# INDIANA DUNES NATIONAL PARK

**Statement of Work:**
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**NATIVE REVEGETATION AT PINHOOK BOG**
(PMIS) Number: 316356D

**1100 N Mineral Springs Rd**
**Porter, IN  46304**

**June 25, 2026**

## Scope

Provide labor, plant material, hand tools, equipment, to restore previously disturbed areas by establishing native plant communities using locally adapted tree species, plant species, shrubs, and seeds to restore ecological function, prevent erosion, and meet resource management goals. See Figures 1-1 Location Map and Figure 2-1 Current Conditions.

## Goal

The goal of this project is to revegetate approximately one and one half (1.5) acres of across three areas of excavation/access routes at the project site plus one half (1/2) acre at borrow material site in accordance with the tasks listed below.

## Background

Pinhook Bog is a 580-acre unit of Indiana Dunes National Park, 110 acres of which are bog. The bog portion of Pinhook supports 167 native species, many of them rare. It is present in an ice block depression in the Valparaiso moraine. In 1965 the bog portion was designated a National Natural Landmark. The Pinhook Bog unit was purchased by the federal government in 1976. In 2019, the bog was identified as a priority resource in the park's Resource Stewardship Strategy (RSS) and several long- and short-term goals were established to combat the many stressors on this rare wetland type. Long-term goals identified in the Strategy include "no loss of native species diversity and composition".

## Place of Performance

Pinhook Bog Unit of Indiana Dunes National Park – Excavation areas and borrow area.

## Period of Performance

- Work shall be conducted within 730 days.
- Work shall be generally performed during normal business hours of 8 a.m. to 5 p.m. CST
- Work will not be allowed before sunrise or after sunset because of hazards associated with the area and the need to protect sensitive plant species.
- Work on Saturdays, Sundays or Federal holidays may not be performed without prior consent from the CO and COR. Submit requests for work outside of the stated normal business hours to the CO and COR for approval at least 48 hours in advance of the work.
- Contractor must provide two days' notice before start of work, and this must be coordinated with the onsite COR.
- Work must not be performed if there is 4 inches or more of snow accumulation.

## Tasks

The contractor shall revegetate approximately one and one half (1.5) acres of across three areas of excavation/access routes at the project site and one half (1/2) acre at borrow material site in accordance with the tasks listed below. See NPS approved Plant Species List on pages .

There is an option for up to one (1) additional acre (43,560 square feet) of revegetation work to be performed at the excavation/access routes at project site.

There is an option for an additional one (1) additional acre of (43,560 square feet) work to be performed in the borrow material site.

**TASK 1 -** Conduct site visit of all areas of disturbance including immediate project site (1 acre), borrow material site (1/2 half acre), and access routes (1/2 acre) that require revegetation.

**TASK 2** – Review NPS Native Plant species list and submit proposed revegetation plan for NPS review and approval.

**TASK 3 -** Submit seed certifications and nursery stock documentation for NPS review and approval.

**TASK 4 -** Provide labor, plant material, tree tubes, and equipment necessary to restore all previously disturbed areas including excavation site, access routes, and borrow source shown on Project Site Map. Total surface area of disturbance is approximately 2 acres.

**TASK 5 -** Submit water and maintenance schedule for one full growing season after planting for NPS review and approval.

**TASK 6 -** Treat invasive shrubs growing within the areas to be planted.

**TASK 7 -** Submit replanting / contingency plan to NPS for review and approval.

**TASK 8 -** Prepare Final Establishment Report.

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**SITE PREPARATION**

- **Soil Preparation:** Previous contractor will attempt to leave site "uncompacted" to assist with revegetation activities. Otherwise, soil preparation of 6"-12" may be necessary in some locations.
- **Soil amendments:** No fertilizers will be allowed as they could impact the water quality of the bog.

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**PLANT MATERIALS**

**Native Species Requirement**

- All plants, shrubs, and seeds must be **locally endemic/native**, sourced from within the Indiana Pinhook Bog site or appropriate ecological region.
- No cultivars unless explicitly approved.
- Cover crop such as cereal rye may be considered in erosion-prone areas.

**Seed Specifications**

- Purity, germination rate, and PLS (Pure Live Seed) must be documented.
- No seed containing noxious weeds may be used.
- Seed mix must match specified species composition and percentages.

**Container Plants & Shrubs**

- Grown from local genotype seed or cuttings.
- Nursery stock must be disease-free, hardened, and appropriately sized (e.g., 1-gallon shrubs, plugs for herbaceous species).

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**INDU PLANT SPECIES LIST**

See Attachment A

**INSTALLATION**

**Seeding**

- Use drill seeding where feasible; broadcast seeding allowed on steep or inaccessible areas.
- If cover crop species are suggested, they must be approved by the Contracting Officer.
- If necessary, apply mulch (weed-free straw or hydromulch) per specification.

**Planting Shrubs & Container Plants**

- Follow plan spacing and density requirements.
- Backfill with site soil; no commercial potting soil.
- Install protective measures (i.e. tree tubes) for planted trees to reduce herbivory.

**Erosion Control**

- Use biodegradable erosion-control blankets (no plastic mesh).
- At the conclusion of the warranty period, Contractor must remove the mulch-filled wattles installed by the previous contractor. The sock and stakes should be removed from the property while the mulch fill can be spread onsite.

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## WATERING & MAINTENANCE

- Contractor shall provide water as needed to ensure establishment for **one growing season** unless otherwise specified.
- If a cover crop is used, it must be mowed prior to seed head production to prevent future establishment.
- Replace dead plants at contractor's expense during warranty period to achieve a minimum of 80% survival.
- Maintain weed-free conditions (remove invasives by hand/mechanical means).
- Tree tubes can remain on trees at the conclusion of the contract and warranty period.

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## PERFORMANCE STANDARDS / ACCEPTANCE

Plant quantities for a 1.0 acre forested riparian area: 1.0 acre x 43,560 ft2/acre = 43,560 ft2 with trees, shrubs, and herbaceous plants:

Trees: 10 ft o.c. (average spacing) 43,560 ÷ 100 ft2 = **436 trees**
Shrubs: 6 ft o.c. (average spacing) 43,560 ÷ 36 ft2 = 1210 shrubs – 436 (trees) = **774 shrubs**
Herbaceous/groundcovers: 2 ft o.c. (average spacing) 43,560 ÷ 4 ft2 = 10,890 – 436 (trees) – 774 (shrubs) = **9,680 herbaceous/groundcovers**

- Minimum **80% survival** of installed shrubs and container plants after first growing season (or as required).
- Minimum **vegetative cover** (e.g., 60% native cover by the end of the first growing season).
- The following species **must not** be present in the restoration areas: Canada thistle, cattail, phragmites, purple loosestrife, reed canary grass, poison hemlock.
- Contracting Officer approval required before release from maintenance obligations.

## PHOTO DOCUMENTATION

- Contractor must provide existing condition, progress, and completion color photos in Final Evaluation Report. All photos shall contain a date stamp, be in focus, show maximum range of depth of field general photo, and then close-up detail photo as needed. Photos shall be in JPEG digital form and provided to the COR at the end of the project. Photographs will be the property of INDU, and the contractor must enter into a data sharing agreement to protect the rights of INDU property.

    A. Existing Condition Images:
        1. Before starting contracted work, take dated images of existing project site for later comparison.
        2. Establish photo location waypoints and direction of shots so that they can be replicated throughout the project.
        3. Include photos of existing items remaining undisturbed within the revegetation area.
    B. Work Progress Images:
        1. Maintain organized index for photos with date, description, etc.
        2. If rare or unique species, habitats, or other items of significance are discovered during the work they should be photographed and georeferenced.
        3. Additional images should be taken as needed when questions or emergency situations occur. Submit within 24 hours to the COR.
    C. Completion Images:
        1. Document all completed work within the scope of work.
        2. Revisit the waypoint locations and repeat photograph sequence.
        3. Maintain organized index for photos with date, description, etc..

## SUBMITTALS

The contractor shall provide:

- Revegetation Plan to include planting schedule and native species list
- Seed certifications
- Nursery stock documentation
- Watering and maintenance schedule
- Replanting/contingency plan

- Final establishment report

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**PROTECTION OF NATURAL RESOURCES**

- Avoid disturbance of adjacent vegetation.
- Prevent spread of invasive species (clean equipment prior to site entry).
- Tree removal is not authorized.

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**WARRANTY PERIOD**

- Growing season for this project ends on October 31, 2027.
- Warranty period ends October 31, 2028.
- Replace all dead or failing vegetation at contractor expense.

## Resource Protection

- Any spills such as fuels, lubricants, must be immediately cleaned up and containment materials disposed of properly off site.
- Spills greater than 2oz on soil or any spills that create a sheen on water must be reported immediately to the COR and Park Dispatch for appropriate management.
- The Contractor shall ensure that prior to moving onto the Project Area, all equipment, boots, and clothing, are free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds. Equipment shall be considered free of soil, seeds, and other debris when a visual inspection does not disclose such material.
- Due to the unique qualities of Pinhook Bog, activities must be confined to the defined project area and follow all specifications listed in this document. Digging in or otherwise disturbing the floating bog mat is not permitted.
- The digging and/or removal of any historic object is prohibited. If any historic object is discovered during the implementation of this contract, all work must cease, the object must be protected, and COR must be contacted immediately to inspect the site. After inspection a course of action will be determined before work can recommence.

## Other Requirements

- At all times the contractor shall conduct his operations in conformance with the rules and regulations promulgated by the Secretary of the Interior for the National Park Service, and applicable park rules and regulations prescribed by the Park Superintendent.

Superintendent's Compendium - Indiana Dunes National Park (U.S. National Park Service) (nps.gov)

- Contractor shall at all times conduct operations to ensure the least inconvenience to the public. The parking lot at Pinhook Bog is to allow public utilization of the property, so the contractor must not block the entrance to the parking lot and should park in designated spaces.
- The Contractor must bring potable water for this project. Water from an existing water system is not available at this remote site.
- Electric power is not available at this remote site. If electric is needed, the contractor should provide a generator to meet their needs.
- Toilets are not available at this remote site. If the Contractor elects to provide a portable toilet facility, they must coordinate with COR for an approved location.

## Service and Support

- Contractor is responsible to provide all labor, materials, potable water, and transportation and handling of materials to complete this work.

## Contractor Worksite Maintenance and Cleanup

- The Contractor shall keep the work areas free from accumulation of waste material and rubbish during the progress of work.
- The contract shall dispose of all waste materials according to state/local regulations.
- Upon completion of the job, the Contractor shall leave the work area and premises in a clean and neat condition. If visual flagging was attached to trees or stakes in the ground, all material must be removed.

## Government Provided Equipment

- No government provided equipment will be available.
- Site does not have a potable water source, electric power source, or restroom facilities.

# FIGURES

Figures 1-1 Location Map
Figure 2-1 Current Conditions
Figure 3 Site Visit Map – Pinhook Bog Public Parking Lot

SOURCE: U.S. GEOLOGICAL SURVEY
LAPORTE WEST: 2016
MICHIGAN CITY: 2016

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|---|---|---|
| SCALE: 0 1000 2000 | DATE: DECEMBER 2017 | |
| S.O. NO.: 162246 | FILE: 162246_INDU_01 | |
| DSN/DWN: MD/RR | CHK: MD | |

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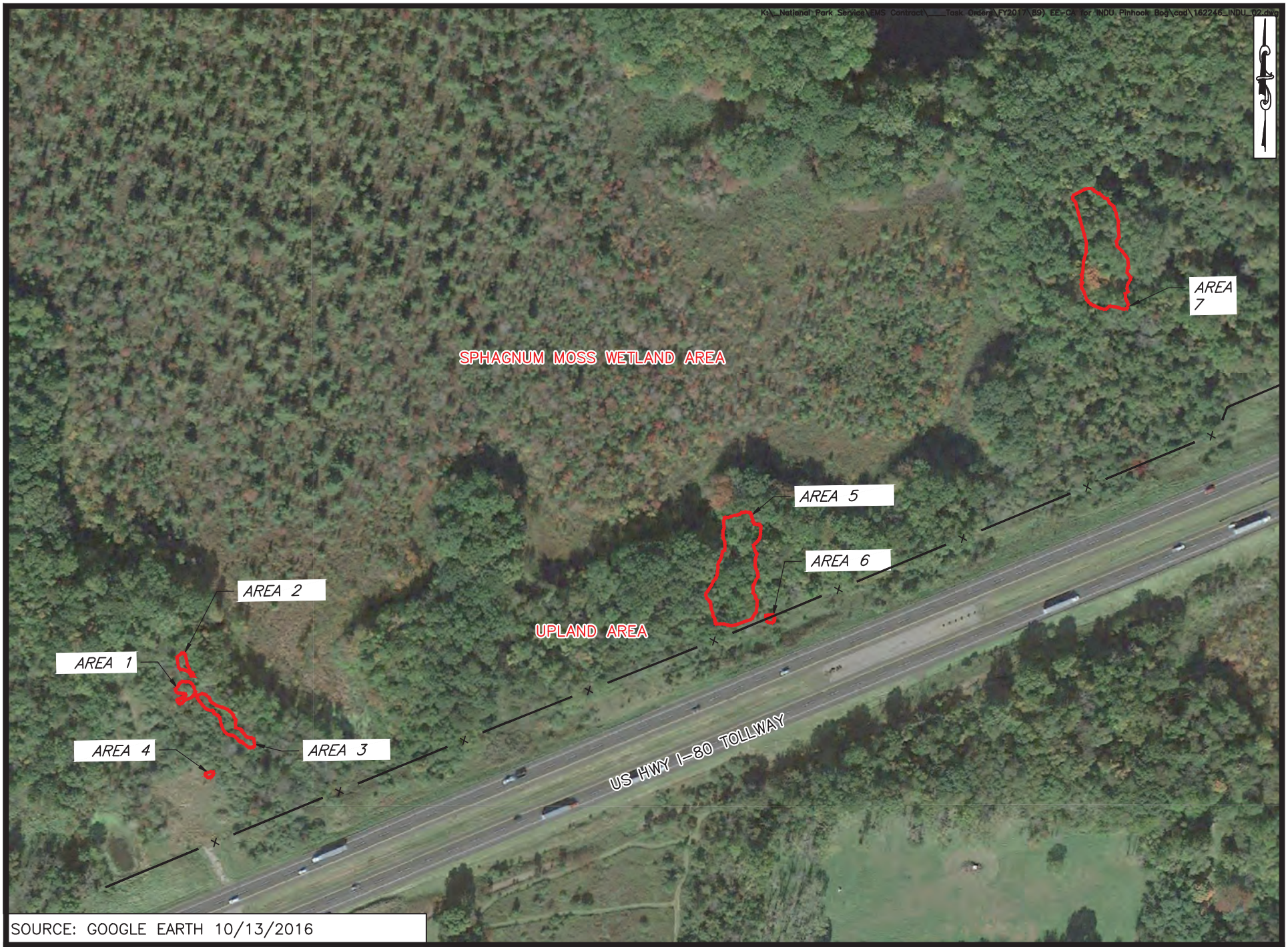
FIGURE 1-1
SITE LOCATION MAP
PINHOOK DEBRIS SITE ENGINEERING EVALUATION/COST ANALYSIS
INDIANA DUNES NATIONAL LAKESHORE
MICHIGAN CITY, INDIANA




SOURCE: GOOGLE EARTH 10/13/2016

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| SCALE: 0 125 250 | DATE: DECEMBER 2017 | Michael Baker INTERNATIONAL | MICHAEL BAKER INTERNATIONAL<br>MOON TOWNSHIP, PENNSYLVANIA |
| S.O. NO.: 162246 | FILE: 162246_INDU_02 | | |
| DSN/DWN: MD/RR | CHK: MD | | |

FIGURE 1-2
CURRENT CONDITIONS MAP
ENGINEERING EVALUATION/COST ANALYSIS
PINHOOK DEBRIS SITE
INDIANA DUNES NATIONAL LAKESHORE
MICHIGAN CITY, INDIANA