

Finding of No Significant Impact

Restoration of Cowles Bog Wetland Complex's Lake Plain Wet-Mesic Prairie Environmental Assessment

Indiana Dunes National Lakeshore

SUMMARY

Pursuant to the National Environmental Policy Act (NEPA) and National Park Service (NPS) NEPA guidelines, the NPS prepared an Environmental Assessment (EA) evaluating the potential impacts of the proposed restoration of the Cowles Bog Wetland Complex's Lake Plain Wet-Mesic Prairie in the Indiana Dunes National Lakeshore (INDU). Based upon the findings in the EA, the NPS finds that the implementation of the preferred Alternative would not constitute a significant impact upon the environment or the National Lakeshore's resources.

The NPS prepared the EA in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended, (CEQ) regulations implementing NEPA [40 Code of Federal Regulations (CFR) 1500-1508]; NPS Director's Order #12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making*; and the National Historic Preservation Act of 1966 as amended, and implementing regulations, 36 CFR Part 800.

PARK INFORMATION

The national lakeshore is located in northwest Indiana along the south shore of Lake Michigan between Gary and Michigan City, Indiana, approximately 50 miles southeast of Chicago. The park is loosely bounded by Lake Michigan to the north and US 20 to the south. The National Lakeshore is separated into an East Unit and a West Unit, with several small non-contiguous satellite areas. A variety of residential, commercial, and industrial developments adjoin the park boundaries, including several small communities that are completely surrounded by National Lakeshore land.

Indiana Dunes National Lakeshore was established by the U.S. Congress as a unit of the National Park Service on November 5, 1966, in order to "preserve for the educational, inspirational, and recreational use of the public certain portions of the Indiana Dunes and other areas of scenic, scientific, and historic interest and recreational value in the State of Indiana." The enabling legislation further states that the "lakeshore shall be permanently preserved in its present state, and no development or plan for the convenience of visitors shall be undertaken therein which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing." Under the enabling legislation 8,330 acres of land and water were set aside to create INDU. Through the efforts of the National Park Service, conservation organizations, and constituents seeking to expand the boundaries for preservation, there were four subsequent expansion bills (1976, 1980, 1986, and 1992) which increased the size of the park to 15,067 acres.

Today, INDU welcomes nearly two million visitors each year and offers many amenities such as hiking and horseback riding trails; biking; camping; beach access; visitor center; picnic facilities; and interpretive programs. In addition, INDU is home to four National Natural Landmarks and one National Historical Landmark.

The national lakeshore is comprised of dunes, oak savannas, swamps, bogs, marshes, prairies, rivers, and forests supporting a great diversity of plant and animal species. Over 1,135 native plant species are distributed throughout the park and more than 350 bird species have been observed within the park (National Park Service, 2007).

PROJECT BACKGROUND

The Great Marsh, a peat based wetland in a dune-beach complex, is the largest interdunal wetland associated with Lake Michigan. It is located less than one mile from the lake between two large, parallel, dune systems. The southern perimeter is delineated by the Calumet Dunes, formed approximately 9,000 years ago, and the northern perimeter is delineated by the Tolleston Dunes formed approximately 4,000 years ago.

The Cowles Bog Wetland Complex (CBWC) represents 205 acres of the western terminus of the Great Marsh, and encompasses the nationally significant Cowles Bog which was designated a National Natural Landmark in 1965 prior to the creation of the National Lakeshore. The CBWC, comprised of bog, fen, forested swamp, sedge-meadow, wet-prairie, and marsh, includes the only remaining coniferous swamp associated with southern Lake Michigan, the only native population of white cedar in Indiana, and the only raised fen in Indiana without adjacent higher topographical features.

The wetland to be restored is located in the southeast portion of CBWC in an area which was, historically, a lake plain wet-mesic prairie of over 50 acres in size. A lake plain wet-mesic prairie is a species-rich, lowland, prairie community that occurs on moist, level, seasonally inundated glacial lake plains of the Great Lakes. Seasonal flooding, cyclic changes in Great Lakes water levels, and fire historically maintained the species composition and community structure of lake plain wet-mesic prairies.

Significant alterations have occurred at the site over the last 120 years. In the early 20th century the lake plain wet-mesic prairie was drained and used for agriculture and development of a transportation corridor which included several railroads and US Highway 12. However, the greatest impact to the CBWC resulted from construction of the adjacent industrial complex in the 1960's. Following cessation of the agricultural use of the area, the soils no longer experiencing wetland hydrology were colonized by non-native trees and shrubs, and native trees that were readily established through wind dispersed seed. The adjacent industrial development completed in the 1960's obliterated all remaining historic lake plain wet-mesic prairie associated with the CBWC (except for the approximately 25 acres which were selected for restoration).

In 1977, in response to the extreme industrial development adjacent to the national lakeshore, Congress added language to the enabling legislation of Indiana Dunes National Lakeshore "to study and report concerning the following objectives: ... (b) Preservation and restoration of the watersheds of Cowles Bog and its associated wetlands; . . ." (PL 94-549 § 19) This authorization was, in part, to provide data to defend against any harm to the National Lakeshore resulting from increased industrial development.

Today, lake plain wet-mesic prairies are globally imperiled. The 25 acres of the CBWC were selected for restoration based upon the 1830 government land survey of the Northwest Territory which records the site as having marsh and prairie characteristics and presence of soils that developed under a prairie influence. The National Park Service has determined that reestablishing hydrology to the site and removing non-historic vegetation will restore this portion of the CBWC to its natural state.

It is the intent of Indiana Dunes National Lakeshore to restore the selected 25 acres of the Cowles Bog Wetland Complex to its former lake plain wet-mesic prairie condition to increase native plant and animal diversity, provide waterfowl habitat in an adjacent open water body, provide a rest stop for migratory birds near Lake Michigan's southern tip, create high quality plant and animal habitat, protect the beaches and improve Lake Michigan's water quality by reducing and controlling runoff, enhance educational opportunities for students and the public, and, most importantly, to leave a natural resource legacy for future generations.

A range of alternatives to provide a lake plain wet-mesic prairie were developed and evaluated throughout development of this Environmental Assessment. The action alternatives addressed included restoring wetland hydrology, minor grading to fill in ditches, removal of tree canopy and understory vegetation, and planting native plants now absent from the area to restore the site to its former historic lake plain wet-mesic prairie condition.

SELECTION OF PREFERRED ALTERNATIVE

Alternative 2 – Retention of Selected Trees

Alternative 2 would involve a substantial reduction in the tree cover and removal of the shrub understory. Approximately 100 trees would remain, chosen specifically based upon species and location to be consistent with the project goals. Trees within and surrounding the historic home site would be undisturbed, however non-native black locust trees would be girdled. A number of trees would be maintained adjacent to Mineral Springs Road, including the “witness” trees from the 1830’s land survey, to provide a buffer to the roadway. In addition to those trees shown on the exhibit, specific trees will be maintained for the ecological and habitat value based upon comments from the U.S. Fish and Wildlife Service (USFWS).

Alternative 2 is consistent with the project goals: reduces the tree canopy to allow for development of desired plant species; is consistent with historical conditions; and provides a buffer to Mineral Springs Road.

The EA considered two other alternatives:

Alternative 1 - No Action Alternative

The existing site consists of approximately 25 acres located at the southeastern corner of CBWC. The No Action alternative would maintain the existing conditions. It would involve no hydrological changes, no earthmoving, no tree removal, and no planting. The unnatural flow of water through the constructed ditch system into CBWC would continue. Tree growth would continue, with the tree canopy expanding to fill the site, along with an understory of spice bush. The site would remain a species poor system with provision of limited ecosystem services. The No Action Alternative would not meet the project goals of establishing a lake plain wet-mesic prairie with diverse species and wildlife.

Alternative 3 – Retention of Trees by Historic Foundation

Alternative 3 would involve removal of all of the trees, other than those associated with the historic home site. This option would reduce the tree canopy to allow for development of desired species, but would not be consistent with historical conditions nor provide a buffer along Mineral Springs Road.

ALTERNATIVES CONSIDERED AND DISMISSED

In addition to the three alternatives discussed above, the National Park Service also considered two additional options for the tree canopy: (1) maintaining all trees greater than 40 centimeters (cm) diameter at breast height (dbh); and (2) maintaining all trees greater than 70cm dbh.

Both of these options would not reduce the tree canopy enough to support desired species and would not provide a buffer along Mineral Springs Road. Therefore, neither of these options would meet the project's Purpose and Need.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C.A. § 4321 et seq., Public Law 91- 190 (1970)), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "[the] environmentally preferable [alternative] is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Simply, this means the alternative which causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic cultural, and natural resources." (Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 23 March 1981; see also 43 C.F.R Part 46.30.)

Alternative 2, the Preferred Alternative, is also the environmentally preferable alternative. This alternative meets the park's need to restore the lake plain wet-mesic prairie on the site, and is the alternative that best protects, preserves, and enhances historic, cultural, and natural resources. Alternative 2 would have only a short term adverse impact to vegetation and wildlife, while avoiding adverse impacts to rare, threatened or endangered species, and cultural resources. Alternative 2 would have beneficial impacts to wetlands, and visitor use and experience. As such, the NPS has determined that Alternative 2 represents the best balance between impacts to natural resources and benefits to the environment, the public, and visitors.

THE SELECTED ALTERNATIVE AND SIGNIFICANCE CRITERIA

As defined in 40 CRF §1508.27, significance is determined by examining the following criteria:

1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal Agency believes that on balance the effect will be beneficial.

Alternative 2 would have a long-term, moderate and beneficial impact to natural resources ecosystem function following the removal of selected trees, the restoration of site hydrology and revegetation with native plants. A short-term, negligible and adverse impact would occur to the wildlife during the restoration of hydrology and vegetation management actions but long-term beneficial impacts would result for waterfowl, migratory birds, and other wetland- dependent fauna.

2. The degree to which the proposed action affects public health and safety.

Alternative 2 would not cause nor improve any known public health or safety impacts or issues over the long-term. Operations associated with the actions proposed in Alternative 2 are not expected to impede traffic or interfere with public use areas.

3. Unique characteristics of the Geographic Area such as Proximity to Historic or Cultural Resources, Wild and Scenic Rivers, Ecologically Critical areas, Wetlands or Floodplains, Park Lands and so forth.

The Cowles Bog Wetland Complex is part of the Great Marsh within Indiana Dunes National Lakeshore. Long-term, moderate beneficial impacts to both the National Lakeshore and the wetland complex will occur through the implementation of Alternative 2. The old home site is the only cultural or historic resource within the project area and Alternative 2 will have a negligible, short-term impact on the site.

4. The degree to which the impacts on the quality of the human environment are likely to be highly controversial.

There were no highly controversial effects on the quality of the human environment identified during either preparation of the Environmental Assessment or the public review period. The public within the town of Dune Acres did raise questions regarding the potential for increased sound transmission from the industrial complex to the west, railroad, and U.S. Route 12 to the town through the removal of trees. In response, INDU completed a sound study and the results indicate there will be no increase in sound transmission to Dune Acres through the implementation of Alternative A.

5. Degree to which the potential impacts on the quality of the human environment is highly uncertain or involves unique or unknown risks.

The Great Marsh and the CBWC have been studied for decades. The hydrology, vegetation, and edaphic conditions of the project site are well known. As a result, the National Lakeshore has a high degree of certainty surrounding the environmental outcomes of Alternative 2.

6. Degree to which the action may establish a precedent for future actions with significant effects, or represents a decision in principle about a future consideration.

The proposed actions of the Selected Alternative are within the guidelines set by the Park's General Management Plan (GMP) prepared in 1997. This plan establishes management zones for future protection of natural and cultural resources and use of lands within the East Unit of Indiana Dunes National Lakeshore. The Selected Alternative is within this unit and supports the natural resources directives within the GMP: to replicate and control processes that shaped the resources; to restore wetlands by closing drainage ditches; and actively manage resources to mitigate human influences and meet resource management objectives. The Selected Alternative does not set precedent for future actions that may have significant impacts and does not represent a decision in principle about a future consideration.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Cumulative impacts were determined by combining the impacts of the preferred alternative with other past, present and reasonably foreseeable future actions. The project is a 25-acre restoration within the 205-acre Cowles Bog Wetland Complex. Restoration actions have been undertaken in other areas of the CBWC. The cumulative effects on the human environment are still moderate, long-term and beneficial. Cumulatively, the implementation of the Selected Alternative and related park activities near the project area do not constitute a significant impact.

8. The degree to which the action may adversely affect historic districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific cultural or historical resources.

The National Lakeshore completed consultation with the Indiana State Historic Preservation Office (SHPO) pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800 in May, 2012 for this project. The SHPO concurred with the national lakeshore's findings that no cultural resources will be adversely affected by the implementation of Alternative 2.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The National Lakeshore completed consultation with the US Fish and Wildlife Service for compliance with Section 7 of the Endangered Species Act (16 U.S.C. 1531 et seq.) in April, 2012. It is the opinion of the Service that no federally listed species would be impacted by the implementation of Alternative 2.

10. Whether the action threatens a violation of Federal, state, or local law or requirements imposed for the protection of the environment.

The Selected Alternative violates no federal, state, or local law, including environmental protection laws. Consultation with the Indiana Department of Natural Resources has been completed.

PUBLIC INVOLVEMENT

To fully consider the impacts and evaluate the selected alternatives, the National Park Service initiated a public scoping process. The purpose of the scoping phase was to solicit input on issues that should be considered in the development of alternatives, as well as what topics should be addressed in the Environmental Assessment. This phase included two meetings, an Agency Coordination Meeting and a Public Involvement Meeting, both held on Wednesday, July 20, 2011.

The intent of the Agency Coordination Meeting was to focus on park staff, federal agencies, state agencies, and the adjacent property owner. Invitations to the Agency Coordination Meeting were sent to the following agencies:

United State Army Corps of Engineers (USACE)
National Park Service (NPS)
Indiana Department of Natural Resources, Division of Natural Preserves (IDNR – DNP)
United States Fish & Wildlife Service (USFWS)
United States Geological Survey (USGS)
Indiana Department of Environmental Management (IDEM)

Representatives from all of the aforementioned agencies were present at the Agency Coordination Meeting, except for the IDEM 401 Coordinator and the IDNR Threatened and Endangered Species Coordinator.

The Public Involvement Meeting was scheduled for the same day as the agency meeting. Twenty-seven people signed in on the attendance sheet. Presentations were made at the meeting which was followed by a question and answer session.

The town council of Dune Acres requested a presentation of the Environmental Assessment to the residents of the community. On March 31, 2012, a presentation was provided at the Dune Acres clubhouse, with approximately 35 residents in attendance. A power point was presented followed by conversation concerning the proposed alternatives.

Native American Tribes

The Native American tribes listed below have demonstrated interest in the areas within the National Lakeshore. Letters were sent to the tribes and tribal contacts regarding the proposed project in March, 2012, however there were no responses.

Citizen Band Potawatomi Nation of Oklahoma

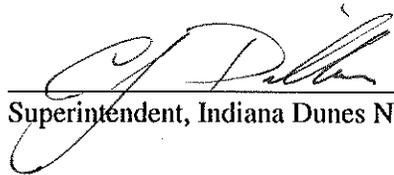
Hannahville Indian Community of WI Potawatomi Indians of Michigan
Prairie Band of Potawatomi Indians of Kansas
Match-e-be-nash-she-wish Band of Potawatomi Indians
Pokagon Band of Potawatomi Indians of Michigan
Nattawaseppi Huron Band of Potawatomi Indians
Forest County Potawatomi
Miami Nation of Indians of Indiana
Miami Tribe of Oklahoma

The draft document was made available to the public through the Planning, Environment, and Public Comment (PEPC) website and the Park, and letters of availability sent to stakeholders, agencies, and Native American tribes. Solicitation of comments also continued during the formal review period from agencies and Native American tribes. The National Lakeshore provided a presentation at the request of Dune Acres residents, and accepted written and verbal comments during that meeting. Additional comments were also sent by mail to the Superintendent's office at the Park.

FINDING OF NO SIGNIFICANT IMPACT

Finding of No Significant Impact based on my review of the facts and analysis contained in this Environmental Assessment, which is incorporated herein, I conclude that the Selected Alternative for the Restoration of Cowles Bog Wetland Complex's Lake Plain Wet-Mesic Prairie within Indiana Dunes National Lakeshore, Porter, Indiana, would not have a significant impact on the human environment either by itself or considering cumulative impacts. Accordingly, the requirements of the National Environmental Policy Act, regulations promulgated by the President's Council on Environmental Quality, and provisions of National Park Service (NPS) Director's Order-12 and Handbook (Conservation Planning and Environmental Impact Analysis and Decision-Making) have been fulfilled. The Selected Alternative does not constitute an action that normally requires preparation of an Environmental Impact Statement and one will not be prepared. The Selected Alternative will not have a significant effect on the human environment and negative environmental impacts that could occur are primarily minor in intensity. In addition, the Selected Alternative supports the enabling legislation establishing Indiana Dunes National Lakeshore with the intended purpose of preserving for the educational, inspirational, and recreational use of the public certain portions of the Indiana dunes and other areas of scenic, scientific, and historic interest and recreational value in the State of Indiana.

Recommended:



Superintendent, Indiana Dunes National Lakeshore

11/5/2012

Date

Approved:



for Midwest Regional Director, National Park Service

11-13-12

Date