -

There are no inventoried roadless areas (RARE II or Forest Plan) in the decision area; therefore this decision will not affect inventoried roadless areas.

6. Research Natural Areas -

There are no Research Natural Areas in or near this decision area. Therefore, this decision does not affect Research Natural Areas.

7. Native American Religious or Cultural Sites, 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. This decision complies with the cited Acts. Surveys were conducted for archeological and historic sites and a determination of *no effect* was made with the addition of Conditions of Approval #5 (Decision Memo, page 1). Similar past projects in this area were determined to have no significant impacts to Native American religious or cultural sites, archaeological sites or historic properties or areas. This decision should not result in significant impacts to such resources. Field review (monitoring) of similar projects validates acceptable resource effects from similar activities.

Additionally, the Federal Government has trust responsibilities to Tribes under a government-to-government relationship to insure that the Tribes' reserved rights are protected. Consultation with tribes helps insure that these trust responsibilities are met. The Forest consulted with potentially affected tribes. The intent of this consultation has been to remain informed about Tribal concerns. Tribal agencies were contacted during the scoping of this project, and there were no concerns brought forward.

**DECISION MEMO**  
**Great Lakes Geophysical**  
**Pilot 3-D Project**

In the event that historic or prehistoric resources are discovered during implementation, further activity will be halted until an archaeological review can be carried out.

8. No other extraordinary circumstances related to the project were identified during this decision analysis.

### **III. PUBLIC INVOLVEMENT**

A scoping/30-day comment letter was mailed on December 2, 2008 to interested parties including adjoining property owners, government officials, and organizations on the District and Forest scoping lists. A legal notice was published in the Newspaper of Record, Manistee News Advocate, on December 5, 2008. The project was also listed in the Forests' Schedule of Proposed Actions.

During the 30-day comment period four comments were received. An additional comment was received after the end of the comment period from one individual. These comments and responses are included within this document as Appendix 1. These comments did not change the issues used to formulate alternatives, the effects analysis, or the decision to proceed with implementation of the project.

### **IV. FINDING'S REQUIRED BY AND/OR RELATED TO OTHER LAWS AND REGULATIONS**

My decision will 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 plans (Forest Plans). The Huron-Manistee National Forests' Plan was approved in 2006, as required by this Act. The plan provides for guidance for all natural resource activities on the Forest. The Act requires all projects and activities are consistent with the Forest Plan. The Forest Plan has been reviewed in consideration of this project. This decision is responsive to guiding direction contained in the Plan, as summarized in Section I of this document. This decision is consistent with the standards and guidelines contained in the Forest Plan.

Endangered Species Act - See Section II, Item B2 of this document.

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 as a concern. Potential effects of this decision on sensitive species have been analyzed and documented in a Biological Evaluation for this project. There are no documented effects to sensitive species that have not been mitigated by the addition of Conditions of Approval to the permit.

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.

Wetlands (Executive Order 11990) - See Section II, Item B3 of this document.

Floodplains (Executive Order 11988) - See Section II, Item B3 of this document.

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 decision area. No known cave resources will be affected by this decision. Subsequently identified caves would be

**DECISION MEMO**  
**Great Lakes Geophysical**  
**Pilot 3-D Project**

protected.

National Historic Preservation Act - See Section II, Item B7 of this document.

Archaeological Resources Protection Act - See Section II, Item B7 of this document.

Native American Graves Protection and Repatriation Act - See Section II, Item B7 of this document.

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 Order. Public involvement occurred for this project, the results of which I have considered for this decision.

National Environmental Policy Act - This Act requires public involvement and consideration of potential environmental effects. The entirety of documentation (this Decision Memo and the project file) for this decision supports compliance with this Act.

**V. ADMINISTRATIVE REVIEW OR APPEAL**

This decision is subject to appeal pursuant to 36 CFR 215. A written notice of appeal must be submitted within 45 calendar days after the Legal Notice is published in the *Manistee News Advocate*; Manistee, Michigan; however, when the 45-day filing period ends on a Saturday, Sunday, or Federal holiday, then filing time is extended to the end of the next Federal working day. The date of the publication of the Legal Notice is the only means for calculating the date by which appeals must be submitted. The Notice of Appeal must be sent to:

Attn: Appeal Deciding Officer, USDA, Forest Service, Gaslight Building, Suite 700, 626 East Wisconsin Avenue, Milwaukee, WI 53202. The Notice of Appeal may also be faxed to: 414-944-3963, Attn: Appeals Deciding Officer, USDA, Forest Service, Eastern Regional Office. Those wishing to submit appeals by email may do so to: [appeals-eastern-regional-office@fs.fed.us](mailto:appeals-eastern-regional-office@fs.fed.us).

Acceptable formats for electronic comments are text or html email, Adobe portable document format, and formats viewable in Microsoft Office applications. Hand-delivered appeals may be submitted at the above address between 7:30 and 4:00 pm CT Monday through Friday, except on Federal holidays.

Appeals must meet the content requirements of 36 CFR 215.14 and will only be accepted from those who have standing to appeal as outlined at 36 CFR 215.13. Individuals or organizations who submitted comments or expressed interest during the 30-day comment period may appeal. It is the appellant's responsibility to provide sufficient project or activity-specific evidence and rationale, focusing on the decision, to show why the Responsible Official's decision should be reversed.

**VI. IMPLEMENTATION DATE**

When no appeal is filed within the 45-day time period, implementation of the decision may begin on, but not before the 5<sup>th</sup> business day following the close of the appeal-filing period (36 CFR 215.15). Except for emergency situations, when an appeal is filed, implementation may occur on, but not before the 15<sup>th</sup> business day following the date of appeal disposition (35 CFR 215.2).

**DECISION MEMO**  
**Great Lakes Geophysical**  
**Pilot 3-D Project**

**VII. CONTACT PERSON**

Further information about this decision can be obtained from John Hojnowski at the Manistee Ranger Station at (231) 723-2211 extension 3105, 412 Red Apple Road, Manistee, MI 49660.; email jhojnowski at fs.fed.us.

**VIII. SIGNATURE AND DATE**

/s/ Jim A. Thompson  
JIM A. THOMPSON  
District Ranger

2/5/2009  
Date

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