

Historic Structures Report  
and Cultural Landscape Report

# Phase II: Environmental Assessment

*for*



*Indiana Dunes National Lakeshore*

## Good Fellow Club Youth Camp

Porter, Indiana

United States Department of the Interior  
National Park Service



**Final**

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**U.S. Department of the Interior  
National Park Service**

**Good Fellow Club Youth Camp  
Indiana Dunes National Lakeshore**

**Environmental Assessment for the Good Fellow Club Youth Camp  
Indiana Dunes National Lakeshore**

**February 2010**

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**SUMMARY**

*Pursuant to the National Environmental Policy Act (NEPA) and National Park Service (NPS) NEPA guidelines, NPS prepared an Environmental Assessment (EA) evaluating the potential impacts of proposed improvements to the existing Good Fellow Club Youth Camp in the Indiana Dunes National Lakeshore. The EA is Phase II of the Historic Structures Report/Cultural Landscape Report and required by NPS for the completion of that document. The HSR/CLR was taken to 95% completion in 2006 and it was at that time that the NPS determined that an EA was necessary to adequately assess potential impacts in alternative treatment plans.*

**INTRODUCTION**

The Good Fellow Club Youth Camp was the former site of a summer camp operated by the Good Fellow Club of U.S. Steel's Gary Works from 1941 to 1976. The camp was created to provide outdoor recreation for the children of Gary Works employees. In addition to its recreational purpose, the camp was seen as a social, physical and moral benefit for the children, an idea derived from the progressive labor movements and welfare capitalism of the early twentieth century.

Although the NPS purchased the property in 1977, funding for extensive maintenance and repairs did not become available until the 1990's. Before that time most changes involved removal of deteriorated structures. In 1993, a reconnaissance survey of the Good Fellow Club Youth Camp site determined that it was potentially eligible for listing on the National Register of Historic Places due to its association with regional industrial history.

Since 1994, the NPS began planning the rehabilitation and renovation of the Good Fellow Club Youth Camp within the Indiana Dunes National Lakeshore (National Lakeshore). The NPS is currently planning for rehabilitation to accommodate needs of partnering entities to share costs associated with the management, operations and upkeep, and benefits from cultural landscape values of the site. It is the intention of the NPS to develop the site in a manner that protects its historic character and sense of place while rehabilitating its historic buildings and landscape features. This proposed expansion is the subject of this Environmental Assessment (EA). This EA is a compliance document and Phase II of the Historic Structures/Cultural Landscape Report (HSR/CLR). The combined HSR/CLR/EA is intended to guide long term cultural resource and environmental resource management of the Good Fellow Club Youth Camp and was prepared reflecting the interconnected nature of the cultural resources and natural landscape features and the entire landscape setting for the Good Fellow Club Youth Camp as well as the significance of the buildings and recreational features. This document concentrates on the potential impacts to the historic and natural resources at the historic Good Fellow Club Youth Camp.

This EA identifies three action alternatives and determines the potential impacts and recommended mitigation measures related to their implementation. The EA also identifies a No Action Alternative and a preferred alternative as required by the Council on Environmental Quality (CEQ). The EA addresses short-term construction-related impacts and long-term effects, as well as the cumulative impacts that would result from this and other projects which have been completed recently, are currently underdevelopment, or are proposed within the project area.

## **PURPOSE OF THE PROPOSED ACTION**

A series of objectives were established by the NPS to guide the development of the proposed action. The objectives include the following:

- Rehabilitation of Historic Structures and Landscape
- Improvement of Visitor Accessibility
- Protection of Natural and Cultural Resources
- Provision for Flexible Management Opportunities in Public/Private Partnership with the Park
- Provision of Uses that are Not Incompatible with the Existing Structures and Programs of the Dunes Learning Center (DLC)..
- Potential Expansion of Camp Facilities

As part of previous studies as well as stakeholder meetings for this EA, existing needs associated with the proposed action were identified:

- There is a need for a fully functional 21<sup>st</sup> century facility with flexible program and meeting space for the Park, existing partners, potential partners or third party management.
- The site in and around the historic lodge should meet Uniform Federal Accessibility Standards for accessibility to the greatest extent possible.
- The Good Fellow Lodge should be made accessible to persons with disabilities to the greatest extent possible without irreversibly altering primary character-defining elements or materials.
- Due to problems with flooding in the basement of the Lodge, positive drainage away from the building should be a part of the Good Fellow Lodge rehabilitation.
- Additional parking should be provided and the existing gravel parking lot should be surfaced and graded to control runoff and appropriately designed to promote safe movements of ingress and egress.
- The historic Good Fellow Club Youth Camp site should be considered for adaptive reuse to support the NPS objectives for the site including additional overnight camping facilities and gathering spaces for education, interpretation, demonstration, recreation and special events.
- Reuse of the site for these purposes must ensure protection of landscape and architectural features that contribute to the camp's historical significance. If not reused or maintained properly, features that are currently in poor condition, such as the steel bridge, riflery, flagstone walk at the lodge, stone retaining wall along the river, and steel swimming pool may be lost to further deterioration.
- Due to the significant cultural and natural resources of Good Fellow Club Youth Camp, new interpretive opportunities should be developed that complement and enhance the existing park interpretive plan and interpretation by the DLC.

## **ALTERNATIVES**

The alternatives developed for this EA explore a range of options for the potential expansion and rehabilitation of the Good Fellow Club Youth Camp that meet the park's purpose and objectives while protecting or minimizing impacts on its resources. The alternatives considered are:

- Alternative A (No Action): Continue current Management of Existing Landscape Patterns and Features
- Alternative B: Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth

- Alternative C: Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities
- Alternative D: Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events and Activities Rental.

Although the option of continuing current management (Alternative A: No Action) does not solve the need for expansion and rehabilitation of the Good Fellow Club Youth Camp site and facilities, it is examined because current conditions are used as the baseline against which the action alternatives are analyzed.

In consideration of the need to protect the integrity and character defining qualities of the Good Fellow Club Youth Camp, the recommended treatment approach in the alternatives is rehabilitation. All rehabilitation work on historic buildings, structures and landscape features will comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and *NPS director's Order#28(20-28) Cultural Resources Management Guidelines* and the basic principles for rehabilitation. All of the alternatives are conceived to help protect the Good Fellow Club Youth Camp landscape and historic structures while promoting an active use for the site that is also economically sustainable. It is assumed that any future development of Good Fellow Club Youth Camp will necessitate at least the following eight pursuits:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Restoration and reuse of some or all historic recreational features
- Management of vegetation
- Provision of access for both vehicles and visitors on foot. This would include universal accessibility for parking, pedestrian access to buildings, and pedestrian access to outdoor program and interpretive spaces and trails.
- Expansion of parking
- Enhancement of interpretation
- Environmental mitigation and sustainable design

This EA describes the environmental consequences associated with the no action alternative (Alternative A) and with the implementation of action alternatives B,C, and D. The document provides the scientific and analytical basis for comparing the alternatives. Each alternative is organized in terms of impact topics, which serve as the basis for the analyses. These topics allow a standardized comparison between the alternatives based on their impact on the environment. As required by the National Environmental Policy Act (NEPA) of 1969, as amended, potential impacts are described in terms of type (beneficial or adverse, direct or indirect), context (site-specific, local, or regional), duration (short-term or long-term), and level of intensity (negligible, minor, moderate, or major). *Director's Order 12, (DO#12) "Conservation Planning, Environmental Impact Analysis, and Decision Making,"* defines the terms used in this Environmental Assessment to analyze impacts including duration, type and intensity or magnitude of impacts. Criteria for determination of the intensity of an impact are defined for each specific impact topic considered in this EA.

After impact analysis was complete, **Alternative D** was determined to be the NPS Preferred Alternative. As required by *NPS Management Policies 2006* and *DO#12*, Alternative D and the other action alternatives were analyzed for potential impacts to determine whether or not proposed actions would impair park resources and values. It was determined that Alternative D did not impair park resources and values and no major adverse effects to any impact topics were determined for this alternative. There was informal consultation with the USFWS and a Biological Assessment was submitted as part of this document for the protection of the Indiana bat and bat habitat. Seasonal restrictions for clearing vegetation were stipulated as well as a mist net survey if tree clearing had to occur during restricted months. The USFWS concurred with the findings of the EA of "May Affect, Not Likely to Adversely Affect" the Indiana bat "provided a seasonal restriction on removal of (or disturbance near) suitable roost trees is implemented."

Alternative D (NPS Preferred Alternative) assumes a partnership between the NPS and a third party interested in sensitively rehabilitating the Good Fellow Club Youth Camp site for commercial special events and activities rental such as conferences, professional and recreational retreats, and other types of events. Any commercial activity would be addressed in a commercial services plan in the future. All activities would be in keeping with the plan and appropriate for the site and the surrounding land use. This alternative would preserve and protect many of the historic and cultural resources on the site and allow a variety of visitors to experience the site. Portions of the cultural landscape would be restored including spatial organization and viewsheds from the period of significance.

The character of the landscape setting would be preserved. The site would have universally accessible facilities and provide diversity and variety of choice. This alternative minimally disrupts some woodland vegetation, however, maintenance and management would follow a set of best management practices developed specifically for the property to promote environmental stewardship and to protect historic resources. Native woodland vegetation would be preserved and invasive plantings removed. This alternative also best meets the stated goals and objectives of the park for the Good Fellow Club Youth Camp. Alternative D best addresses all the criteria presented in Section 101 (b) for the Environmentally Preferred Alternative and best addresses the goals and objectives of the Park.

## **CONSULTATION AND COORDINATION**

### **Scoping Process**

Groundwork preparation for the formal scoping process was developed by the Park staff in 2008. During that year a committee was developed, opening up a dialog with stakeholders. The Planning Work Group committee met on March 31, 2008, April 15, 2008 and September 3, 2008. The following stakeholders were identified as having an interest in the Good Fellow site: U.S. Steel, former owners and operators of the camp; Friends of Camp Good Fellow, an alumni group; the Dunes Learning Center, residential camp currently using the site and the new buildings adjacent to the site; Historic Landmarks Foundation of Indiana, historic preservation organization; the State Historic Preservation Office, state agency which oversees compliance for historic sites; Eppley Institute, education agency associated with Indiana University; Bradford Woods, residential environmental education camp south of Indianapolis and connected with Indiana University; and Friends of the Indiana Dunes, a local support group for interpretation and education.

To officially initiate the EA, a kickoff meeting was held via conference call on November 3, 2008 which included Indiana Dunes National Lakeshore staff, Marla McEnaney, (MWRO-CR), and planning team members. Public scoping strategy was part of the agenda and the planning team was given all the notes from the previous meetings in 2008. A second conference call was held with Park staff and the planning team on November 18, 2008 and key issues were discussed pertaining to partners, project objectives, program requirements and feasible alternatives. The planning team was tasked to develop the discussed alternatives and send to the park for review. After reviews and revisions, the alternatives were approved for presentation to stakeholders. Park staff then requested that the planning team come to the park for the formal stakeholder meeting to present the environmental assessment process, schedule, goals and objectives, and the conceptual alternatives. The stakeholder meeting at the Park was held on January 22, 2009. Input from park staff and stakeholders was then incorporated into the alternatives by the planning team. The draft document was made available to the public through the Park and letters of availability sent to stakeholders, agencies and Indian tribes.

The scoping process continued during the public review period and the scheduled public meeting. Solicitation of comments also continued during the formal review period from agencies and Indian tribes. The Public Meeting was held on July 15, 2009 and alternative concepts were presented and comments solicited. Upon request from stakeholders the public review period was extended for 45 days and additional comments were posted on the PEPC site. Additional comments were also sent by mail to the Superintendent's office at the Park.

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# Chapter 1 • Purpose and Need

## 1.0 INTRODUCTION

The Good Fellow Club Youth Camp was the former site of a summer camp operated by the Good Fellow Club of U.S. Steel's Gary Works from 1941 to 1976. The camp was created to provide outdoor recreation for the children of Gary Works employees. In addition to its recreational purpose, the camp was seen as a social, physical and moral benefit for the children, an idea derived from the progressive labor movements and welfare capitalism of the early twentieth century. In addition to organized sports and crafts, the activities of the camp emphasized an appreciation of the natural environment and the history of native peoples and pioneer settlers in the region. In 1976, the last summer camp was held at Good Fellow Club Youth Camp. In 1976, when the National Park Service (NPS) was poised to take over the Good Fellow Youth Camp, an appraisal report was prepared providing information on the status of buildings and structures as well as playground equipment and outdoor facilities. Although NPS purchased the property in 1977, funding for extensive maintenance and repairs did not become available until the 1990s. Before that time most changes involved removal of deteriorated structures. The small cabins were dismantled in the 1980s and the primary buildings on the site were retained but fell into disuse. The buildings gradually deteriorated during the late 1970s and 1980s as the camp site was effectively abandoned for camping. In 1993, a reconnaissance survey of the Good Fellow Club Youth Camp site determined that it was potentially eligible for listing on the National Register of Historic Places due to its association with regional industrial history. By 1994 the camp was looking overgrown and neglected.

Since that time, the NPS began planning the rehabilitation and renovation of the Good Fellow Club Youth Camp within the Indiana Dunes National Lakeshore (National Lakeshore). The NPS is currently planning for rehabilitation to accommodate needs of partnering entities to share costs associated with management, operations and upkeep and benefit from cultural landscape values of the site. It is the intention of the NPS to develop the site in a manner that protects its historic character and sense of place while rehabilitating its historic buildings and landscape features. This proposed expansion is the subject of this Environmental Assessment (EA). This EA is a compliance document and Phase II of the previously completed Cultural Landscape Report and Historic Structures Report. The combined Cultural Landscape Report/Historic Structures Report/ and Environmental Assessment is intended to guide long term cultural resource and environmental resource management of the Good Fellow Club Youth Camp and was prepared reflecting the interconnected nature of the cultural resources and natural resources of the camp, both physically and in terms of function. The HSR/CLR details the significance of the cultural landscape features and the entire landscape as the setting for the Good Fellow Club Youth Camp as well as the significance of the buildings and recreational features. It is not the function of this Phase II EA to assign operations or security or develop an operational plan, commercial services plan, strategic plan, management plan, or a development concept plan. This document concentrates on the potential impacts to the historic and natural resources at the historic Good Fellow Club Youth Camp.

This EA seeks to identify three action alternatives and determine the potential impacts and recommended mitigation measures related to their implementation. The EA will also identify a No Action Alternative and a preferred alternative as required by the Council on Environmental Quality (CEQ). The EA addresses short-term construction-related impacts and long-term effects, as well as the cumulative impacts that would result from this and other projects which have been completed recently, are currently under development, or are proposed within the project area.

The NPS has prepared this EA in compliance with the National Environmental Policy Act of 1969, as amended (NEPA), (CEQ) regulations implementing NEPA [40 Code of Federal Regulations (CFR) 1500-1508], the National Historic Preservation Act of 1966, as amended (NHPA), the Advisory Council on Historic Preservation's (ACHP) implementation regulations for Section 106, implementation regulations for 36 CFR Part 800 *Protection of Historic Properties* and the NPS Director's Order -12 (as reflected in the DO-12 Handbook).

## 1.1 PURPOSE OF THE PROPOSED ACTION

A series of objectives were established by the NPS to guide the development of the proposed action. The objectives include the following:

## **Rehabilitation of Historic Structures and Landscape**

In consideration of the need to protect the integrity and character-defining qualities of the Good Fellow Club Youth Camp landscape and historic structures, and the need to address future National Lakeshore administrative, educational, recreational and interpretive needs, the recommended treatment approach as stated in the Historic Structures Report/Cultural Landscape Report (HSR/CLR) is rehabilitation. This approach will allow the National Lakeshore to meet programmatic needs while protecting significant cultural and natural resources.

## **Improvement of Visitor Accessibility**

Facilities, parking and trails shall improve accessibility for physically challenged individuals and shall be in accordance with applicable published codes and standards.

## **Protection of Natural and Cultural Resources**

The prominence of the Good Fellow Lodge, the surrounding structures and the cultural landscape setting are critical in the design and development of any landscape improvements or additional features on the site. Topography, adjacent roadways, aesthetic quality, and viewsheds to and from the site are all important considerations in the need to establish clear links between planning and resource protection.

## **Provision for Flexible Management Opportunities in Public/Private Partnership with the Park**

The NPS shall have management flexibility in all the proposed action alternatives, preferably with a public/private partnership or with sole management by a private entity (third party).

## **Provision of Uses that are not Incompatible with the Existing Structures and Programs of the Dunes Learning Center (DLC)**

The Dunes Learning Center is a current partner of the NPS and actively uses both buildings and cultural landscape features within the boundaries of the Good Fellow Club Youth Camp. The DLC currently uses buildings for intern housing, storage and shelter during winter survival training. They also use the main parking area, the overflow parking, and parking at the lodge. The DLC uses site features such as the former tennis courts, cabin foundations, floodplain and forest for programs and interpretation. Proposed changes or uses would not be incompatible with the current operations and programs of the DLC. If portions of the study area that have been historically used by the DLC change, there would be negotiations between NPS and DLC for alternative uses.

## **Potential Expansion of Camp Facilities**

Potential expansion of the camp shall retain and repair the character defining elements of the structures and environment of the project area while introducing new elements as needed to meet specific administrative, educational, interpretive, recreational or other needs. These new elements will serve the intended use of the site. Sustainable practice and design principles will be incorporated into the proposed action.

## **1.2 ADDITIONAL NEED FOR THE PROPOSED ACTION**

As part of previous studies as well as stakeholder meetings for this EA, existing needs associated with the proposed action were identified:

- There is a need for a fully functional 21<sup>st</sup> century facility with flexible program and meeting space for the Park, existing partners, potential partners or third party management.

- The site in and around the historic lodge should meet Uniform Federal Accessibility Standards for universal accessibility to the greatest extent possible. There should be an accessible route between the lodge and near-by UFAS accessible parking as well as routes to other areas of educational, recreational and interpretive value.
- The Good Fellow Lodge should be made accessible to persons with disabilities to the greatest extent possible without irreversibly altering primary character-defining elements or materials.
- Due to problems with flooding in the basement of the Lodge, positive drainage away from the building should be a part of the Good Fellow Lodge rehabilitation.
- Additional parking should be provided and the existing overflow gravel parking lot should be surfaced and graded to control runoff and appropriately designed to promote safe movements of ingress and egress.
- The historic Good Fellow Club Youth Camp site should be considered for adaptive reuse to support the NPS objectives for the site including additional overnight camping facilities and gathering spaces for education, interpretation, demonstration and special events.
- Reuse of the site for these purposes must ensure protection of landscape and architectural features that contribute to the camp's historical significance. If not re-used or maintained properly, features that are currently in poor condition, such as the steel bridge, riflery, flagstone walk at the lodge, stone retaining wall along the river, and steel swimming pool may be lost to further deterioration.
- Due to the significant cultural and natural resources of Good Fellow Club Youth Camp, new interpretive opportunities should be developed that complement and enhance the existing Park interpretive plan and interpretation by the DLC.

The proposed actions are designed to help the NPS best meet its mission and goals for protecting the historic Good Fellow Club Youth Camp landscape and structures and the natural resources of the site while promoting an active use that is economically self-sustaining and preferably generates a revenue stream. Action involves changes to the landscape and structures that will affect the site, the visitor, and park operations to various degrees.

### 1.3 DESCRIPTION OF THE PARK

The National Lakeshore is located in northern Indiana along the south shore of Lake Michigan between Gary and Michigan City, Indiana, approximately fifty miles southeast of Chicago. The National Lakeshore 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 noncontiguous satellite areas. A variety of residential, commercial, and industrial developments about the National Lakeshore boundaries, including several small communities that are completely surrounded by National Lakeshore land (NPS 1997b). The National Lakeshore covers approximately 15,000 acres, including the 2,182-acre Indiana Dunes State Park managed by the Indiana Department of Natural Resources (IDNR).

The legislation that authorized the National Lakeshore in 1966 resulted from a movement that began in 1899. Three individuals helped make the National Lakeshore a reality: Henry Cowles, a botanist from the University of Chicago; Paul H. Douglas, senator for the state of Illinois; and Dorothy R. Buell, an Ogden Dunes resident and teacher. Henry Cowles published an article entitled "Ecological Relations of the Vegetation on Sand Dunes of Lake Michigan," in the *Botanical Gazette* in 1899 that brought international attention to the intricate ecosystems existing on the dunes (NPS n.d.d.; NPS 2001c).

During the early 1960s, a compromise was worked out in which both a federally supported port and a new national park would be established in northwest Indiana. The Kennedy administration took the lead in linking economic development and preservation of the natural environment, and the creation of the Cape Cod National Seashore in 1961 established a precedent for the use of federal funds to purchase land to create new national parks. Illinois Senator Paul H. Douglas helped ensure that the port legislation was accompanied by authorization for the new National Lakeshore. Congress designated Indiana Dunes National Lakeshore as a unit of the national park system on November 5, 1966 (Public Law 89-761) (NPS 1993a). While the

1966 authorizing legislation included only 8,330 acres of land and water, four subsequent expansion bills for the National Lakeshore (1976, 1980, 1986, and 1992) increased its size to more than 15,000 acres (NPS n.d.d, 2001c).

Since the creation of the National Lakeshore, development has increased to the point that most of its boundary now consists of homes, farms, roads, or businesses. Residential communities, open rural areas, light and heavy industry, and agricultural lands exist within or adjacent to the National Lakeshore’s boundary (NPS 1993a). The National Lakeshore is primarily divided into two large lakefront units by an industrial complex that includes two steel companies, a public service company, and the Port of Indiana.



Figure 1. Map of Indiana Dunes National Lakeshore – Good Fellow Club Youth Camp.



Figure 2. Good Fellow Club Youth Camp Project Area.

## 1.4 DESCRIPTION OF THE PROJECT AREA

The historic footprint of the Good Fellow Club Youth Camp is set in sixty-three acres of woodland along the Little Calumet River near Lake Michigan. The camp consists of wooded and open areas, historic camp buildings, and site recreational facilities. The property is generally rectangular in shape, approximately 1,600 feet deep and 1,000 feet wide. The northern boundary of the property is irregular and is formed by the adjacent power company property. The southern boundary is also irregular and is formed by the top of the bluff overlooking the Little Calumet River. The western boundary is an area of woodland while the eastern boundary is formed by Howe Road. The main buildings of the camp stand at the top of a moraine overlooking the Little Calumet River. The highest elevation, approximately 690 feet above mean sea level, is at the northern boundary of the camp. The ground slopes down across hills and terraces to the river's edge at approximately 606 feet above mean sea level.

The camp was designed by U.S. Steel engineers to provide recreational and educational opportunities for the employees' children. Built starting in 1941, the camp embodies visions of an Adirondack style summer camp, including a rural, rustic character that blends with the natural environment.

The camp occupies a wooded site near the center of the National Lakeshore. The camp contains nine one to three-story rustic buildings with redwood tongue and groove siding and rectangular massing. These historic buildings are located at the northwest corner of the site. During the camp's operation from 1941 to 1976, a large portion of the site (about thirty-five acres) was maintained as open lawn areas to serve as playing fields.

At the base of the steep hill where the Lodge is located, fourteen concrete slabs are arranged in a horseshoe pattern within a field. These concrete slabs are all that remain of the children's camp cabins, the former handicraft cabin and the former nurse's cabin. The washhouse foundation is located in the center of the cabin pads. To the southeast of the concrete pads, within the dense wooded area of the southern boundary, is located the overgrown remains of the large tennis court and the basketball court. To the south of the courts nearer the river are the remnants of the riflery.

The action alternatives described in this EA would take place within the study boundary shown in Figure 3, *Study Area Boundary*. The area of affect includes the sixty-three acres of the historic area and approximately 6.5 acres of land just north of the lodge that is the site of the gravel parking lot and the former site of the challenge course. The challenge course equipment which was managed by Porter County Education Interlocal, was removed in September of 2009. This small land area north of the entrance road and lodge is not part of the historic footprint of the Good Fellow Club Youth Camp

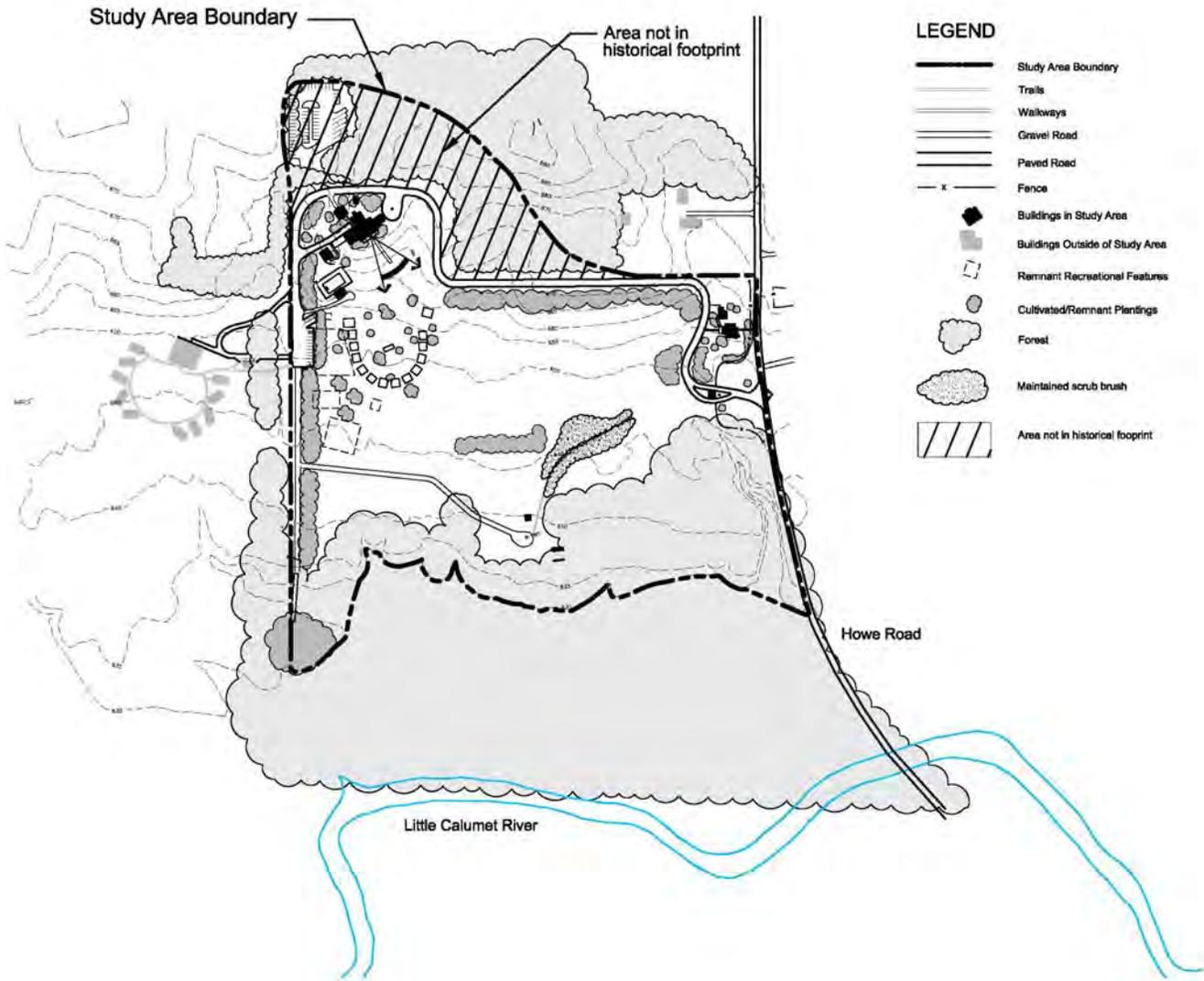


Figure 3. Study Area Boundary.

## 1.5 PLANNING CONTEXT

Several other plans and studies have informed and led to the development of alternatives for the rehabilitation of the Good Fellow Club Youth Camp. These include NPS research, management, and other documents as described below:

### **Good Fellow Club Youth Camp Lodge Reuse Study, and Evaluation of the Capacity of the Good Fellow Lodge Building (NPS 1989).**

The focus of this study was to evaluate the condition and capacity of the existing lodge and to present a concept for its reuse. In addition, a separate program was developed for a potential new facility at a proposed alternate location. The study provides a comparison of these two alternate concepts for meeting space requirements and their associated costs. The purpose of this study was to add information on appropriate lodge facilities and provide a basis from which to plan the future development of Good Fellow Club Youth Camp.

### **Indiana Dunes National Lakeshore Good Fellow Club Youth Camp: Development Concept Plan and EA (NPS 1995).**

This study, prepared in 1995, based the selection of a preferred alternative on a document prepared by Quinn Evans in 1988. The preferred alternative encompassed rehabilitation of the original lodge and development of three camp clusters, with some modification to improve site utilization. The other action evaluated was the no action alternative. No other alternatives were considered to be significantly different in overall impact on the camp area. The other lodge treatments were considered infeasible as the camp including the original lodge was nominated for the National Register. This plan did not include comprehensive research on the historic significance of the camp. This led to the need for the *Historic Structures Report and Cultural Landscape Report* in 2005.

### **Indiana Dunes National Lakeshore General Management Plan (NPS 1997).**

The General Management 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. All of the alternatives presented in this EA are within this unit and comply with the initial guidance for the area. The GMP describes specific actions such as “the Good Fellow Club Youth Camp will be used to provide overnight environmental education programs; historic Good Fellow Club Youth Camp features that can be incorporated into the environmental education program will be preserved, and the preferred alternative will rehabilitate and adaptively use the lodge and additional existing structures associated with the lodge complex.” As well, the GMP describes other elements of the alternatives presented in this EA.

### **Indiana Dunes National Lakeshore Interpretive Plan (NPS 1997).**

This plan includes program recommendations and program goals for the Good Fellow Club Youth Camp including: enhanced awareness of the southern Lake Michigan basin with an emphasis on the Indiana Dunes ecosystem; increased understanding of the natural history of the Lake Michigan basin and learning ecological principals and processes, and better understanding of specific ecosystems and the diversity found in those systems; and document an understanding of the history of the area and the contribution of different cultural groups, with emphasis on settlement, transportation, industrial development, development of scientific ecology, the conservation and preservation movement, and their relationships to these topics.

### **Good Fellow Club Youth Camp, Historic Structures Report and Cultural Landscape Report (NPS 2005).**

The purpose of this plan was to provide baseline research essential to planning for and developing the site in a manner that protects its historic character and sense of place while rehabilitating its historic buildings and landscape features. The HSR/CLR is also intended to guide long-term cultural resource management of the Good Fellow Club Youth Camp. A National Register Determination of Eligibility was supplemented by a significance evaluation of the historic landscape prepared as part of the HSR/CLR.

## **Indiana Dunes National Lakeshore Division of Interpretation, “The Plan” (NPS 2008). Phase Two of Shaping Our Future: Redirecting Resources and Re-Engineering the Interpretive Program for an Efficient and Effective Operation.**

The Plan has a life of up to three years -through 2011- and will be replaced with a *Comprehensive Interpretive Plan/Long Range Interpretive Plan* that will be developed in collaboration with park partners. The Plan is the vital transitional piece that builds on the successes of Phase One and positions the Division of Interpretation for successful implementation of a comprehensive, long-range, interpretive plan.

## **Indiana Dunes National Lakeshore, *Strategic Plan* (NPS 2007-2011).**

This plan focuses on the mission of the National Lakeshore and the key external influences. All the alternatives within this EA comply with the legislative intent which states: “The mission of the Indiana Dunes National Lakeshore is to preserve the Indiana Dunes and other areas of scenic, scientific, and historic interest and recreational value.... And to provide for educational, inspirational, and recreational use by the public so long as such use is compatible with the preservation of the park’s unique flora, fauna, and physiographic conditions and its historic sites and structures.”

The alternatives presented also align with the purpose of the National Lakeshore as stated in this plan: “1) preserve, maintain, and restore the integrity and character of the natural resources and processes and protect cultural resource values at the lakeshore; 2) provide educational, inspirational, and recreational opportunities compatible with preserving natural and cultural resource values; 3) inspire in the public an appreciation of and a sense of personal stewardship for lakeshore resources; and 4) interpret, encourage, and conduct scientific research in the tradition of pioneer investigators.”

### **1.6 SCOPING**

Scoping is the effort to involve agencies and the public in determining the issues to be addressed in the EA. Among other tasks, scoping determines important issues; allocates assignments among the interdisciplinary team members and other participating agencies; identifies related projects and associated documents; identifies permits, surveys, or consultations required by other agencies; and creates a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made.

Groundwork preparation for the formal scoping process for Good Fellow Club Youth Camp was developed by the Park staff in 2008. During that fiscal year a committee was developed, opening up a dialog with stakeholders. The Planning Work Group committee met three times over the course of six months and identified stakeholders having an interest in the Good Fellow site. The EA planning team was tasked to develop the discussed alternatives and send to the park for review. Park staff then requested that the EA planning team come to the Park for the formal stakeholder meeting to present the environmental assessment process, schedule, goals and objectives, and the conceptual alternatives. Input from park staff and stakeholders was then incorporated into the alternatives by the planning team. The scoping process continued during the public review period and the scheduled public meeting. Solicitation of comments also continued from agencies and Indian tribes. For further scoping and public participation information see “Chapter 5: Consultation and Coordination” of this document.

### **1.7 ISSUES**

During the scoping process, specific considerations and concerns were identified as critical to the proposed project’s development. The following issues were identified as most important to the planning process:

- The driving force behind implementing this project is resource protection.
- Any alternative must protect historic structures and the cultural landscape.

- The Dunes Learning Center currently uses many of the Good Fellow Club Youth Camp physical facilities and some of the natural areas for programmed activities. If portions of the site that have been historically used by DLC change, there would be negotiations between NPS and DLC for alternative uses or locations.
- Alternatives for the project need to discuss a variety of management models to include public/private partnerships, sole management by NPS, and joint management between NPS and a third party.
- Sewage system and municipal water requirements will need to be considered in association with any proposed changes to the site.
- Revenue generation options should be pursued ranging from self-sustaining at a minimum to providing a revenue stream to the Park.

## 1.8 IMPACT TOPICS

Specific impact topics were developed to allow comparison of the environmental consequences of each alternative presented in this document. These impact topics were identified based on the issues raised during scoping; site conditions; federal laws, regulations, and Executive Orders; *NPS Management policies 2006* (NPS 2006) and topics specified in *Director's Order 12 and Handbook* (NPS 2001); park specific resource information; and agency and public input during scoping.

### Impact Topics Evaluated

Each of the impact topics listed below would be affected by one or more of the alternatives evaluated in this EA. A brief rationale for the selection of each impact topic is provided below, and each impact topic is further discussed in detail in Chapters 3 and 4 of this document.

#### *Natural Resources*

##### Soils

According to *NPS Management Policies 2006* (NPS 2006), the NPS actively seeks to understand and preserve the soil resources of parks, and to prevent, to the extent possible, the erosion, physical removal, or contamination of the soil or its contamination of other resources. Due to potential impacts from soil disturbance in several locations within the project study area and proposed grading at the lodge and parking facilities in some or all of the alternatives, soils will be retained as an impact topic to allow for evaluation of potential impacts.

##### Air Quality

The 1963 Clean Air Act, as amended (42 USC 7401 et seq.) requires land managers to protect air quality. Section 118 of the Clean Air Act in particular requires parks to meet all federal, state, and local air pollution standards, and *NPS Management Policies 2001* (NPS 2000) addresses the need to analyze potential impacts to air quality during park planning. Hauling material, operating construction equipment, and other construction-related activities could result in temporarily increased vehicle exhaust and emissions.

Air quality at Indiana Dunes National Lakeshore is of concern due to the park's proximity to industrial complexes and the urban centers of Gary, Indiana, as well as Chicago, Illinois, which subject the park to pollution via the prevailing winds. Sources of air pollution within the park are motor vehicles and park maintenance activities such as mowing and burning. Due to potential impacts, air quality will be further evaluated as an impact topic.

##### Water Quality

*NPS Management Policies 2006* (NPS 2006) require protection of water quality consistent with the Clean Water Act. Section 404 of the Clean Water Act authorized the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge of dredged or fill material or excavation in U.S. waters. Water quality at the Park is managed in accordance with Clean Water Act, Executive Order 12088, and *NPS Management Policies 2006*.

No dredged or fill material will be deposited in U.S. waters and no excavation will occur in U.S. waters; however, the NPS has expressed a concern with any potential runoff into the Little Calumet River or in other areas where tree removal occurs or land cover is removed. Due to potential impacts, water quality will be further evaluated as an impact topic.

#### Wetlands

Executive Order 11990, *Protection of Wetlands*, requires federal agencies to avoid, where possible, adversely impacting wetlands. The goal of NPS wetlands management is to strive to achieve a no net loss of wetlands, as defined by both acreage and function. Proposed actions that have the potential to adversely impact wetlands must be addressed in a statement of findings. Executive Order 11988, *Floodplain Management*, requires all federal agencies to avoid construction within the 100-year floodplain unless no other practical alternative exists. Certain construction within a 100-year floodplain requires preparation of a statement of findings.

The proposed project area does not contain designated or functional wetlands as described in Executive Order 11990, the Clean Water Act Section 404, or by NPS Director's Order No. 77-1 (2002). The site does contain a hydromesophytic forest (slough) just west of Howe Road. This low and frequently flooded area, contains sedges, cattails and shrubs tolerant of flooding. The slough is not within the EA study boundary but is in close proximity down the slope of the bluff and into the floodplain of the Little Calumet River. Therefore, wetlands will be further evaluated as an impact topic.

#### Vegetation (Including Non-Native and Invasive Plant Species)

The National Environmental Policy Act (42 USC 4321 *et seq.*) calls for an examination of the impacts on all components of affected ecosystems. According to NPS *Management Policies 2006* (NPS 2006), the NPS strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants.

Vegetation would be affected by some of the recommendations in the action alternatives including removal of woodlands to restore historic open landscape, and replacement of historic non-native trees. Vegetation will therefore be retained as an impact topic for further evaluation

Numerous non-native plant species were identified in the plant survey conducted by Plampin in 1994. Disturbed areas and the margins between open and wooded areas, such as trail edges and where woodland abruptly edges maintained lawn or field, are highly susceptible to colonization by these species. Invasive species are aggressive and out-compete native plant species, adversely affecting native species richness and diversity. Clearing woodlands and converting them to grassed fields would allow removal of some non-native species, but could promote the spread of non-native species.

#### Wildlife and Wildlife Habitat

The Lakeshore supports a variety of wildlife. The NPS Organic Act, which directs parks to conserve wildlife unimpaired for future generations, is interpreted by the agency to mean that native animal life should be protected and perpetuated as a part of the Lakeshore's natural ecosystem.

Removal of vegetation and any construction could affect the Lakeshore's wildlife. Wildlife will therefore be retained as an impact topic for further evaluation.

#### Rare, Threatened, or Endangered Species

The 1973 Endangered Species Act, as amended, requires an examination of impacts to all federally listed threatened or endangered species. NPS policy requires examination of the impacts to state listed threatened and endangered species and federal candidate species. A plant survey of the entire Good Fellow Club Youth Camp was conducted by Barbara Plampin in 1994 followed by a supplemental report of significant plants along the bluff and floodplain in 1996 and an EA which inventoried plants of the wooded bluff, also conducted in 1994 and 1996. Several communities of rare plant species were identified and mapped in the supplemental report. These communities were primarily located along the wooded bluff and within the floodplain near the 630 elevation.

The EA also identifies high quality vegetation as well as other species of interest. Endangered species information was requested from the U.S. Fish and Wildlife Service and it was determined that the Good Fellow Club Youth Camp site is

within the range of the Indiana bat, a Federally endangered species. (Refer to the Biological Assessment attached to this document). Therefore rare, threatened, or endangered species will be further evaluated as an impact topic.

## ***Recreational Resources, Aesthetic Resources, and Visitor Use and Experience***

### Recreational Resources

Recreational land uses associated with the Good Fellow Club Youth Camp include walking and biking along Howe Road and the access road to the Good Fellow Club Youth Camp and to the DLC. Recreational use also includes hiking along the wooded trails both on the Good Fellow Club Youth Camp site and adjacent to it. The proposed alternatives variously affect recreational uses in the project area. This impact topic will be retained for further evaluation.

### Aesthetic Resources

In the evaluation of aesthetics, both the visual character of the site and the quality of a viewshed are considered. A viewshed comprises the limits of the visual environment associated with the proposed action including both viewsheds within and into the project study area. Additional development at the site must consider impacts to the visual character.

### Visitor Use and Experience

The site is currently gated and open to visitors who are enrolled in programs provided by the NPS and the DLC. There are also interns who are housed on the site and use the main gate for entrance. When rehabilitation of the site is complete, visitor use is likely to increase, due to additional programming and amenities on the site. The alternatives differ in the level of amenities offered to visitors and associated program accommodations. Visitor use and experience will be further evaluated as an impact topic.

## ***Cultural Resources***

### Cultural Landscapes

A cultural landscape is a geographic area, including both cultural and natural resources and the wildlife and domestic animals therein, associated with an historic event, activity, or person, or exhibiting other cultural or aesthetic values. The proposed alternatives would impact the cultural landscape of Good Fellow Club Youth Camp site to varying degrees. Cultural landscapes will be further evaluated as an impact topic.

### Historic Resources

The Good Fellow Club Youth Camp has a small collection of historic buildings and structures. These include the Lodge and several smaller buildings including the Staff Cabin, the Directors Cabin, and the Caretaker's House. Smaller structures include the pool and pool house and the gatehouse. Some of these have already been rehabilitated while others are proposed for repair or rehabilitation as part of the action alternatives. Historic resources will be further evaluated as an impact topic.

### Archeological Resources

Based upon two reports: *Archeologist Trip Report* (1996) and *An Archeological Survey of elected Areas at the Good Fellow Club South Camp* (1999), no archeological resources have been documented on this site. Currently undocumented underground resources could be impacted by the proposed cultural landscape changes at the Good Fellow Youth Camp. Archeological resources will be further evaluated as an impact topic.

## ***NPS Operations and Infrastructure***

### Park Operations

Rehabilitated facilities within the Good Fellow Club Youth Camp would need to be maintained and operated. Portions of the roadway and parking would need to be cleared and de-iced during the winter. Park operations would be affected by the need for additional patrolling of these new facilities and any necessary roadway improvements would enhance emergency response. Lakeshore staff fulfills the functions and activities to accomplish management objectives and meet requirements in law enforcement, emergency services, interpretation and education, utilities, housing, fee collection, and management support. Therefore park operations will be retained for further impact evaluation.

### Infrastructure and Utilities

Due to increased use at the Good Fellow Club Youth Camp in the action alternatives, NPS would have to evaluate the size of the sewer system and the water system/fire protection in order to accommodate larger numbers of visitors. Electric power, transportation and the road system will also be impacted by development. Therefore, this impact topic will be retained for further evaluation.

### ***Long-term Management and Sustainability of Resources***

#### Night Skies/Lightscaapes

The NPS Night Sky Initiative and NPS *Management Policies 2006* (NPS 2006) direct the NPS to “preserve to the greatest extent possible, the natural lightscaapes of the parks, which are natural resources and values that exist in the absence of human-caused light”. The NPS is currently developing the Night Sky Initiative to formulate a policy to protect views of the stars and planets in national parks.

Should the proposed actions be implemented within a new management framework, site lighting will have to be evaluated. Any added night lighting in the alternatives needs to ensure that whatever activity is undertaken reduces rather than increases the amount of light emitted at the site. Therefore, Night Sky/Lightscaapes is retained as an impact topic for further evaluation.

#### Soundscapes

NPS Director’s Order #47 *Soundscape Preservation and Noise Management* (NPS 2000) and NPS *Management Policies 2006* (NPS 2006) direct NPS managers to protect, maintain, or restore natural soundscapes unimpaired by inappropriate or excessive noise. Under this directive, noise is defined as appropriate or inappropriate relative to the purpose of the park, the level of visitor services available, and to activities pursued by visitors.

The alternatives addressed in this analysis introduce new programs and facilities that will increase visitor use and participation at the site. There will also be periods of construction work on particular elements of the project. Therefore, this topic will be retained for further evaluation.

#### Natural or Depletable Energy Resource Requirements and Conservation Potential

As directed by NPS *Management Policies 2006* (NPS 2006), the NPS strives to minimize the short and long-term environmental impacts of development and other activities through resource conservation, recycling, waste minimization, and the use of energy-efficient and ecologically responsible materials and techniques. Each of the alternatives would require energy for day-to-day operations and the action alternatives require materials for construction. Quantification of the energy required for the options is not addressed in this environmental assessment. The NPS is committed to energy and resource conservation in facility planning and development as documented in Executive Orders 12873 and 12902.

All of the action alternatives would include the rehabilitation of the Lodge and facilities for overnight stays on the site which would all require energy for operations. This impact topic will be retained for further evaluation.

#### Socioeconomics

CEQ regulations for implementing NEPA, 40 CFR 1500, require economic analyses of federal actions that would affect local or regional economies. Socioeconomic values consist of local and regional businesses and residents, and local and regional economy.

The local and regional economies of this area are strongly influenced by heavy industry and tourism. Should the proposed actions be implemented, short-term economic benefits for project-related expenditures and employment would include economic gains for some local businesses and individuals. While there may be slight short-term benefits to local economies, local and regional businesses would benefit in the long-term from having more scheduled visitation and overnight stays at the Good Fellow Club Youth Camp site in close proximity to residential areas and the commuter rail line. Therefore, socioeconomic values are retained as an impact topic for further evaluation.

## **Impact Topics Dismissed from Further Analysis**

Several potential impact topics were evaluated and dismissed from further consideration. Potential impact topics dismissed and associated rationale follow:

### ***Ethnographic Resources***

Ethnographic resources are defined by NPS as any “site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it (DO-28, Appendix A, page 181). Though there is a relationship with several federally recognized tribes that work with the park on projects, no known ethnographic resources are identified within the project area. This impact topic was therefore dismissed from further consideration.

### ***Indian Trust Resources***

Secretarial Order 3175 requires that any anticipated impacts to Indian Trust resources from a proposed project or action by Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian Trust responsibility is a legally enforceable obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal laws with respect to American Indians. There are no Indian Trust resources associated with the proposed project or action. This impact topic was thus dismissed from further consideration.

### ***Museum Objects***

NPS Director’s Order 28 defines a museum object as “a material thing possessing functional, aesthetic, cultural, symbolic, and/or scientific value, usually movable by nature or design. Museum objects include prehistoric and historic objects, artifacts, works of art, archival materials, and natural history specimens that are part of a museum collection.” The proposed action does not include any design for storage and/or display of museum collections or collections accrued through site archaeology. Therefore, this impact topic was dismissed from further consideration.

### ***Marine or Estuarine Resources***

No marine or estuarine resources are located within the proposed project boundaries. The proposed alternatives would not impact any marine or estuarine resources. This impact topic was therefore dismissed from further consideration.

### ***Unique, Essential, or Important Fish or Fish Habitat***

There are no unique, essential, or important fish or fish habitat areas known to be located within the proposed project boundaries or the areas adjacent to the project site. The proposed action alternatives would not impact any fish or fish habitats. This impact topic was therefore dismissed from further consideration.

### ***Prime and Unique Agricultural Lands***

Prime farmland, as defined by the CEQ 1980 memorandum, has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique agricultural land is land other than prime farmland that is used for production of specific high-value food and fiber crops. These designations are established by the Natural Resource Conservation Service following soil and resource analyses. No lands within the project site have been defined as prime or unique agricultural lands. This impact topic was dismissed from further consideration.

### ***Minority and Low-income Populations***

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental impacts of their programs and policies on minorities and low-income populations and communities.

For the purpose of fulfilling EO 12898 within the context of NEPA, the alternatives addressed in this EA were assessed during the planning process. Although there are minority and/or low-income populations and communities within the county

and region, it was determined that none of the planning alternatives would result in disproportionately high direct or indirect adverse impacts on these groups. Therefore, minority and low-income populations was dismissed as an impact topic. The following information contributed to this conclusion:

- The actions proposed by the alternatives would not result in any identifiable human health impacts. Therefore, there would be no direct or indirect adverse impacts on human health within any minority or low-income population or community.
- The impacts on the natural and physical environment that would occur due to any of the alternatives would not disproportionately or adversely impact any minority or low-income population or community.
- The planning team actively solicited public participation as part of the planning process and gave equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors.
- Impacts on the socioeconomic environment resulting from any of the action alternatives would be negligible. Additionally, any impacts on the socioeconomic environment would not substantially alter the physical and social structure of nearby communities.

### ***Floodplains***

The project area of Good Fellow Club Youth Camp lies outside the 100-year floodplain. Implementation of the proposed alternatives would not adversely affect the natural values and functions of the floodplain or increase flood risks. Therefore, floodplains were dismissed as an impact topic.

### ***Land Use***

The Good Fellow Club Youth Camp study boundary is set in approximately 69.5 acres of woodland in the National Lakeshore. The historic footprint encompasses sixty-three of those acres. The study area consists of woodlands, open areas, historic camp buildings, and site recreational facilities. The Good Fellow Club Youth Camp is located in the southwest quarter of the southeast quarter of Section 27 of Township 37 North Range 6 West, Town of Porter, Porter County, Indiana. Since 1977, the camp property has been part of the National Lakeshore, which currently comprises approximately 15,000 acres in Lake, Porter, and LaPorte counties, in irregular parcels within Gary city limits on the west and Michigan City city limits on the east. Residences and businesses in the Town of Porter and Porter County would not be impacted by the proposed action. Because the project area is on NPS property, and thus federally owned, there is no local zoning designation for this area. The alternatives, including the no action alternative, would be consistent with surrounding existing land use, and would not change any adjacent land use. The surrounding land use by the DLC is compatible with the Park's General Management Plan.

In 1997 and 1998, the DLC was developed southwest of the historic camp site. This included the construction of ten new camper cabins and a new wood-sided lodge that included meeting and dining facilities with kitchen and restrooms for environmental education programming and events. Through verbal agreement with the NPS, the DLC has use of the staff cabin, the Director's cabin, the gatehouse, the caretaker's house and garage, the lodge (storage at present) and its parking, the former tennis court for programs, the main gate for access, the gravel drive, picnic shelter, native plant garden, steel footbridge, main and overflow parking areas, the floodplain and forest areas for interpretive educational programs.

The alternatives presented in this document would not curtail the DLC from continuing to provide environmental education programs and events nor is it the purpose of this EA to propose management alternatives for the DLC's use of the property. The alternatives presented in this document will not impact the use of the Field Station Preschool. Proposed uses for the Good Fellow Club Youth Camp in the alternatives may increase visitor volume on the hike/bike trail along Howe Road that is part of the Porter Brickyard Trail connection and vehicular traffic use of Howe Road. This potential impact from increased visitation is included for analysis in the impact topics of Air Quality; Recreational Resources and Visitor Use and Experience; and NPS Operations and Infrastructure. The overall use and purpose of the site would be consistent with planning documents and adjacent land use; therefore, land use was dismissed as an impact topic.

# Chapter 2 • Alternatives

## 2.0 INTRODUCTION

The alternatives that follow explore a range of options for the potential expansion and rehabilitation of the Good Fellow Club Youth Camp that meet the park's purpose and objectives while protecting or minimizing impacts on its resources. Several alternatives were considered and dismissed because they did not meet project objectives or they had the potential to produce an unacceptable level of adverse environmental or visitor use impacts. Furthermore, the draft alternatives are consistent with applicable NPS laws, policies, and regulations, as summarized in Chapter 1. The alternatives under consideration are listed below:

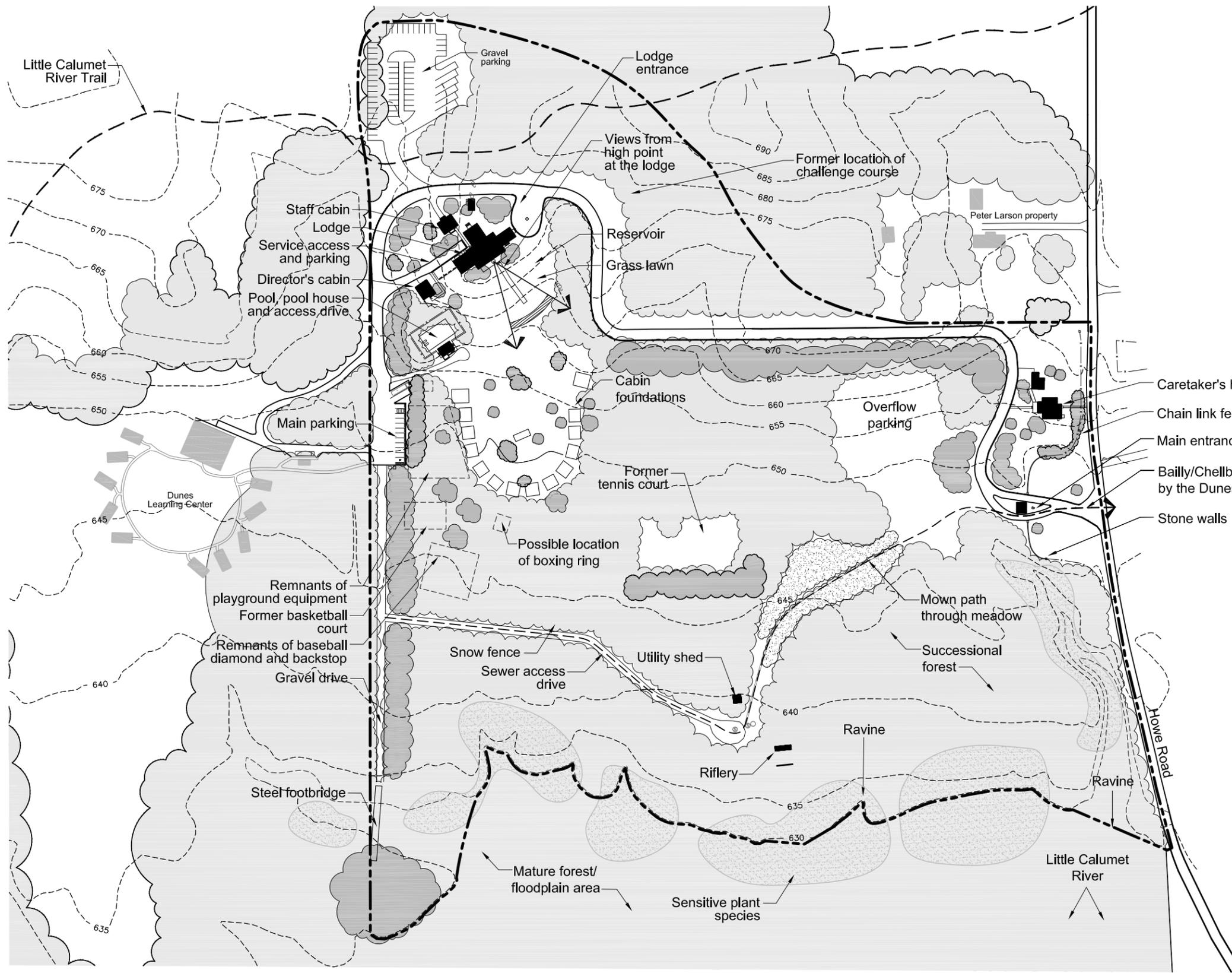
- Alternative A (No Action): Continue Current Management of Existing Landscape Patterns and Features
- Alternative B: Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth
- Alternative C: Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities
- Alternative D: Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental.

Although the option of continuing current management (Alternative A: No Action) does not solve the need for rehabilitation of the Good Fellow Club Youth Camp site and facilities and potential expansion, it is examined here because current conditions are used as the baseline against which the action alternatives are analyzed. This is the context for determining the relative magnitude and intensity of impacts (NPS 2001). Two additional alternatives – one that would have the NPS develop and manage the site exclusively and another in which the NPS partnered with the Dunes Learning Center (DLC) – were considered but dismissed because they were determined to be unreasonable, as explained in “2.6 Alternatives Considered and Dismissed.” Once the action alternatives were developed and discussed, the planning group then further evaluated the alternatives, both advantages and disadvantages which led to the identification of the NPS Preferred Alternative.

### 2.1 ALTERNATIVE A (NO ACTION): CONTINUE CURRENT MANAGEMENT OF EXISTING LANDSCAPE PATTERNS AND FEATURES

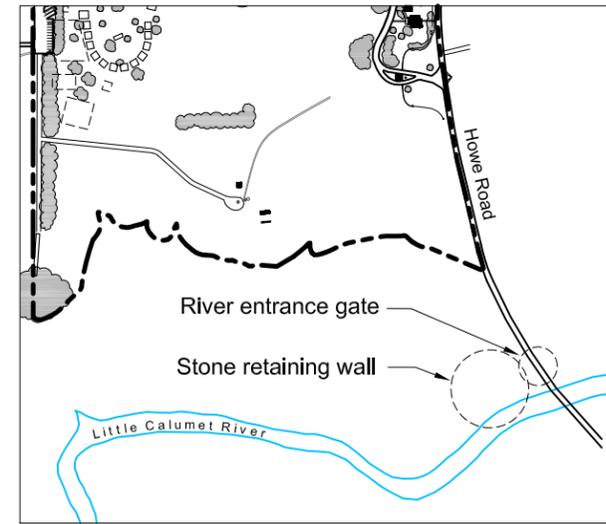
Under the No Action alternative the park would continue to maintain the existing landscape patterns and features of the Good Fellow Club Youth Camp site in their current condition. The successional oak-hickory woodland that occupies much of the formerly open camp site would remain and current mowing and vegetation management regimes would continue. Overall treatment of the landscape would focus on maintaining existing conditions. Land uses of the site would continue to include the DLC's use of the following:

- The lodge and its parking for staff use and storage.
- The cabin foundations for programs
- The staff cabin
- The Director's cabin
- The caretaker's garage for storage
- The caretaker's house for naturalist interns housing
- The former tennis court for programs
- The gatehouse for warming shelter during winter survival training



**LEGEND**

- Study Area Boundary
- Park Trail
- Trails
- Walkways
- Gravel Road
- Paved Road
- Fence
- Buildings in Study Area
- Buildings Outside of Study Area
- Remnant Recreational Features
- Cultivated/Remnant Plantings
- Forest
- Sensitive Plant Species
- Maintained scrub brush



Scale 1 inch = 200 feet  
 Map prepared by John Milner Associates, Inc.  
 Sources: AutoCAD files, 1946 Plot Plan, historic photographs, and GIS data provided by NPS in 2005.

**A/E FIRM**  
 PRIME:  
 Bahr Vermeer & Haecker Architects, Ltd.  
 Lincoln, NE  
 CONSULTANT:  
 John Milner Associates, Inc.  
 Charlottesville, VA

**DRAWN:**  
 JM, CMO  
**TECH. REVIEW:**  
 JJ, LK  
**DATE:**  
 OCTOBER 2009



**TREATMENT ALTERNATIVE:**  
 NO ACTION **A**  
**GOOD FELLOW CAMP**  
**INDIANA DUNES NATIONAL LAKESHORE**

**MAP**  
**1**

- The gravel drive, picnic shelter, native plant garden and steel footbridge
- The main and overflow parking areas
- The floodplain and forest areas for interpretive educational programs
- The main gate

With the No Action alternative, areas of the camp that were open historically but have re-vegetated would remain in this state of succession. The primary actions involving vegetation management would include the removal of invasive plant species and trees that pose a hazard to buildings and the safety of visitors. Turf and field areas, where they do remain, would continue to be mown and kept clear. Surviving culturally derived plantings such as the white and scotch pines, apple trees, shade trees, and arborvitae would continue to be maintained in their current condition although continued growth of the successional woodland community may interfere with the growth habit and health of some of these plantings over time.

Other management activities that would occur under the No Action alternative include ongoing maintenance of all contributing buildings, structures, circulation, and small-scale features in their current condition. There is special concern for the current condition of the Lodge and the need for rehabilitation in order to adequately protect the historic structure and prevent further deterioration and undermining of the building from water and weather damage. Features that are currently in poor condition (such as the steel bridge, riflery, flagstone walk at the lodge, stone retaining wall along the river, and steel swimming pool), and which are in need of restoration, may not survive under this alternative.

## 2.2 ELEMENTS COMMON TO THE ACTION ALTERNATIVES

In consideration of the need to protect the integrity and character defining qualities of the Good Fellow Club Youth Camp, the recommended treatment approach in the alternatives is **rehabilitation**. All rehabilitation work on historic buildings, structures, recreational features and the cultural landscape will comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* and *NPS Director's Order #28 (20-28) Cultural Resources Management Guidelines* and the basic principles for rehabilitation. All of the alternatives are conceived to help protect the Good Fellow Club Youth Camp landscape while promoting an active use for the site that is also economically sustainable. However, each alternative involves changes to the landscape that would affect the site, the visitor, and park operations to varying degrees. It is assumed that future development of Good Fellow Club Youth Camp will necessitate at least the following eight pursuits:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Restoration and reuse of some or all historic recreational features
- Management of vegetation
- Provision of access for both vehicles and visitors on foot. This would include universal accessibility for parking, access to buildings, and access to outdoor program and interpretive spaces and trails where possible.
- Expansion of parking
- Enhancement of interpretation
- Environmental mitigation and sustainable design

The degree to which alternatives successfully address these elements varies as does the need for mitigation of their potential impacts to cultural and natural resources. These elements common to all action alternatives are discussed briefly below.

### **Adaptive Reuse of the Lodge**

The lodge is the center of the Good Fellow Club Youth Camp, and a key historic feature of the National Register-eligible property. In all of the proposed action alternatives the lodge is recommended for *rehabilitation*, which is the process of returning a building or structure to a useful state through repairs or alteration while retaining its most significant historic

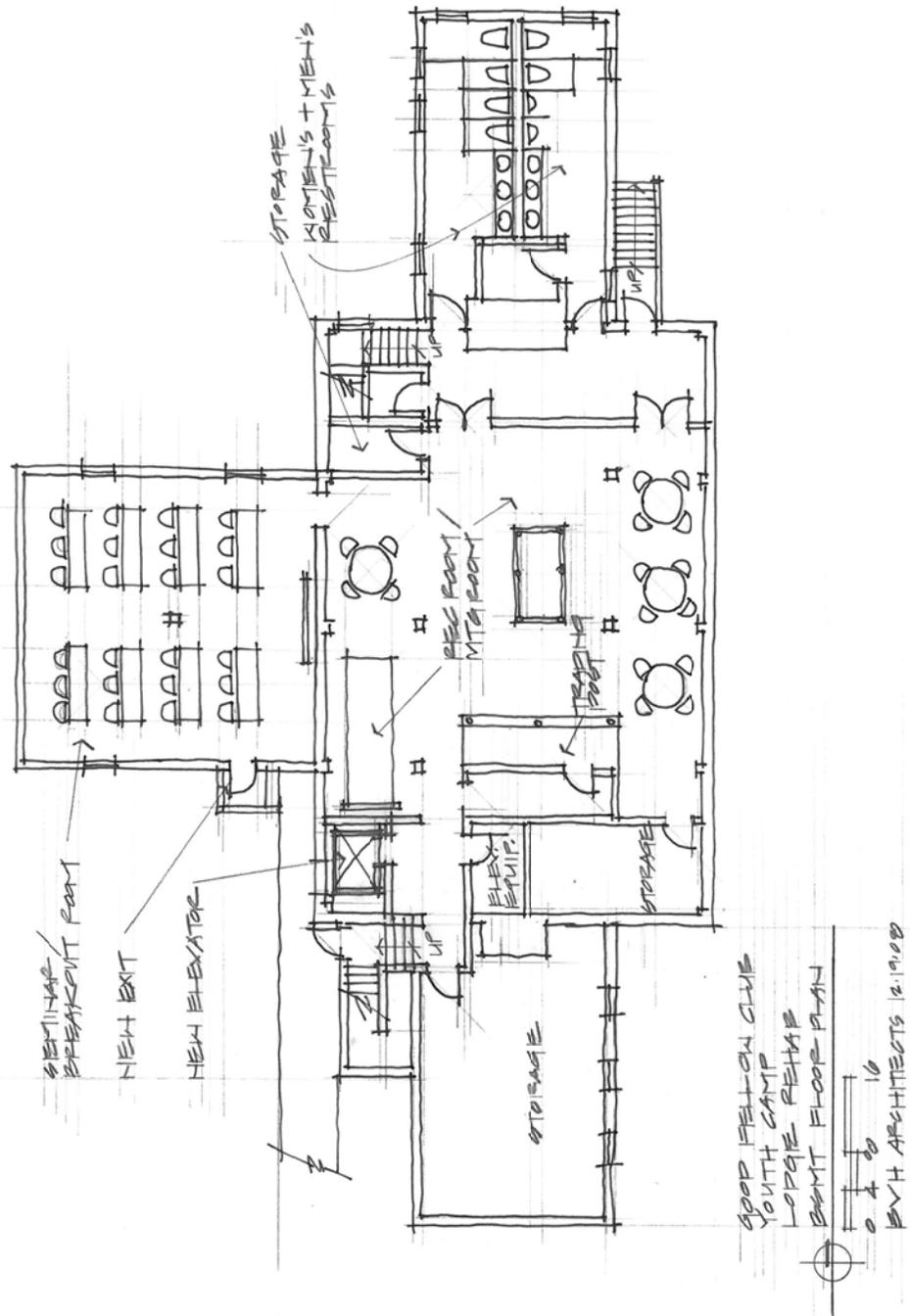


Figure 4. Lodge Rehabilitation: Basement Floor Plan.



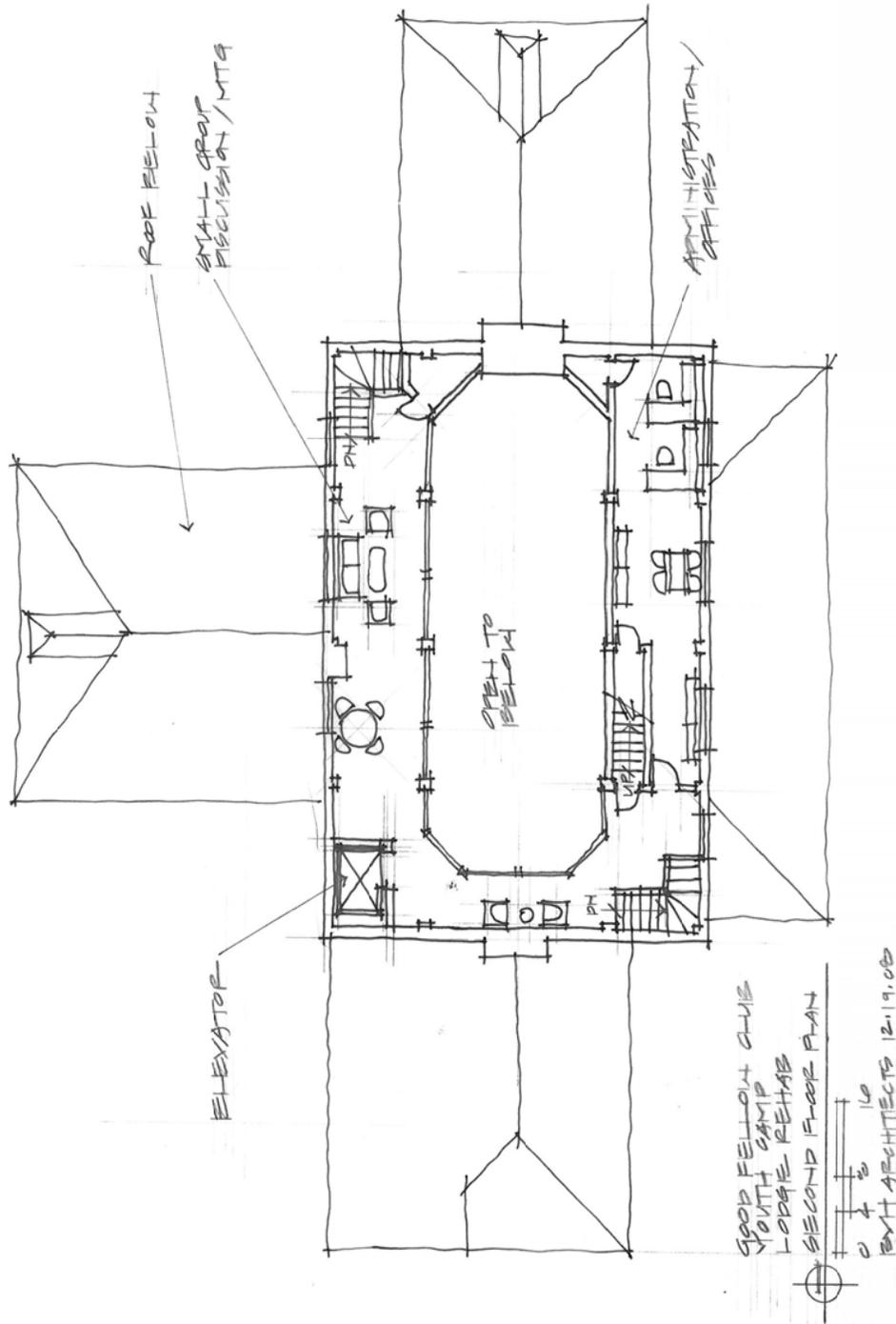


Figure 6. Lodge Rehabilitation: Second Floor Plan.

elements. This approach, as described in *The Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*, is recommended in all the alternatives so that the lodge can be adapted to accommodate a wide variety of programs while retaining its original building materials. A rehabilitation approach allows for some alterations and additions when they facilitate more efficient and contemporary uses without obscuring the historic character of the building.

Key components of rehabilitation include: identifying, retaining, and preserving character-defining features; protecting and maintaining historic materials and features; repairing historic materials with the least degree of intervention possible; and replacing an entire character-defining feature with new material if deterioration or damage precludes repair. Rehabilitation permits some exterior and interior alterations to allow continued use of the historic building, but such alterations should not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes. Other considerations that may require alterations to the building include energy efficiency, accessibility, and health and safety code compliance. Care must be taken not to radically alter character-defining materials or features in the process of meeting code requirements.

Rehabilitating the lodge allows the NPS to maintain its integrity while incorporating features that will increase its flexibility for increased programming, such as: multi-purpose meeting rooms, spaces for informal gatherings, food preparation areas and catering amenities, and rooms for storage and administration.

The main entrance to the lodge will be accessible and located at the east wing in its historic location. The east wing will be rehabilitated to function as the main entrance lobby and waiting area. The historic two-story great hall and north wing will be rehabilitated into a multi-purpose conference room and dining hall. All of the historic elements of these spaces, including the wood paneling, wood trusses, beams, millwork, floors, and the massive stone fireplace will be retained and restored.

The space historically used as a kitchen will also undergo rehabilitation into a contemporary food preparation facility, a full kitchen that can also support catering services. At the lower level, the historic Trading Post will be restored, additional spaces for meetings and recreation developed, and modern accessible restrooms, ample storage and service areas added. The small second floor level of the lodge will contain administrative offices and spaces for small group meetings. The third floor will be restricted to non-public uses such as additional storage. The southwest corner of the lodge will be adapted with an ADA-accessible elevator. Additional code improvements will also be made to address federal accessibility requirements and any International Building Code deficiencies.

The exterior of the lodge is also in need of extensive rehabilitation. The site needs grading for improved drainage, the siding, windows and roof need repair and restoration, and the main porch needs to be restored. The existing mechanical and electrical systems are outdated and need to be upgraded to incorporate energy efficient and more sustainable systems, such as a geothermal heat pump HVAC system. Modern fire protection systems will also be required to protect occupants as well as the historic resources.

## **Construction of New Camping or Lodging Facilities on the Footprints of the Historic Camp Cabins**

Each of the alternatives accommodates overnight guests at the site, either as part of a traditional camp experience, an educational environment, or conference, events, and activities rental venue. Initial lodging offerings would be best sited on the existing footprints of the historic camp cabins that form a horseshoe shape facing the lodge. The exterior design of these lodging facilities should be contemporary and modest, and incorporate traditional local materials so that they do not detract from the historic setting. The design of the interiors and level of finish should reflect the use promoted by the selected alternative. Visual and physical connections between the interior of the cabins and the outdoors should be promoted in their design.

## **Restoration and Reuse of Historic Recreational Features**

Many of the recreational features associated with the historic Good Fellow Club Youth Camp are missing, in poor condition, or deteriorating. These features will be important to the overall adaptive reuse design of the site depending on the alternative selected. Recreational features in poor or declining condition that contribute to the programmatic use of the site will require restoration. Reestablishing missing camp recreation features is recommended particularly for Alternative B. Repairing or

adaptively reusing some of the recreational features is recommended for Alternatives C and D. Features that are not consistent with the programmed use and pose a threat to visitors, such as outdated play equipment, are recommended for documentation and removal.

## **Vegetation and Adaptive Land Management**

All of the action alternatives require change to existing vegetation and adaptive land management to various degrees. Native and deciduous successional woodland has claimed much of the formerly open central portion of the site. This area was once managed as turf lawn for active recreation and outdoor gatherings. Trees are recommended for removal in both Alternatives B and D to accommodate specific programmatic needs. For Alternative B, the goal is to restore the historic camp uses for which this area was a primary focus. For Alternative D, designated open space may be needed to accommodate outdoor events. One of the main concerns related to removing the existing woodland, however, is that it may lead to increased maintenance requirements and costs. Tree clearing, particularly on sloped areas, must be accompanied by the ability to quickly establish an alternative land cover and maintain it long-term. If the clearings are not maintained then saplings, weeds, and invasive plant species will quickly re-colonize the site. Tree clearing will constitute a loss of wildlife and plant habitat for some existing species that require forest cover. Clearing may also contribute to erosion and may have a negative impact on water quality due to an increase in particulate matter reaching water resources.

Turf grass is the primary vegetative cover anticipated for use within areas of visitor activity. Turf grass is maintained through periodic mowing. Different parts of the site could be mowed with more or less frequency depending on a variety of factors. For instance, areas that are close to the road or lodging or activity areas should be mowed more frequently than areas where it may be possible to establish alternative ground covers that would require less frequent mowing.

Alternative C assumes retention of the majority of the existing tree cover for environmental education. It is likely that the woodland area will best protect the site from soil erosion, provide wildlife habitat, and promote infiltration of stormwater into the groundwater system.

## **Access and Parking**

Access through the main gate at the Good Fellow Club Youth Camp remains the same in all the alternatives and will continue to be shared with the DLC. Parking is expanded in each alternative to accommodate new uses of the Good Fellow Club Youth Camp and also to provide the DLC with parking based on their current needs and programs. However, access and parking are variable and may be relocated as part of the overall planning for Howe Road.

As stated in the purpose and need for this document, the site in and around the historic lodge should meet Uniform Federal Accessibility Standards for accessibility to the greatest extent possible. There should be an accessible route between the lodge and near-by UFAS accessible parking as well as routes to other areas of educational value.

The internal access loop trail is retained in each alternative. The DLC will continue to use this trail and other existing and proposed trails in the study area.

## **Enhancing Interpretation**

All of the treatment alternatives assume an interest on the part of the park in enhancing the interpretive program at Good Fellow Club Youth Camp and suggest a range of possibilities for doing so. Improved interpretation will benefit the public in many ways, including engendering an appreciation for the site and its history and a sense of stewardship of its resources. It will also help the park to meet its stated mission and purpose. Improving interpretation at the site could take many forms. As noted above, clearing some of the forest that has encroached on the camp will both facilitate recreational use and an understanding of the camp's historic condition. Interpretation may be enhanced by linking the Good Fellow Club Youth Camp to other historic park sites such as the Bailly Homestead, the Field Station Cooperative Preschool and the Peter Larsen Site (Sears House). Interpretation may also be enhanced through indoor and outdoor exhibits as well as use of digital technologies. Also, the DLC programs are designed to enhance interpretation of INDU's historic and natural resources and there will be continued coordination and cooperation with the DLC on exhibits and interpretation. Some alternatives

recommend a combination of strategies, and the proposed ideas are not mutually exclusive. Different degrees or versions of the strategies presented could be implemented depending on available budget or other criteria.

### **Mitigation and Sustainable Design**

The NPS has adopted sustainable design as one of the guiding principles of planning and development. The objectives of sustainability are to design structures to minimize adverse impacts on natural and cultural values; to reflect their environmental setting; to maintain and encourage biodiversity; to construct and retrofit facilities using energy efficient materials and building techniques; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use. Essentially, sustainability is living within the environment with the least impact on the environment. All of the action alternatives subscribe to and support the practice of sustainable planning and design and minimizing adverse impacts on the natural environment. Action alternative objectives are to meet the purpose and need of the project while maintaining sustainable design. Mitigation efforts also help to achieve sustainable design.

Best management practices (BMPs) are defined as effective, practical or feasible (including technological, economic, and institutional considerations) conservation practices and management strategies that avoid or minimize adverse impacts to natural and cultural resources. BMPs are often used to control soil loss and reduce water quality degradation caused by nutrients, animal wastes, toxics, and sediment moving from the land to surface or ground water. They can also be innovative and dynamic and provide improved environmental protection practices for landscape management procedures of many types. BMPs may target a variety of endeavors, for instance forestry or silviculture and tree clearing, landscape installation, landscape maintenance, riparian buffer preservation, or turf management. BMPs must be reasonable, achievable and cost-effective to adopt and use.

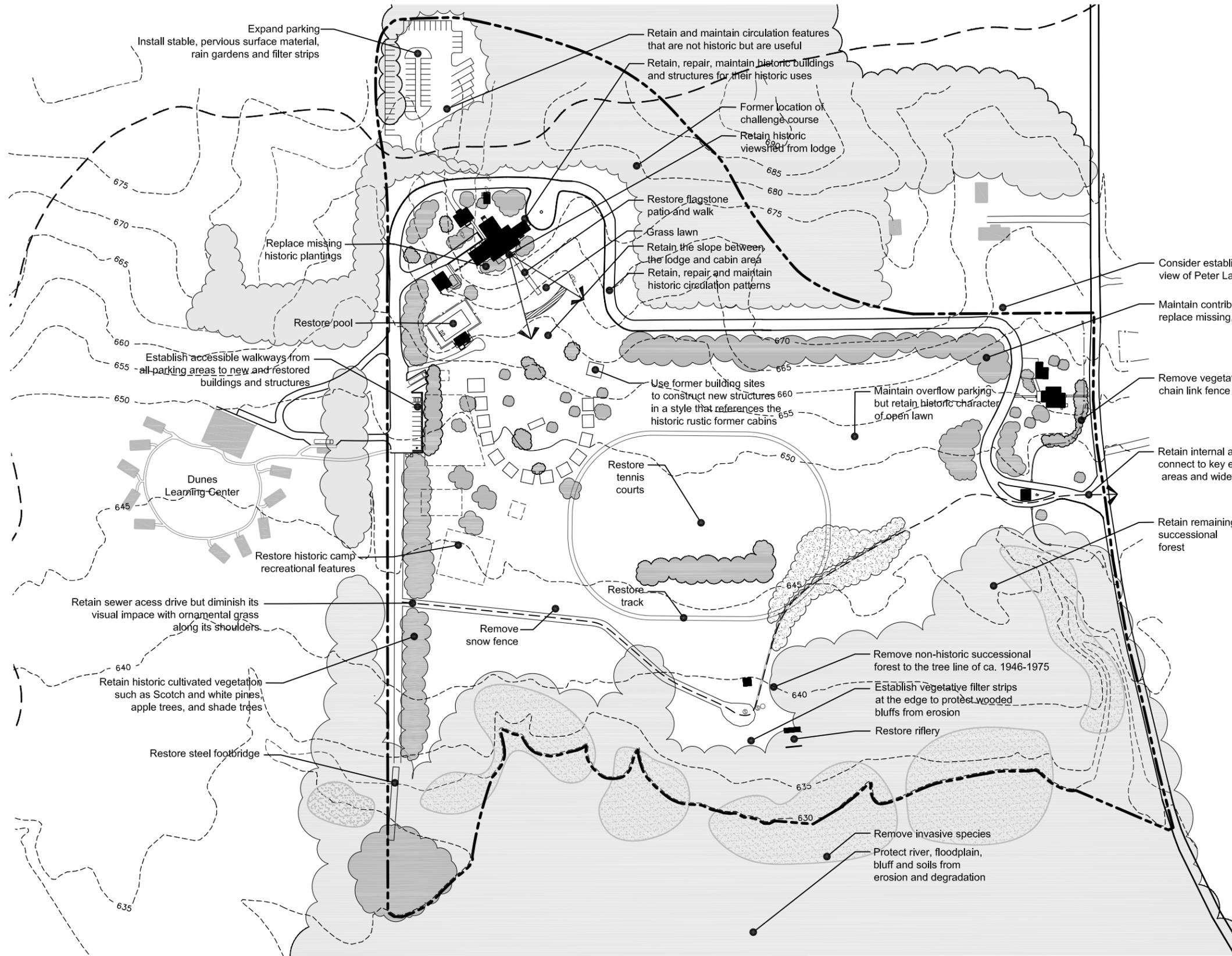
At Good Fellow Club Youth Camp it is recommended that BMPs be developed to support implementation and management of each of the alternatives. At a minimum, BMPs need to be developed for site clearing, turf cover establishment and maintenance, and invasive plant control.

### **2.3 ALTERNATIVE B: REHABILITATE THE HISTORIC GOOD FELLOW CLUB YOUTH CAMP TO ACCOMMODATE ITS TRADITIONAL USE AS A RECREATIONAL CAMP FOR YOUTH**

Under this alternative the NPS, potentially in concert with local partners, would rehabilitate the Good Fellow Club Youth Camp landscape in support of re-establishment of its traditional use as a recreational camp. Rehabilitation would focus on accommodating the contemporary programmatic needs of a relatively rustic camp. Historic landscape features would be retained, maintained, repaired, and/or restored to establish a new camp. Modeled on the historic programs of the Good Fellow Club Youth Camp, the new camp would be active during both the traditional summer period as well as expanded spring and fall shoulder seasons to augment the potential revenue stream. Lost or degraded historic resources that would be desirable components of the new camp, such as cabins, lawn and playing fields, a campfire circle, picnic areas, archery and rifle ranges, a swimming pool, and trail connections to the river would be reestablished based on historic documentation.

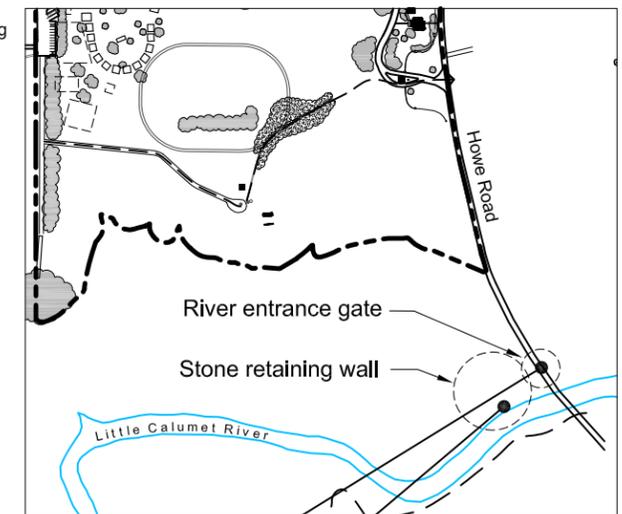
Historic maps, plans, aerial photographs, ground photographs, and other records, would guide the rehabilitation and closely approximate the Good Fellow Club Youth Camp's historic operational conditions. While the lodge, former cabins, caretaker's house, and site entrance areas are currently maintained in open vegetative cover, much of the remainder of the formerly open site has been allowed to undergo secondary succession, and is now characterized by a young oak-hickory forest. Under this alternative the successional forest areas would be cleared and returned to a low-growing turf or meadow vegetation, although the forest would be retained in areas identified as important to sensitive plant communities or where there are steep slopes. The DLC would have shared use of the forested area with the NPS and any new uses developed for this alternative. The new vegetative cover type would be selected to meet sustainability criteria such as drought tolerance and low-frequency mowing requirements.

The existing overflow parking site would remain but be managed to retain an unobtrusive character that would be as open and uncluttered as the surrounding landscape. To address any potential impacts to the sensitive slopes and plant communities associated with the river bluffs to the south, a filter strip is recommended for the south edge of the open field on the restored



**LEGEND**

- Study Area Boundary
- Park Trail
- Trails
- Walkways
- Gravel Road
- Paved Road
- Fence
- Buildings in Study Area
- Buildings Outside of Study Area
- Remnant Recreational Features
- Cultivated/Remnant Plantings
- Forest
- Sensitive Plant Species
- Maintained scrub brush



Document and stabilize entrance gates and columns

Document and stabilize retaining wall along river

0 100 200 400

Scale 1 inch = 200 feet

Map prepared by John Milner Associates, Inc.  
Sources: AutoCAD files, 1946 Plot Plan, historic photographs, and GIS data provided by NPS in 2005.

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**TREATMENT ALTERNATIVE: B**

TRADITIONAL RECREATIONAL CAMP USE

**GOOD FELLOW CAMP**  
INDIANA DUNES NATIONAL LAKESHORE

forest edge. Maintenance, and replacement in-kind if necessary of culturally derived historic plantings, including the white and scotch pines, apple trees, shade trees, and arborvitae, is also recommended – but only if these are still considered non-invasive. Missing historic plantings, such as the cedars that once flanked the lodge porch, would be replanted.

Under this alternative historic land uses and activities would be reinstated, such as lodging and recreation. Current non-historic use of the lodge as a storage facility would end. Repair and adaptive reuse of historic buildings is recommended to accommodate the needs of the new camp. Every effort would be made to retain the historic character and configuration of contributing buildings and structures, including the Good Fellow Lodge, Pool House, Director’s Cabin, Staff Cabin, Pump House, Caretaker’s House and Garage, Gatehouse, and steel bridge.

To further support restored use of the site as a camp, new structures would be established on the concrete pads that mark the sites of the former cabins. The design of these structures would be based on either the historic tent cabin structures used by the camp in the 1940s, or the wood cabins present in the 1970s. Interior building character and use would be permitted to deviate from historic uses under this rehabilitation strategy. Non-contributing structures (sewage pump station, underground reservoir) would be retained and maintained as long as they continued to serve a useful purpose.

Historic site circulation features would be retained, repaired, and maintained in good condition. Deteriorated features such as the flagstone walk and patio associated with the lodge would be repaired, with missing sections reestablished. Historic trails, including access to the river and a boat launch area, would be reestablished based on historic documentation. Universally-accessible walks would be established to provide connections between road and parking and the primary features of the camp. Non-historic circulation would be maintained as long as it continues to serve a useful purpose. The DLC will continue to have use of trails through the historic site for programs and hiking.

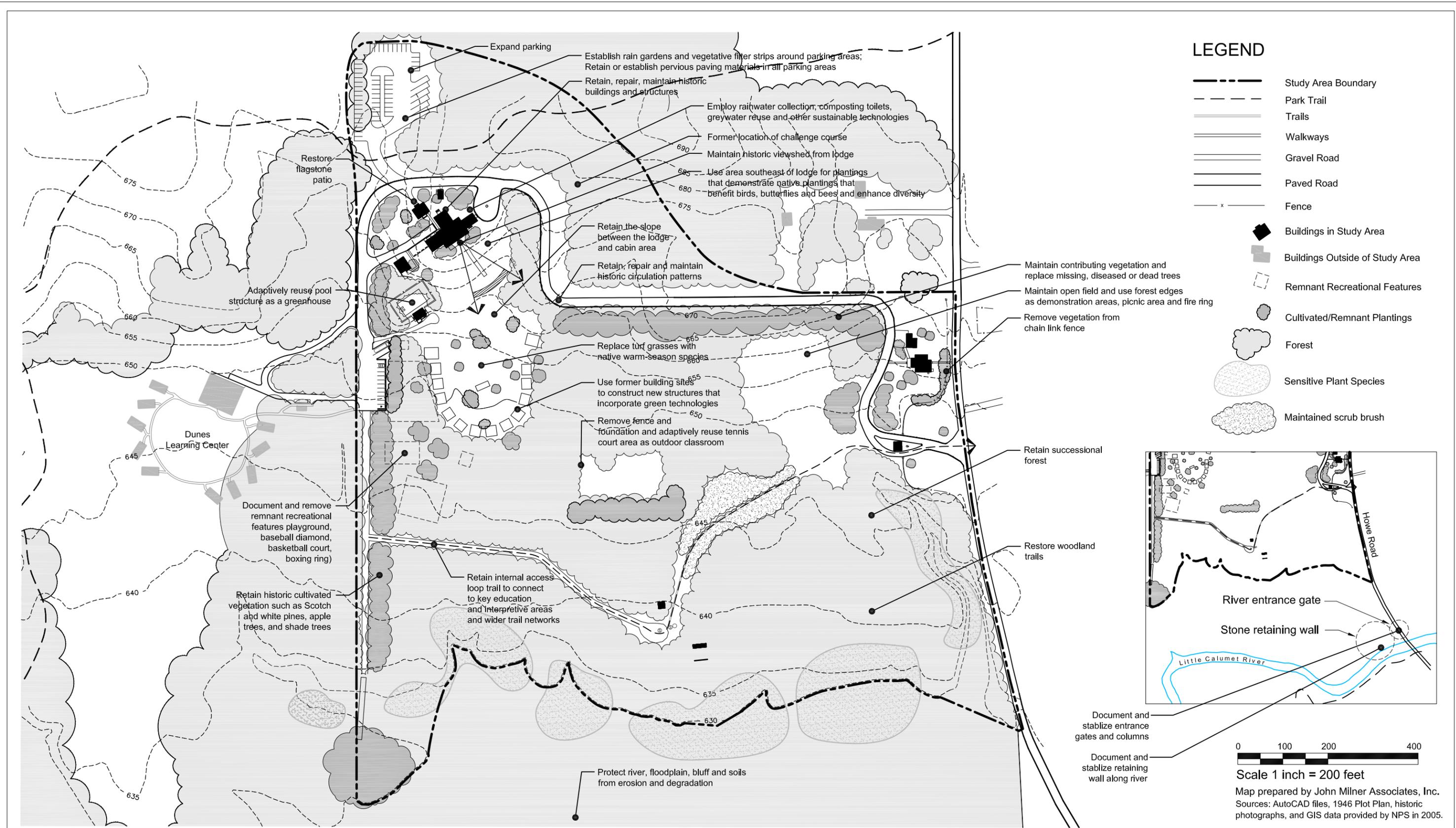
Surviving historic recreation features, such as the swimming pool, riflery, tennis courts, and checkerboard, are recommended for restoration and reuse by the camp. Missing historic recreation features, such as the baseball diamond, boxing ring, archery range, horseshoe pits, croquet court, basketball court, badminton court and running track are recommended for reestablishment if sufficient historic documentation exists to guide their siting and design, and if they will be used by the camp. Other small scale features that are recommended for repair or reestablishment include the Good Fellow Club Youth Camp sign that hung next to the entrance, the sign on the roof of the gatehouse, the campfire circle south of the steel bridge, and the stone wall along the river. Given the evolution of safety standards for playgrounds since the 1970s, documentation and removal of any surviving equipment is recommended under this alternative. Replacement with contemporary equipment in the same location is recommended.

Also, this alternative recommends the documentation, stabilization and maintenance of the historic retaining wall found along the Little Calumet River and maintenance of the historic stone columns near Howe Road.

The intent of this alternative is to restore the camp to its historic condition to the fullest extent possible while also upgrading its facilities for active and increased contemporary use. It is the alternative that recommends clearing the most trees from where they have encroached upon the camp’s former open clearings.

## **2.4 ALTERNATIVE C: REHABILITATE THE HISTORIC GOOD FELLOW CLUB YOUTH CAMP TO ENHANCE ENVIRONMENTAL LEARNING OPPORTUNITIES**

Under this alternative the NPS, engaged in a partnership with a public or private entity and in coordination with the DLC, would rehabilitate the Good Fellow Club Youth Camp site as an environmental education center for programs and activities that would not be incompatible with the adjacent DLC. Surviving historic camp features would be retained, maintained, and adaptively reused, but missing historic elements and patterns of spatial organization would not be reestablished. The successional forest, specialized vegetation communities, and other natural elements of the site would be featured in environmental education programs. Maintenance of the site would follow a set of best management practices developed specifically for the property to promote environmental stewardship and the protection of historic resources. Management strategies would be linked to the educational programs conducted at the site. For example, the successional oak-hickory forest that currently occupies the camp’s formerly open grassy field would be studied to record and analyze change over time as an aid to understanding ecological principles and processes. Invasive plants that interfere with native plant communities would be removed and controlled. Native plants that are threatened or provide habitat for local wildlife species of interest would be planted and their associated vegetation communities promoted. Turf grasses would be replaced with native warm-



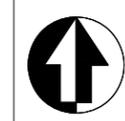
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**TREATMENT ALTERNATIVE: C**

ENVIRONMENTAL LEARNING CENTER

**GOOD FELLOW CAMP**

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**MAP 3**

season grasses and forbs. Other environmental processes in evidence on the site would be revealed through the interpretation and demonstration of green technologies. For example, stormwater management strategies that promote collection of rainwater for reuse, infiltration of runoff into the groundwater system, and removal of sediments such as rain gardens, filter strips, cisterns, rain barrels, and detention areas would be established in association with building and circulation systems.

Existing historic buildings, such as the lodge, would be rehabilitated to accommodate classroom, meeting, training, laboratory, and family camping uses. The Director's Cabin, Staff Cabin, and Caretaker's House have already been rehabilitated and probably will remain DLC facilities. The Pump House has also been rehabilitated and houses a booster pump and chlorination system for the site's water service. Rehabilitation of the site and the historic building would adhere to a set of guidelines developed to protect the historic integrity of the National Register-eligible property. In addition, green building principles and technologies would be applied to all aspects of the rehabilitation.

Should the existing buildings and structures prove insufficient to accommodate the needs of the facility, additional lodging, classroom, laboratory, storage, and training facilities would be established using the existing concrete pads that mark the former site of the Good Fellow Club Youth Camp cabins. The architecture and design of the new facilities would be contemporary and compatible with the historic setting, and green building principles would be applied to their construction.

Historic circulation systems would be retained and maintained, while unnecessary non-contributing circulation systems would be removed. The NPS and its partner would explore replacement of impervious pavements with permeable paving systems, and associated stormwater management systems that promote infiltration, detention, cleansing, and collection. Universally accessible trails would be developed to provide connections between roads, parking and primary site destinations. Woodland trails would be established to connect the camp with the river, the DLC, and adjacent park trail and bike trail systems. These trails would be designed to have as little environmental impact as possible.

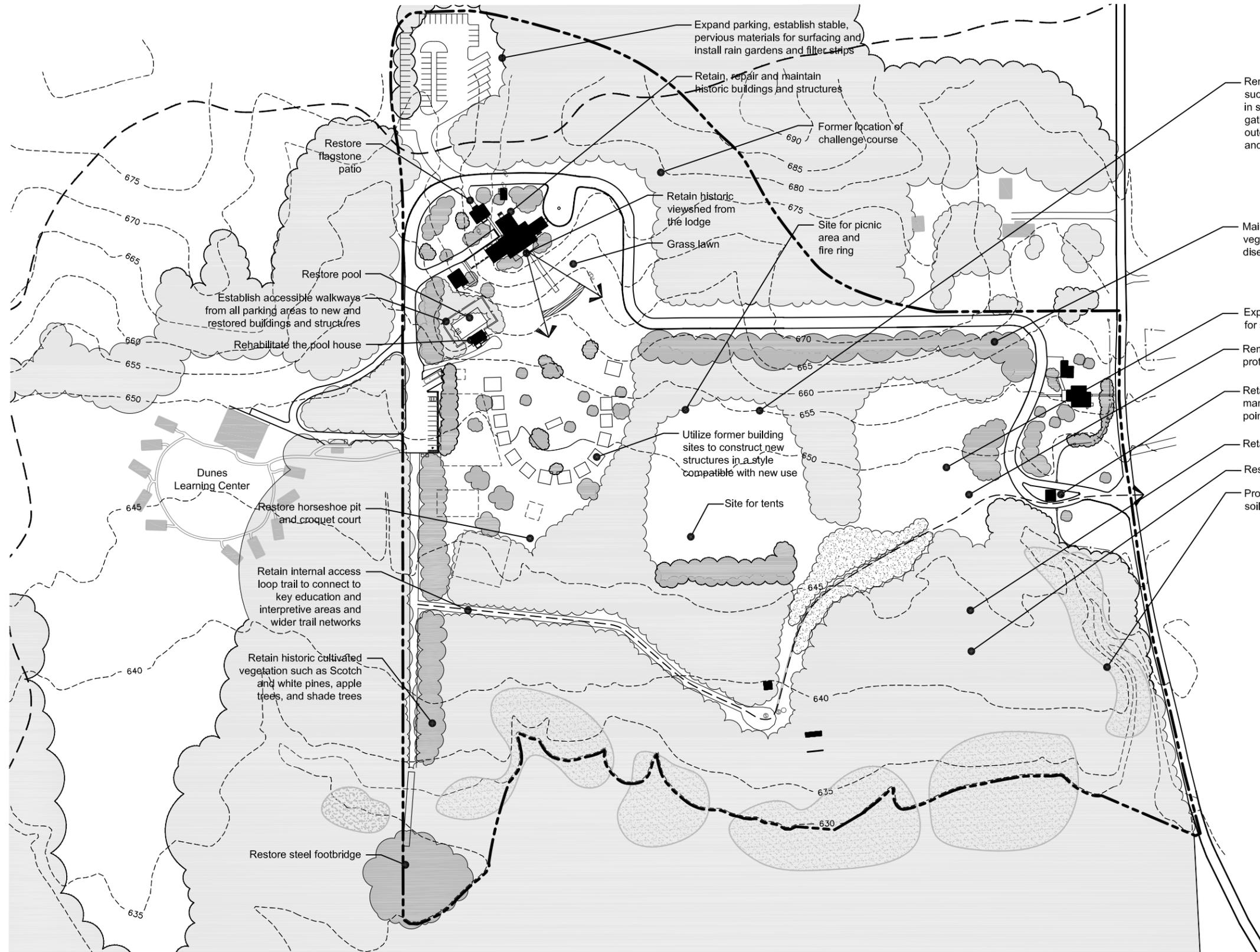
Former recreational features in poor or unsafe condition, such as the swimming pool, riflery, and playground equipment, would be documented and removed, while other existing historic recreation features would be stabilized and maintained, but not repaired for use. The tennis court site would be adapted for use as an outdoor classroom area.

Also, this alternative recommends the documentation, stabilization and maintenance of the historic retaining wall found along the Little Calumet River and maintenance of the historic stone columns near Howe Road.

The intent of this alternative is to build upon the mission of the DLC and emphasize environmental stewardship alongside the camp's rehabilitation. As such, it is the alternative that recommends the least amount of vegetation clearing from the site.

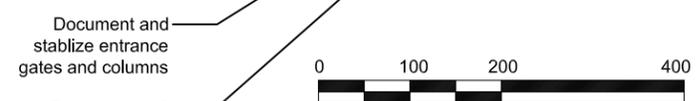
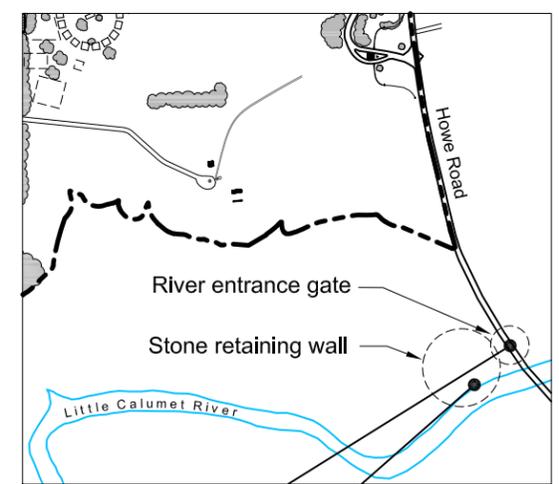
## **2.5 ALTERNATIVE D: REHABILITATE THE HISTORIC GOOD FELLOW CLUB YOUTH CAMP TO ACCOMMODATE CONFERENCES, EVENTS, AND ACTIVITIES RENTAL (NPS PREFERRED ALTERNATIVE)**

This alternative assumes a partnership between the NPS and a third party interested in sensitively rehabilitating the Good Fellow Club Youth Camp site for commercial special events and activities rental such as conferences, professional and recreational retreats, and other types of events. Any commercial activity would be addressed in a commercial services plan which the park is initiating. All activities would be in keeping with the plan and appropriate for the site and the surrounding land use. In addition to offering the overall camp landscape as an attraction this alternative would require developing reception areas, kitchen facilities and overnight lodging, and adaptations for universal accessibility so that the facility could host events for clients with disabilities. Existing historic buildings would be adaptively reused to accommodate the programmatic needs of the third party. The third party would be permitted to construct additional buildings; as with the previous alternatives, they would need to be sited on the existing concrete pads that mark the former cabin sites. The exterior design of the new buildings would be expected to be contemporary, yet compatible with the historic setting. The level of finish and details of the interiors of new buildings would be permitted to meet the needs and target audience of the facility. Structures currently in use by the DLC could be available for the programmatic needs of the new management. Existing uses by the DLC could be relocated. INDU remains committed to ensuring that any activities or events of a third party would not be incompatible with the DLC. As portions of the site change, there would be negotiations between NPS and the DLC for alternative uses and locations.



- ### LEGEND
- Study Area Boundary
  - Park Trail
  - Trails
  - Walkways
  - Gravel Road
  - Paved Road
  - Fence
  - Buildings in Study Area
  - Buildings Outside of Study Area
  - Remnant Recreational Features
  - Cultivated/Remnant Plantings
  - Forest
  - Sensitive Plant Species
  - Maintained scrub brush

- Remove non-historic successional forest in select sites for gatherings, activities, outdoor receptions and events
- Maintain contributing vegetation and replace missing, diseased or dead trees
- Expand overflow parking for shared use
- Remove invasive species and protect woodland native species
- Retain gatehouse for new management utilization as a point of entry and for site security
- Retain successional forest
- Restore woodland trails
- Protect river, floodplain, bluff and soils from erosion and degradation



Scale 1 inch = 200 feet

Map prepared by John Milner Associates, Inc.  
Sources: AutoCAD files, 1946 Plot Plan, historic photographs, and GIS data provided by NPS in 2005.

- Document and stabilize entrance gates and columns
- Document and stabilize retaining wall along river

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**TREATMENT ALTERNATIVE: D**

CONFERENCES, EVENTS, AND ACTIVITIES RENTAL  
(NPS PREFERRED ALTERNATIVE)

**GOOD FELLOW CAMP**  
INDIANA DUNES NATIONAL LAKESHORE

Rehabilitation of the landscape would accommodate the anticipated needs for outdoor activity associated with the facility, such as tented events and recreational opportunities. To that end, this alternative indicates selected clearing of existing woodland within the center of the site and establishment of open turf or meadow for outdoor activities and gatherings. Native woodland plants would be retained and protected and invasive species would be removed. Portions of the cultural landscape could be restored with particular attention to spatial organization and viewsheds from the period of significance. This alternative retains the overall character of the landscape setting. The existing overflow parking area will be expanded and there will be continued use of this area by the NPS for festivals and large special events as well as any program needs of the third party. To accommodate recreational needs of guests, this alternative recommends that the swimming pool and pool house be restored and interpreted. Additional recreational trails will be developed within and along the margins of the remaining wooded areas and provide a connection to the DLC, the river and regional trail networks. Universally accessible paths would be developed between roads, parking and key destinations.

Missing historic recreational features such as the horseshoe pits and the croquet court are recommended for re-establishment if sufficient historic documentation exists to guide their reconstruction. Historic resources in fair to poor condition would be stabilized to the extent possible, but not integrated into use of the site. Features in degraded condition that cannot be repaired would be documented and removed.

Also, this alternative recommends the documentation, stabilization and maintenance of the historic retaining wall found along the Little Calumet River and maintenance of the historic stone columns near Howe Road.

In this alternative, to align with Park goals and objectives for all sites, maintenance and management of the Good Fellow Club Youth Camp would follow a set of best management practices developed specifically for the property to promote environmental stewardship and the protection of historic resources. As with Alternative C, environmental processes could be interpreted and demonstrated through the use of green technologies.

This alternative would include upgrading and expansion of physical infrastructure at the camp. The existing woodland would be selectively cleared for events but large areas of the encroaching forest would remain. This alternative would provide a wide variety of visitors with both aesthetically and culturally pleasing surroundings and a wide range of beneficial uses of the environment.

## **2.6 ALTERNATIVES CONSIDERED AND DISMISSED**

A fourth alternative was considered and dismissed as part of the discussions and analysis. This alternative had the NPS as sole manager of the rehabilitation of the Good Fellow Club Youth Camp as well as its operations and costs. This alternative was dismissed because its feasibility was doubtful.

A fifth alternative partnered the NPS and DLC in the rehabilitation of the camp. The surviving contributing features would be protected, maintained, and reused where appropriate to meet the programmatic needs of the DLC. Extant contributing features that would not support the educational program of the DLC would still be preserved for interpretation. This alternative was dismissed because the Dunes Learning Center felt it could not take on the leadership of the Good Fellow Lodge rehabilitation effort, but they would support the Park in its efforts to restore Good Fellow Lodge. With this assessment by DLC, the Park determined that viable alternatives for the EA will have to include development of the lodge through public/private partnership or through a third party.

## **2.7 ENVIRONMENTALLY PREFERRED ALTERNATIVE**

As stated in Section 2.7D of Director's Order #12 and Handbook (NPS 2001), "the environmentally preferred alternative is the alternative that would promote the national environmental policy expressed in the National Environmental Policy Act (NEPA)." Section 101 (b) goes on to define the Environmentally Preferred Alternative through the application of six criteria. Generally, these criteria define the Environmentally Preferred Alternative as the alternative that causes the least amount of damage to the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources, while attaining the widest range of beneficial uses of the environment. The criteria are as follows:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.

- Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historical, cultural, and natural aspects of our national heritage and maintain wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and wide sharing of life's amenities.
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The Council on Environmental Quality (CEQ) provides additional direction in its guidance *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations* (1981). "The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, 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."

Under **Alternative A**, the park would continue to maintain the existing landscape patterns and features of the Good Fellow Club Youth Camp site in their current condition. Also, Alternative A does not address the purpose and need of the project, including expansion of environmental learning camp facilities and rehabilitation of historic structures and landscape.

Alternative A would not provide for beneficial use of the environment, nor would it provide a sharing of amenities. This alternative would cause the least damage to the biological and physical environment, however, Alternative A would not enhance historic, cultural, and natural resources because no site restoration would occur.

**Alternative B** proposes the rehabilitation of the historic Good Fellow Club Youth Camp to accommodate its traditional use as a recreational camp for youth. This alternative would provide aesthetically and culturally pleasing surroundings, preserve important historical and cultural resources and through use of green technologies and sustainable design, enhance the quality of renewable resources. There is vegetation removal and soil disruption in this alternative, but mitigation measures would minimize impacts to the surrounding environment.

**Alternative C** proposes the rehabilitation of the historic Good Fellow Club Youth Camp to enhance environmental learning opportunities. The NPS in partnership would rehabilitate the site as an environmental education center for programs and activities that would not be incompatible with the adjacent DLC programs and activities.

This alternative would preserve the natural resources as they are and provide environmental educational programs specific to the unique vegetation communities and other natural elements of the site. This alternative would provide for beneficial use of the environment and a sharing of amenities. There is some preservation of historic resources in this alternative. The cultural landscape and many historic features of the site would further deteriorate and disappear if Alternative C were implemented. Also visitor use would be limited to daily programs and overnight lodging for specialized environmental activities and educational uses.

**Alternative D** proposes rehabilitation of the historic Good Fellow Club Youth Camp to accommodate conferences, events and activities rental. This alternative would preserve and protect many of the historic and cultural resources on the site and allow a variety of visitors to experience the site. Portions of the cultural landscape would be restored as well as spatial organization and viewsheds from the period of significance. The character of the landscape setting would be preserved. It would have facilities and accessibility for clients with special needs and provide diversity and variety of choice. This alternative minimally disrupts some woodland vegetation, however, maintenance and management would follow a set of best management practices developed specifically for the property to promote environmental stewardship and to protect historic resources. Native woodland vegetation would be preserved and invasive plantings removed. This alternative also best meets the stated goals and objectives of the park for the Good Fellow Club Youth Camp.

Therefore, Alternative D best addresses all the criteria presented in Section 101 (b) for the Environmentally Preferred Alternative and best addresses the goals and objectives of the Park. **Alternative D is the environmentally preferred alternative.**

## 2.8 COMPARISON OF ALTERNATIVES

Table 1: PROJECT OBJECTIVES BY ALTERNATIVE				
	Alternative A	Alternative B	Alternative C	Alternative D
<b>Objectives: Purpose and Need</b>	<b>Alternative A: No Action: Continue Current Management of Existing Landscape Patterns and Features</b>	<b>Alternative B: Rehabilitate Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth</b>	<b>Alternative C: Rehabilitate the Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities</b>	<b>Alternative D: Rehabilitate Good Fellow Club Youth Camp to Accommodate Commercial Special Events and Activities Rental (NPS Preferred Alternative)</b>
<b>Rehabilitation of Historic Structures</b>	Continuing current management would not address this objective. There would be ongoing maintenance of contributing buildings, structures, circulation, and small-scale features in their current condition. Others in poor condition would continue to deteriorate.	This alternative fully addresses this objective with re-establishing lost or degraded historic resources. Also historic landscape features would be retained, maintained, repaired and or restored to establish a new camp. Also, there is repair and adaptive reuse of historic structures.	There is less rehabilitation of structures and the landscape in this alternative than in Alternative B. Missing historic elements would not be re-established. This alternative would allow for adaptive reuse of historic recreation features that would result in changes to their contributing character, remove recreation features in poor condition.	There is more rehabilitation of structures and landscape features in this alternative than in Alternative C. Existing historic buildings would be adaptively reused to accommodate the programmatic needs of the concessionaire or lessee. Many historic landscape features would be retained, maintained, repaired and/or restored to meet programmatic needs.
<b>Rehabilitation of Cultural Landscapes</b>	Continuing current management would not address this objective.	This alternative partially addresses this objective. This alternative would rehabilitate the site, to the extent possible, to its character during the period of significance. Non-contributing woodland would be removed and historic buildings and recreational features would be repaired and reused.	This alternative does not address this objective. New features would be added to accommodate visitor access and sustainability initiatives that would further alter the historic character of the NRHP-eligible cultural landscape.	This alternative partially addresses this objective. Selected non-contributing woodland would be removed, helping to reinstate the historic patterns of spatial organization, viewsheds, and character of the landscape setting.
<b>Improvement of Visitor Accessibility</b>	Continuing the current management would not address this objective.	This alternative fully addresses this objective with expanded parking, new fully accessible walks to primary features of the camp site, and historic site circulation features would be retained, repaired, and maintained in good condition.	This alternative fully addresses this objective by providing expanded parking, new fully accessible walks to primary features and new universally accessible trails to the DLC and adjacent park trail and bike systems.	Due to the management flexibility and range of visitors possible in this alternative, this alternative has the maximum provision for universal accessibility in both the building interiors and exteriors and also with walkways from parking and to important site features and existing and proposed trails.

Table 1: PROJECT OBJECTIVES BY ALTERNATIVE

	Alternative A	Alternative B	Alternative C	Alternative D
<b>Protection of Natural and Cultural Resources</b>	Protection measures associated with the existing management practices would remain. This would include on-going maintenance of all contributing buildings, structures, circulation, and small-scale features in their current condition. Features currently in poor condition may be difficult to maintain and be lost to further deterioration.	In this alternative, cultural landscape features and historic structures are rehabilitated and protected. However, in reestablishing historic spatial organization, some natural resources, (successional forest) are removed and replaced with turf or meadow vegetation. Also vegetation is removed if it interferes with the health and form of contributing features.	In this alternative, historic elements and spatial patterns would not be reestablished thus protecting existing natural resources. Vegetation communities and other natural elements of the site would be featured in on-site environmental educational programs. Historic structures would be rehabilitated but features in poor or unsafe condition would be documented and removed.	There is less removal of woodland vegetation in this alternative than in alternative C but there is clearing to allow establishment of open meadow for activities and gatherings. Native woodland plants are protected and invasive species removed. Historic structures and many features are rehabilitated and protected. Features in degraded condition that cannot be repaired would be documented and removed.
<b>Provision for Flexible Management Opportunities with the Park</b>	In this alternative, DLC would continue use of Good Fellow site and structures through continued verbal agreement with the Park (NPS)	In this alternative, the NPS potentially in concert with local partners, would rehabilitate the Good Fellows Club Youth Camp landscape in support of re-establishment of its traditional use as a recreational camp for youth.	This alternative provides the possibility for public/private partnership for the Park with management of the Good Fellow Club Youth Camp as an environmental education center.	This alternative provides the most flexible management opportunities for the Park as it includes not only potential partnerships, but also third parties for management and a potential revenue stream.
<b>Provision for Uses that are Not Incompatible with the Existing Structures and Programs of the Dunes Learning Center (DLC)</b>	DLC would retain existing uses of structures, trails, and the landscape. Park is currently providing DLC use of most of the cultural and natural resources at Good Fellow Club Youth Camp. This alternative fully addresses provision of uses that are not incompatible with the existing programs and structures of DLC.	Proposed changes or programmatic uses associated with this alternative would not be incompatible with the current operations and programs of the DLC. If portions of site currently used by DLC change, there would be negotiations between NPS and DLC for alternative uses or locations.	Proposed changes or programmatic uses associated with this alternative would not be incompatible with the current operations and programs of the DLC. If portions of site currently used by DLC change, there would be negotiations between NPS and DLC for alternative uses or locations.	Proposed changes or programmatic uses associated with this alternative would not be incompatible with the current operations and programs of the DLC. If portions of site currently used by DLC change, there would be negotiations between NPS and DLC for alternative uses or locations.
<b>Potential Expansion of Camp Facilities</b>	Continuing the current management would not address this objective.	This alternative minimally addresses expansion of environmental education facilities as its intent is rehabilitation for traditional recreational camp for youth. The camp could also become an extension of environmental education. Historic land uses and activities would be reinstated. This alternative does provide BMPs developed for the site and use of green technologies.	This alternative fully addresses this objective by providing enhanced environmental learning opportunities and maintenance and management of the site following BMP practices and interpretation and demonstration of green technologies. Existing historic features, vegetation communities and other natural elements of the site would be featured as possible for on-site environmental education programs	This alternative partially addresses this objective. It will have BMPs developed for the site and other environmental processes would be revealed through the interpretation and demonstration of green technologies. Further facilities or programs for environmental education would be determined by needs of flexible management and in coordination with NPS and DLC.

Table 2. SUMMARY OF ALTERNATIVES AND IMPACTS

Impact Topic	Alternative A	Alternative B	Alternative C	Alternative D
<b>NATURAL RESOURCES</b>				
<b>SOILS</b>	<p>No changes to current conditions</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse impact on soils.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor adverse cumulative impact.</p>	<p>Approximately 11.6 acres of soil temporarily impacted from woodland removal. 2750 sf of impervious surface created.</p> <p><b>Overall Impact:</b> short-term, moderate, and adverse impact on soils.</p> <p>Alternative contributes a noticeable adverse increment to a long-term minor adverse cumulative impact.</p>	<p>Approximately zero acres of soil temporarily impacted from woodland removal. 2750 sf of impervious surface created.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact on soils.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term minor adverse cumulative impact.</p>	<p>Approximately 5.3 acres of soil temporarily impacted from woodland removal. 2750 sf of impervious surface created.</p> <p><b>Overall Impact:</b> short-term, moderate, and adverse impact on soils.</p> <p>Alternative contributes a noticeable adverse increment to a long-term minor adverse cumulative impact.</p>
<b>AIR QUALITY</b>	<p>No changes to current site resources, character or management.</p> <p><b>Overall Impact:</b> long-term, negligible, and beneficial impact to air quality.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term negligible adverse cumulative impact.</p>	<p>Approximately 11.6 acres of existing successional woodland tree cover to be removed and replaced with grass.</p> <p><b>Overall Impact:</b> long-term, minor, and adverse impact to air quality.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact.</p>	<p>Approximately zero acres of existing successional woodland tree cover to be removed and replaced with grass.</p> <p><b>Overall Impact:</b> long-term, negligible, and beneficial impact to air quality.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term negligible adverse cumulative impact.</p>	<p>Approximately 5.3 acres of existing successional woodland tree cover to be removed and replaced with grass.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse impact to air quality.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact.</p>
<b>WATER QUALITY</b>	<p>No changes to existing management and maintenance practices.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse impact to water quality.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact.</p>	<p>Approximately 11.6 acres of existing tree cover would be removed and replaced with grass cover. 2750 sf of impervious surface created.</p> <p><b>Overall Impact:</b> long-term, minor, and adverse impact to water quality.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term, negligible adverse cumulative impact.</p>	<p>Approximately zero acres of existing tree cover would be removed and replaced with grass cover. 2750 sf of impervious surface created.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to water quality.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term negligible adverse cumulative impact.</p>	<p>Approximately 5.3 acres of existing tree cover would be removed and replaced with grass cover. 2750 sf of impervious surface created.</p> <p><b>Overall Impact:</b> long-term, minor, adverse impact to water quality.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact.</p>

Table 2. SUMMARY OF ALTERNATIVES AND IMPACTS

Impact Topic	Alternative A	Alternative B	Alternative C	Alternative D
<b>WETLANDS</b>	<p>No changes to existing management and maintenance practices on the off-site wetland.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact.</p>	<p>Potential soil erosion and increase in overland flow of stormwater from tree removal could potentially impact off-site wetland. BMPs added.</p> <p><b>Overall Impact:</b> long-term, minor, and adverse impact to off-site wetland.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact.</p>	<p>No tree removal or associated potential impacts.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to off-site wetland.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term negligible adverse cumulative impact.</p>	<p>Potential soil erosion and increase in overland flow of stormwater from <i>selected</i> tree removal could potentially impact off-site wetland. BMPs added.</p> <p><b>Overall Impact:</b> long-term, negligible and adverse impact to off-site wetland.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact.</p>
<b>VEGETATION</b>	<p>No change in existing maintenance and management practices.</p> <p><b>Overall Impact:</b> long-term, minor, and adverse impact to vegetation.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term, minor adverse cumulative impact.</p>	<p>Removal of app. 11.6 acres of successional woodland and associated invasive plant species; sensitive plant stands avoided.</p> <p><b>Overall Impact:</b> long-term, moderate, adverse impact to vegetation.</p> <p>Alternative contributes a noticeable adverse increment to a long-term, minor adverse cumulative impact.</p>	<p>Existing woodlands remain, invasive plants removed, and management practices implemented to enhance woodland health.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to vegetation.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term, minor adverse cumulative impact.</p>	<p>Removal of app. 5.3 acres of successional woodland and associated invasive species; avoids sensitive plant communities; protects slopes above floodplain.</p> <p><b>Overall Impact:</b> long-term, negligible and adverse impact to vegetation.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term, minor adverse cumulative impact.</p>
<b>WILDLIFE AND WILDLIFE HABITAT</b>	<p>No change in existing park character and maintenance and management practices.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse to wildlife.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor adverse cumulative impact.</p>	<p>Removal of app. 11.6 of successional woodland diminishes wildlife habitat; higher quality vegetation communities are protected.</p> <p><b>Overall Impact:</b> long-term, moderate, and adverse impact to wildlife.</p> <p>Alternative contributes a noticeable adverse increment to a long-term, minor adverse cumulative impact.</p>	<p>Existing woodlands remain, invasive plants would be removed, and woodland health would be enhanced, allowing diverse wildlife habitat.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to wildlife.</p> <p>Alternative contributes an imperceptible, beneficial increment to a long-term, minor adverse cumulative impact.</p>	<p>Removal of app. 5.3 acres of successional woodland, slightly diminishing diversity of wildlife habitat.</p> <p><b>Overall Impact:</b> long-term, minor, and adverse impact to wildlife and habitat for Indiana bat.</p> <p>Alternative contributes an imperceptible adverse increment to a long term, minor adverse cumulative impact.</p>

Table 2. SUMMARY OF ALTERNATIVES AND IMPACTS

Impact Topic	Alternative A	Alternative B	Alternative C	Alternative D
<b><u>RARE, THREATENED AND ENDANGERED SPECIES</u></b>	<p>No change to existing park character and maintenance and management practices.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse impact on rare plant populations.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term, negligible adverse cumulative impact.</p>	<p>Identified rare plants protected from tree removal process; mitigation with measures to protect associated communities. Recommendations from the BA would be implemented to protect the Indiana bat and its habitat.</p> <p><b>Overall Impact:</b> long-term, moderate, and adverse impact on rare plant populations and the Indiana bat</p> <p>Alternative contributes an appreciable adverse increment to a long-term moderate adverse cumulative impact.</p>	<p>Existing woodlands would remain, invasive plants removed; protection and habitat support for rare plant species and bat habitat.</p> <p><b>Overall Impact:</b> long-term, minor, beneficial impact on rare plant populations and Indiana bat habitat.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term, negligible adverse cumulative impact.</p>	<p>Removal of selected woodland area; new features disrupt some areas of existing plant communities; protection of any associated rare plant species. Recommendations from BA would be implemented to protect the Indiana bat and its habitat.</p> <p><b>Overall Impact:</b> long-term, minor, and adverse impact on rare plant populations and the Indiana bat.</p> <p>Alternative contributes a noticeable adverse increment to a long-term, minor, adverse cumulative impact.</p>
<b>RECREATIONAL RESOURCES, VISITOR USE AND EXPERIENCE AND AESTHETIC RESOURCES</b>				
<b><u>RECREATIONAL RESOURCES AND VISITOR USE AND EXPERIENCE</u></b>	<p>No change to existing recreational resources or uses.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse impact to recreational resources and visitor use and experience.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term moderate, beneficial cumulative impact.</p>	<p>Majority of historic recreational features would be restored and incorporated into future camp uses.</p> <p><b>Overall Impact:</b> long-term, moderate, and beneficial impact to recreational resources and visitor use and experience.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term moderate beneficial cumulative impact.</p>	<p>Historic recreational features not restored and some removed. Recreational uses of the site generally replaced by educational uses.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to recreational resources and visitor use and experience.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term moderate beneficial cumulative impact.</p>	<p>Some of historic recreational features would be restored and incorporated into future special events uses.</p> <p><b>Overall Impact:</b> long-term, moderate, and beneficial impact to recreational resources and visitor use and experience.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term moderate beneficial cumulative impact.</p>
<b><u>AESTHETIC RESOURCES</u></b>	<p>No changes to vegetation and open space patterns. Viewsheds remain as they are.</p> <p><b>Overall Impact:</b> long-term, negligible, adverse impact to aesthetic resources.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor beneficial cumulative impact.</p>	<p>Removal of woodlands creates new viewsheds into the camp and restores historic spatial patterns.</p> <p><b>Overall Impact:</b> long-term, moderate, beneficial impact to aesthetic resources.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term, minor beneficial cumulative impact.</p>	<p>Woodlands vegetation remains on the site and open space patterns are not changed.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse impact to aesthetic resources.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor beneficial cumulative impact.</p>	<p>Selected removal of woodland vegetation creates new viewsheds and open spaces for activities.</p> <p><b>Overall Impact:</b> long-term, moderate, beneficial impact to aesthetic resources.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term minor beneficial cumulative impact.</p>

Table 2. SUMMARY OF ALTERNATIVES AND IMPACTS

Impact Topic	Alternative A	Alternative B	Alternative C	Alternative D
<b>CULTURAL RESOURCES</b>				
<b>CULTURAL LANDSCAPES</b>	<p>No changes to current conditions</p> <p><b>Overall Impact:</b> long-term, minor, and adverse impact to the cultural landscape.</p> <p>Alternative contributes a noticeable adverse increment to a long-term minor beneficial cumulative impact.</p>	<p>Returns the site to its character during the period of significance except for contemporary cabin facilities. Non-contributing woodlands removed and historic building and recreation features repaired and reused.</p> <p><b>Overall Impact:</b> long-term, moderate, and beneficial to the cultural landscape.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term, minor, and beneficial cumulative impact.</p>	<p>Allows non-contributing woodlands to remain. Some historic features are adaptively reused. New features for visitor access and sustainability initiatives alter the historic character of the NRHP-eligible cultural landscape.</p> <p><b>Overall Impact:</b> long-term, moderate, and adverse to the cultural landscape.</p> <p>Alternative contributes a noticeable adverse increment to a long-term, minor and beneficial cumulative impact.</p>	<p>Some woodland removed. Reinstates the historic patterns of spatial organization. Many historic structures and recreational features adaptively reused.</p> <p><b>Overall Impact:</b> long-term, negligible, beneficial impact to the cultural landscape.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term minor, and beneficial cumulative impact.</p>
<b>HISTORIC RESOURCES</b>	<p>No change to current conditions.</p> <p><b>Overall impact:</b> long-term, moderate, and adverse impact to historic resources.</p> <p>Alternative contributes a noticeable adverse increment to a long-term, moderate, adverse cumulative impact.</p>	<p>Existing historic buildings and historic recreational features are stabilized, repaired and adaptively reused for traditional camp needs. New cabins are built on historic cabin pads.</p> <p><b>Overall Impact:</b> long-term, moderate, and beneficial impact to historic resources.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term negligible beneficial cumulative impact.</p>	<p>Existing historic buildings and historic recreational features are adaptively reused for educational learning needs. The existing character of some recreational features is altered and new cabins are built on historic cabin pads.</p> <p><b>Overall Impact:</b> long-term, negligible, and beneficial impact to historic resources.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term negligible beneficial cumulative impact.</p>	<p>Existing historic buildings and historic recreational features are adaptively reused for special events, programs and clients. Historic recreational features are repaired for use and new cabins built on historic cabin pads.</p> <p><b>Overall Impact:</b> long-term, minor, beneficial impacts to historic resources.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term negligible beneficial cumulative impact.</p>
<b>ARCHEOLOGICAL RESOURCES</b>	<p>No change to current conditions.</p> <p><b>Overall impact:</b> long-term, negligible, and adverse impact to archeological resources if soil erosion were to occur due to unforeseen events.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term, minor adverse cumulative impact.</p>	<p>Removal of non-contributing woodland; construction of new cabins on existing concrete pad sites could result in soil disturbances.</p> <p><b>Overall Impact:</b> long-term, moderate, and adverse; diminished integrity of archeological resources should construction activities impact currently unidentified resources.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term, minor adverse cumulative impact.</p>	<p>Construction of new cabins on existing concrete pad sites could result in soil disturbance</p> <p><b>Overall Impact:</b> long-term, negligible and adverse; diminished integrity of archeological resources should construction activities impact currently unidentified resources.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term, minor adverse cumulative impact.</p>	<p>Potential soil disturbance from selected woodland removal, walkways, new cabins, new recreational/ educational/event facilities.</p> <p><b>Overall Impact:</b> long-term, moderate, and adverse; diminished integrity of archeological resources should construction activities impact currently unidentified resources.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor adverse cumulative impact.</p>

Table 2. SUMMARY OF ALTERNATIVES AND IMPACTS

Impact Topic	Alternative A	Alternative B	Alternative C	Alternative D
<b><u>SOUNDSCAPES</u></b>	<p>No changes to current conditions.</p> <p><b>Overall Impact:</b> long-term, negligible, and beneficial impact to natural soundscape.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term negligible adverse cumulative impact.</p>	<p>Noise impacts associated with use as traditional camp and increased vehicular use in and out of the site; noise levels on site are associated with human use.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to natural soundscape.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term negligible adverse cumulative impact.</p>	<p>Noise impacts associated with use as environmental education facility and increased vehicular use; noise levels on site are associated with human use of the educational facility.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to natural soundscape.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term negligible adverse cumulative impact.</p>	<p>Special events and activities increase levels of noise periodically; more outdoor activities generate noise in addition to vehicle traffic on site; events or large gatherings with sound systems and music impact noise levels at the site.</p> <p><b>Overall Impact:</b> long-term, minor, and adverse impact to natural soundscape.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact.</p>
<b><u>NATURAL, DEPLETEABLE, OR ENERGY RESOURCE REQUIREMENTS AND CONSERVATION POTENTIAL</u></b>	<p>No change to current conditions.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse impact to this topic.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor adverse cumulative impact.</p>	<p>Alternative will use green technologies and sustainable design; Alternative B requires energy resources due to building rehabilitation and new construction.</p> <p><b>Overall Impact:</b> For construction: short-term, minor, and adverse impact. For overall: long-term, minor and adverse impact to this topic.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term, minor adverse cumulative impact.</p>	<p>Alternatives will use green technologies and sustainable design; alternative C requires energy resources due to building rehabilitation and new construction.</p> <p><b>Overall Impact:</b> For construction: short-term, minor, and adverse impact. For overall: long-term, minor adverse impact to this topic.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor adverse cumulative impact.</p>	<p>Alternative will use green technologies and sustainable design; Alternative D requires energy resources due to building rehabilitation, new construction, restored outdoor recreational facilities and special events requirements.</p> <p><b>Overall Impact:</b> For construction: short-term, minor, and adverse impact. For overall: long-term, minor adverse impact to this topic.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor adverse cumulative impact.</p>
<b><u>SOCIOECONOMICS</u></b>	<p>No change to current conditions.</p> <p><b>Overall Impact:</b> long-term, negligible, and adverse impact on local and regional economy.</p> <p>Alternative contributes an imperceptible adverse increment to a long-term minor beneficial cumulative impact.</p>	<p>Use of site as traditional recreational camp accommodates more visitors to the site, the counties and the region.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to local, regional economy.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term minor beneficial cumulative impact.</p>	<p>Use of site as traditional environmental education facility accommodates more visitors to the site, the counties and the region.</p> <p><b>Overall Impact:</b> long-term, minor, and beneficial impact to local, regional economy.</p> <p>Alternative contributes an imperceptible beneficial increment to a long-term minor beneficial cumulative impact.</p>	<p>Use of site for special events, conferences, special needs clients enhances the visitor diversity and numbers to the site, counties and region.</p> <p><b>Overall Impact:</b> long-term, moderate, and beneficial impact to local, regional economy.</p> <p>Alternative contributes a noticeable beneficial increment to a long-term minor beneficial cumulative impact.</p>

# Chapter 3 • Affected Environment

## 3.0 INTRODUCTION

This chapter examines the existing environmental conditions in and around Good Fellow Youth Camp and specifically discusses the resources that could be potentially impacted by any proposed action. Organized by resource topic, this chapter considers natural, recreational, and cultural resources as well as park infrastructure, utilities, and sustainability.

Good Fellow Club Youth Camp study boundary comprises approximately sixty-nine and half acres of rolling woodland above the Little Calumet River. The historical footprint encompasses sixty-three of these acres. The Good Fellow Club Youth Camp is one of the contiguous parcels of the East Unit of Indiana Dunes National Lakeshore (Lakeshore) in Porter County, Indiana, approximately fifty miles east of Chicago, Illinois, and ten miles from Gary, Indiana. The East Unit is separated from the West Unit by a large industrial complex. Additional discontinuous areas within the lakeshore include Pinhook Bog, the Heron Rookery, Hobart Prairie Grove, Calumet Prairie, and Hoosier Prairie.

Authorized by Congress in 1966, the Lakeshore is a national park that encompasses approximately 15,000 acres and stretches along more than fifteen miles of the Lake Michigan shoreline. Indiana Dunes National Lakeshore preserves an important remnant of what was once a vast and unique lakeshore environment resulting from the retreat of the last great continental glacier. Immediately inland from the beaches, sand dunes rise to almost 200 feet above the lake in a series of ridges, blowouts, and valleys. Extensive wetlands fill the depressions between the dunes. The high dunes provide splendid opportunities for hiking, nature study, wildlife viewing, and interpretive programs. Byways for bicycling and roads for leisure driving are abundant.<sup>1</sup>

The lakeshore is made up of beaches, sand dunes, bogs, wetlands and woodland forests that weave in and out of privately owned land, and include a range of residential, agricultural, commercial, and industrial land uses. One of the most significant features of the park is the biological diversity present in its range of environmental habitats.

Cultural resources located within the park include Good Fellow Club Youth Camp, the Bailly Homestead, settled in 1822 by the French-Canadian fur trader Joseph Bailly (which contains historic structures and a small cemetery); five homes originally displayed at the 1933 Chicago World's Fair; the late nineteenth century working Chellberg farm; and known archeological sites.<sup>2</sup>

As identified in the 1997 General Management Plan for the park:

*The principal natural resource management objectives will be to continue to protect and preserve the natural environment and ensure ecosystem integrity while providing for visitor enjoyment. Endangered and sensitive species will be protected and, where possible, restored to their natural ranges. Biological, geological, and other natural processes will be permitted to continue with minimal human interference.*

*However, because natural resources are not free from human influences, some active management will be necessary to meet resource management objectives. Managing the national lakeshore's natural resources will include actions necessary to replicate and control processes that shaped the resources. Examples include management ignited prescribed fire, the removal of ditches and barriers to natural water flow, beach nourishment, and removal of invasive exotic species... The NPS will work to restore the habitats in the Great Marsh, Furnessville, Little Calumet River corridor, and other areas. Habitats to be restored will include prairie, oak savannah, swamp forest, floodplain forest, and sedge meadow.<sup>3</sup>*

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<sup>1</sup> NPS, "Indiana Dunes" available on-line at: <http://www.nps.gov/indu/> (accessed 25 March 2009).

<sup>2</sup> NPS, "Indiana Dunes National Lakeshore; Good Fellow Club Youth Camp; Development Concept Plan and Environmental Assessment" (n.p., 1995), 1.

<sup>3</sup> GMP, 1997, 33.

## 3.1 NATURAL RESOURCES

### Soils and Geology

Much of the Lakeshore is underlain by bedrock of limestone, dolomite, sandstone, and shale. The soils found within the park are derived from wind, water, glacial deposits, and weathering of the underlying bedrock. Most are clay-rich or sandy unconsolidated soil deposits—psamments—associated with the shifting dunes.

One of the largest freshwater lakes in the world, Lake Michigan formed some 11,000 years ago when the Wisconsin glacier began melting. During this process fluctuations in water levels gave rise to beaches, sand dunes, and interdunal wetlands. Four major dune systems exist within the park. Beginning at the present shoreline and moving inland into progressively older dunes, they include the lakeshore dunes, Tolleston dunes, Calumet dunes, and Glenwood dunes.<sup>4</sup>

The highest elevation within the park is 711.5 feet above mean sea level (AMSL), while the lowest elevation occurs along the lakeshore at 578.5 feet AMSL. The topographic profile of the park is of rolling landforms, interspersed with relatively level areas, and cut by steeply-sloped ravines associated with stream corridors. The extant landforms are derived from the influence of glaciers, wind, and water, resulting in a patchwork of moraine deposits, sand beaches, dunes, and bogs.

Geologically, the Good Fellow Club Youth Camp site sits atop Lake Border Moraine rather than on a dune ridge as is typical of most of the East Unit of the park. Moraines are landscapes of knobby hills and kettle shaped valleys created by glacial drift. Lake Border Moraine is also associated with the high ground comprising the Tremont area of the park.<sup>5</sup>

Topographically, the camp is composed of a series of relatively level terraces oriented east-west that roughly parallel the Little Calumet River. A distinct bluff separates the relatively level upper terrace where the camp was developed from the river's floodplain below. The lodge is located at the highest elevation, approximately 676 feet AMSL. From this high point, the land descends toward the river in a series of gentle slopes. At the southern edge of the camp site, the topography changes abruptly at approximately 635 feet AMSL to a steep south-facing sloped bank. This slope is incised by a deep narrow ravine along Howe Road. The Little Calumet River sits at the base of the slope at approximately 606 feet AMSL. A wide floodplain bordering the river ranges between 615 and 606 feet AMSL.

The camp was modified topographically to accommodate site development needs such as grading for roadways and walks, stormwater management, and level pads for buildings and recreation features. Both the swimming pool and tennis courts required grading. Soil excavated to establish the in-ground pool was used as fill to support the pool walls. To the east of the Lodge, two underground water reservoirs also involved excavation. The reservoirs are not historic and the work was completed by the NPS. These features are evidenced by bermed soil.

The soils that underlie the Good Fellow Club Youth Camp site include the Morley series in its northern portion and Martinsville series within its central portion. Beyond the site boundary to the south, Fluvaquents series soils occur within the river floodplain, and the Del Rey series is associated with the Little Calumet River corridor.

Soils of the Morley series are found over the majority of the site, including Morley silt loam on 2-to-6 percent and 6-to-12 percent slopes. These slopes include the northernmost portion around the Lodge and the access drive from Howe Road. Morley series soils are moderately well-drained, with a surface layer of silt loam, and moderate organic matter content. They have a high available water capacity and moderately slow permeability. Surface runoff is moderate. The soil has a high seasonal water table of three to six feet. Within Porter County, Morley soils are generally used for crop cultivation, pasture, and productive woodland. Conservation practices are needed to control erosion and surface runoff if cultivated crops are grown. Grasses and legumes grown for forage are effective in controlling wind and water erosion. Morley soils present moderate limitations for dwellings because of wetness and the shrink-swell potential, and severe limitations for local roads

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<sup>4</sup> NPS, Indiana Dunes. *Nature and Science*. <http://www.nps.gov/indu/naturescience/index.htm> (accessed 25 March 2009).

<sup>5</sup> Glenda Daniel, *Dune Country*, (Athens: Shallow Press, 1984), 8.

and streets because of low strength. Limitations are severe for septic tank absorption fields because of the moderately slow permeability and wetness. These soils are in capability subclass II or IIIe, and woodland suitability subclass 2c.<sup>6</sup>

Soils of the Martinsville series, specifically Martinsville loam on 0-to-2 percent slopes, occupy the area between the pool house and the top of the bluff to the south of the lodge. Martinsville series soils are well-drained, and have a surface layer of loam and moderate organic matter content. They have high available water capacity and moderate permeability, while surface runoff is slow. The soils are friable and can be easily tilled through a fairly wide range in moisture content. This soil is well suited to all types of crop and pasture farming and for trees. It does, however, present moderate limitations for building sites because of the shrink-swell potential, and moderate limitations for local roads and streets because of low strength and the frost action potential. These are prime agricultural soils with a capability class of I and woodland suitability subclass 1c.<sup>7</sup>

The Fluvaquent soils located in the floodplain below the site are poorly-drained, while the Del Rey soils along the river appear to have a high water table, are poorly drained, a surface layer of silt loam, and moderate organic matter content.<sup>8</sup>

## **Air Quality**

Air quality became a national concern in the mid-1960s, leading to the passage of the Air Quality Act (AQA) in 1967 which established National Ambient Air Quality Standards (NAAQS). Areas meeting the NAAQS are referred to as being in attainment and those that are not are known as nonattainment areas. Porter, Lake and LaPorte Counties, within which the Lakeshore falls, have non-attainment status for ozone levels, and the Environmental Protection Agency has cited the counties for violating the pollution standard for particulate matter.

Air quality at Indiana Dunes National Lakeshore is of concern due to the park's proximity to industries and the urban centers of Gary, Indiana, as well as Chicago, Illinois, which subject the park to pollution via the prevailing winds. Industrial, commercial, and residential development, power plants, agricultural operations, and highways with heavy motor vehicle traffic in the surrounding area also impact the park's air quality. High nitrogen deposition, ozone, sulfur dioxide, sulfate, and mercury, and particulate matter pollution levels have been identified within the area. Sources of air pollution within the park are motor vehicles and park maintenance activities such as mowing and burning. Sources of pollution in the park also include the mills and the power plant, as they are surrounded by park property.

## **Water Quality**

The Good Fellow Club Youth Camp site is above a bluff north of the Little Calumet River. Along the southern boundary of the site the Little Calumet River is approximately sixty feet wide as it meanders north to Lake Michigan. Ephemeral streams and small swales drain into the Little Calumet River from the undulating face of the bluff below the camp. A wide floodplain separates the river and the steep slope of the bluff.

An interesting feature of the Little Calumet River is that its direction of flow is intimately tied to the water levels of Lake Michigan. The direction of flow can reverse, depending on the lake levels and climate conditions.<sup>9</sup> Most of the Little Calumet River watershed has been altered from its historic setting. Land use in this watershed is predominantly urban, suburban, and industrial, although some of the land is used for agriculture. Only small remnants of its historic wetlands remain.<sup>10</sup>

Section 303(d) of the 1972 Federal Clean Water Act requires that Indiana identify those waters that do not meet the state's Water Quality Standards for designated uses. Water quality data collected from the Little Calumet River has shown that the

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<sup>6</sup> G. Franklin Furr, Jr., "Soil Survey of Porter County, Indiana" (Washington, DC: U.S. Government Printing Office, 1981), 32-33.

<sup>7</sup> G. Franklin Furr, Jr., "Soil Survey of Porter County, Indiana" (Washington, DC: U.S. Government Printing Office, 1981), 29.

<sup>8</sup> USDA, National Resources Conservation Service, *Soil Survey Geographic (SSURGO) database for Porter County, Indiana*. <http://soildatamart.nrcs.usda.gov/> (accessed March 2009).

<sup>9</sup> USDA, National Resources Conservation Service, *Soil Survey Geographic (SSURGO) database for Porter County, Indiana*. <http://soildatamart.nrcs.usda.gov/> (accessed March 2009).

<sup>10</sup> Portage Lakefront Park EA, 48.

segment between Porter and Chesterton does not meet the state's water quality standards, with a high severity rating associated with PCBs and mercury, cyanide, pesticides, and *E. coli* bacteria.<sup>11</sup> Based on exceeding these standards, the river was listed on Indiana's 2002 Section 303(d) list of impaired waters.

The major source of *E. coli* bacteria impairment in the Little Calumet appears to be non-point sources such as failing septic systems, unknown illicit discharges of sewage, wildlife, small agricultural operations, bacteria laden sediments, and urban runoff. Point sources represent only a small percent of the total load and their reduction would not significantly improve water quality.

The section of the Little Calumet south of Good Fellow Club Youth Camp has not, however, been listed as impaired water on the IDEM Final 2006 303(d) List. Although this segment is not identified as impaired, the upstream segment of the Little Calumet River is listed for a Fish Consumption Advisory (FCA) for mercury and PCBs.<sup>12</sup>

## **Wetlands**

As defined for this project, the boundaries of the Good Fellow Club Youth Camp site are Howe Road to the east, camp roads to the north and west, and the bluff above the river to the south and within this area there are no federally-identified wetlands.

Just beyond the site boundary to the south, however, is a large wetland area located west of Howe Road. This wetland is comprised of two component parts, a hydromesophytic forest (slough) and an area of floating vegetation. The wetland is bounded to the north by oak-hickory successional forest, and to the south by beech-maple-oak forest associated with the river's floodplain.

## **Vegetation**

The biological diversity within the Lakeshore is amongst the highest per unit area of all the national parks. More than 1,400 species of flowering plants and ferns have been identified within the Lakeshore. Both northern and southern, prairie, and woodland plant species converge at Indiana Dunes, supported by a wide range of habitats such as open beaches, grass-covered dunes, oak savannas, swamps, bogs, marshes, prairies, rivers, and forests. An array of plant communities include eastern deciduous forest, boreal forest, Atlantic coastal plain, and prairie.<sup>13</sup>

The Lakeshore is home to a diverse population of vascular plants such as predacious bog plants and native prairie grasses, towering white pines and rare algae species.<sup>14</sup> The habitat provided by the Lakeshore supports 1,130 native vascular plant species, including state and federally-listed rare, threatened, and endangered species (*see below*).

The Good Fellow Club Youth Camp site supports several native plant communities in various stages of succession, as well as culturally-introduced species.<sup>15</sup> Identification of these communities occurred as part of a 1994 plant survey conducted by Barbara Plampin. In 1996, Plampin further surveyed the site to identify significant—rare, threatened, endangered and species of special concern—plants falling within the Good Fellow Club Youth Camp landscape. Most of these were found beyond the site boundaries along the bluff and within the river floodplain. These investigations are useful within the context of a larger park-wide survey conducted in 1990 by Gerould Wilhelm entitled *Special Vegetation of the Indiana Dunes National Lakeshore*.

In *Special Vegetation of the Indiana Dunes National Lakeshore*, Wilhelm notes of the Bailly tract, which includes the Good Fellow Club Youth Camp site:

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<sup>11</sup> Jane Frankenberger and Natalie Carroll, "Watershed Connections; Water Resources of Porter County, Indiana" (Department of Agricultural and Biological Engineering, n.d.), available on-line at <http://www.agcom.purdue.edu/AgCom/Pubs/menu.htm>.

<sup>12</sup> Portage Lakeshore Park EA, 48-49.

<sup>13</sup> Portage Lakefront Park EA, May 2007, 40.

<sup>14</sup> Indiana Dunes National Lakeshore, *Development Concept Plan*.

<sup>15</sup> NPS, Midwest Field Area, *Indiana Dunes NL East Unit Vegetation*. GIS data available at <http://science.nature.nps.gov/nrdata/datastore.cfm?ID=23249> (accessed March 15, 2005).

The bottomland, while of not the highest quality, nevertheless represents some of the finer of the bottomland communities of this type remaining in the Chicago region today, and one of the only local examples of a riparian community with forested mesophytic bluffs intact to any degree at all. Thus, these bluffs rank among the more significant regional natural areas. Wilhelm also noted that “the fact that the forests along the bluffs are now confined to steep slopes, the upper edges of which interface with open, highly disturbed, often artificial habitats, probably does much to discourage both stability in groundcover vegetation and tendencies toward moderation of the mesophytic microclimate. An unstable environment is extremely susceptible (less resilient) to both internal and external stress/threats.”<sup>16</sup>

A large portion of the relatively level terrace occupied by the Good Fellow Club Youth Camp was formerly maintained in grass. Most of the grassy area has been allowed to revert to forest cover, although there remain mown areas along utility easements and paths. Today much of the camp is currently in oak-hickory forest in an early seral stage of old field succession. Woody growth is relatively dense. Some areas have species compositions and understory conditions that reflect previous land uses. For example, the area of the former baseball diamond exhibits a very sparse herbaceous and shrub layer, and the site of the former basketball courts is densely populated by a monoculture of brambles including multiflora rose (*Rosa multiflora*) that contrasts sharply with the shrub layer of the surrounding forest.



Figure 7. Successional forest.



Figure 8. Successional forest.

To the south of the camp site a more mature oak-hickory forest covers most of the upland slopes adjacent to the floodplain. This forest is composed of mature deciduous trees that form a dense canopy. The dominant canopy species include white oak (*Quercus alba*), red oak (*Q. rubra*), and shagbark hickory (*Carya ovata*). The undergrowth is dense, consisting of a range of shrub and herbaceous species. The understory contains old field invasives such as black cherry (*Prunus serotina*) and sassafras (*Sassafras albidum*). The shrub layer is quite variable but can include grey dogwood (*Cornus foemina*), Virginia creeper (*Parthenocissus quinquefolia*), and prickly gooseberry (*Ribes cynosbati*). The herbaceous layer includes American hog-peanut (*Amphicarpaea bracteata*), thimbleweed (*Anemone virginiana*), pointed lead tick trefoil (*Desmodium glutinosum*), bedstraw (*Galium spp.*), and clustered black snake root (*Sanicula gregaria*).

Along the edge of the bluff the upland oak-hickory forest transitions into a beech-maple-oak forest that occupies much of the floodplain along the Little Calumet River. This forest is characterized by a dense canopy of deciduous trees, a sparse shrub layer, and a moderately to well-developed herbaceous layer. Typically, the canopy is composed primarily of American beech (*Fagus grandifolia*) and sugar maple (*Acer saccharum*). Viburnums (*Viburnum spp.*) are prevalent within the shrub layer. The herbaceous layer of this plant community includes numerous spring ephemerals, such as Jack-in-the-pulpit (*Arisaema triphyllum*), annual bedstraw (*Galium aparine*), hairy sweet cicely (*Osmorhiza claytonia*), and May apple (*Podophyllum peltatum*).<sup>17</sup>

A hydromesophytic forest, inset with an open water wetland colonized by floating vegetation, occurs within the southeastern portion of the floodplain beyond the limits of the project area. This low, frequently flooded, area contains sedges, cattails, and shrubs tolerant of flooding.

<sup>16</sup> Wilhelm, 120; 130.

<sup>17</sup> Nature Serve. *Plant Communities of the Midwest, Indiana Subset*. <http://www.natureserve.org/library/indianasubset.pdf> (accessed 25 March 2009).

## **Non-Native and Invasive Plant Species**

Numerous non-native plant species were identified in the plant survey conducted by Plampin in 1994. These plants range from ornamental species planted as part of the original camp landscape to invasive exotics. Invasive species are aggressive and out-compete native plant species, adversely affecting native species richness and diversity. Disturbed areas and the margins between open and wooded areas, such as trail edges and where woodland abruptly edges maintained lawn or field, are highly susceptible to colonization by these species. The list of non-native species compiled by Plampin, with invasive species denoted with an asterisk, includes:<sup>18</sup>

- Yarrow (*Achillea millefolium*)
- Tree of heaven (*Ailanthus altissima*)\*
- Garlic mustard (*Alliaria officinalis*)\*
- Japanese barberry (*Berberis thunbergii*)\*
- Oriental bittersweet (*Celastrus orbiculatus*)\*
- Ox-eye daisy (*Chrysanthemum leucanthemum pinnatifidum*)
- Field thistle (*Cirsium arvense*)\*
- Common day-flower (*Commelina communis*)
- Queen Anne's lace (*Daucus carota*)
- Autumn olive (*Eleaegnus umbellate*)\*
- Creeping Charlie (*Glechoma hederacea*)\*
- Yellow downy bush honeysuckle (*Lonicera x muendeniensis*)
- Bush honeysuckle (*Lonicera tartarica*)\*
- Honesty *Lonicera annua*)
- White mulberry (*Morus alba*)\*
- Timothy (*Phleum pretense*)
- Garden phlox (*Phlox paniculata*)
- Scotch pine (*Pinus sylvestris*)
- English plantain (*Plantago lanceolata*)
- Japanese knotweed (*Polygonum cuspidatum*)\*
- Sulfur cinquefoil (*Potentilla recta*)
- All-heal (*Prunella* spp.)
- Apple (*Pyrus malus*)
- Black locust (*Robinia pseudoacacia*)\*
- Multiflora rose (*Rosa multiflora*)\*
- Store-front sow thistle (*Sonchus oleraceus*)
- Starwort (*Stellaria graminea*)
- Lilac (*Syringa vulgaris*)
- Common dandelion (*Taraxacum officinale*)
- Penny cress (*Thlaspi arvense*)
- Eastern white cedar (*Thuja occidentalis*)
- Red clover (*Trifolium pretense*)
- Siberian elm (*Ulmus pumila*)\*
- Moth mullein (*Verbascum blattaria*)
- European highbush cranberry (*Viburnum opulus*)
- Cocklebur (*Xanthium strumarium*)

Exotic species were primarily associated with the interface of the forested bluff and the previously disturbed habitats of the Good Fellow Club Youth Camp.<sup>19</sup> Of these species, the park reports that garlic mustard, Oriental bittersweet, bush

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<sup>18</sup> Indiana Native Plant and Wildflower Society. *Invasive Plants in Indiana*. <http://www.inpaws.org/InvasivePlants.pdf> (accessed 25 March 2009).

<sup>19</sup> NPS, "Indiana Dunes National Lakeshore; Good Fellow Club Youth Camp; Development Concept Plan and Environmental Assessment" (n.p., 1995), 12-16.

honeysuckle, and multiflora rose are of immediate concern within the project area. Oriental bittersweet vines are growing in many of the trees; multiflora rose and bush honeysuckle are present in most of the woodland understory; and garlic mustard dominates the herbaceous layer in many areas.

## **Wildlife and Wildlife Habitat**

The wide variety of habitats and range of vegetation found within the park supports many species of wildlife. Within the Lakeshore, surveys have documented 37 species of mammals, 352 species of birds, 18 species of amphibians, and 27 species of reptiles. The park is an especially important feeding and resting area for migrating land and water birds.<sup>20</sup>

The Lakeshore extends across several ecological transition zones, including where northern conifers meet temperate hardwood forests of the northern and eastern United States and the tallgrass prairies of the Midwest. The variety of environmental niches makes the region an important habitat area. This exceptional biological diversity was the reason the National Lakeshore was founded.<sup>21</sup>

Some species found along the Lakeshore are survivors of past climatic changes that occupy sheltered habitats currently uncharacteristic of the region. The only threatened or endangered species known to be present is the American badger (*Taxidea taxus*), which is on the state threatened list, but the Indiana myotis (*Myotis sodalis*), listed as endangered, is also likely present within the park (see section below on rare, threatened, and endangered species).<sup>22</sup> No data exists regarding mammals known to be associated with the camp site.

An inventory of invertebrates has not been completed, but the Lakeshore has about 100 different species of butterflies and moths, including the federally-listed endangered Karner blue butterfly, and 60 species of dragonflies and damselflies. No data exists to indicate insects associated with the camp site.

At least 350 species of birds have been sighted within the Lakeshore. The Lakeshore's habitats and moderate climate provide regular nesting, resting, and wintering areas for a variety of birds.<sup>23</sup> Some of the species observed within the park are protected by the Migratory Bird Treaty Act (MBTA) (16USC §703). No data exists to indicate bird species associated with the camp site.

The herpetofauna of northwest Indiana is especially diverse due to the geologic history of the region, and the associated geomorphology and hydrology. Within the Lakeshore, eighteen species of amphibians and twenty-seven species of reptiles have been identified. The only species identified within the Bailly tract of the park that is of special concern is the Northern leopard frog (*Rana pipiens*), which is generally found in marshes with pond lilies, smartweed, and cattails.<sup>24</sup>

The Little Calumet River at large remains one of the few river systems in the region capable of supporting spawning runs and sport fishing for Indiana fishermen. Habitat quality is better in the east branch than it is in the more urbanized western branch. In a 1987 study of fish within the park twenty-four species were collected and considered present in the Little Calumet River including steelhead and brown trout. The presence of brown trout, as well as salmonoids and white suckers, suggest that the river is actively used by migratory species of Lake Michigan.<sup>25</sup>

## **Rare, Threatened, and Endangered Species**

Both state and federally protected threatened and endangered plant, animal, vertebrate, and invertebrate species are known to occur or potentially occur within the park. Within the Good Fellow Club Youth Camp project area several stands of rare plant

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<sup>20</sup> NPS, Indiana Dunes. *Nature and Science*. <http://www.nps.gov/indu/naturescience/index.htm> (accessed 25 March 2009).

<sup>21</sup> General Management Plan, 1997, 3.

<sup>22</sup> John O. Whitaker, Jr., "Mammals of Indiana Dunes National Lakeshore" (Terre Haute, IN: NPS, 1994), 1-2.

<sup>23</sup> Kenneth Azarian (rev.), "Birds of the Indiana Dunes National Lakeshore" (Porter, IN: NPS, 1991)

<sup>24</sup> Alan Resetar, "The Amphibians and Reptiles of the Indiana Dunes National Lakeshore" (Chicago: Field Museum of Natural History, October 1994).

<sup>25</sup> Anne Spacie, "Fishes of the Indiana Dunes; Species Distributions and Habitats" (Porter, IN: Indiana Dunes National Lakeshore, April 1988), 6, 12.

species (none of which are included on federal or state lists of threatened or endangered species, or are considered species of special concern) were identified and mapped in Barbara Plampin's 1996 report, including:

- White baneberry (*Actaea pachypoda*)
- Virginia snakeroot (*Aristolochia serpentaria*)
- Shooting star (*Dodecatheon media*)
- American columbo (*Frasera caroliniensis*)
- Pink corydalis (*Corydalis sempervirens*)

Approximately twelve white baneberry plants were identified along the slope of the bluff near the ravine. Additional plants were noted elsewhere within the camp site, including within the rubble of a former building. (The building was not identified by name but was possibly the tool shed.)

Two populations of shooting star were identified south and west of the group of white baneberry plants upon the bluff. The survey suggests the total number of shooting star plants comprising these populations to be 120.

A population of Virginia snakeroot is thought to be located amongst the shooting star plants, and between the two populations. This is thought to be the only known population of Virginia snakeroot within the park.

A large mass of American columbo was identified west of the shooting star and Virginia snakeroot populations described above. In 1996, it was estimated that approximately 100 plants comprise the colony of American columbo, which is the only known population of the species within the park at the time the report was published. One plant is within five feet of the existing trail along the bluff.

Pink corydalis, a state-listed endangered species, was identified within the upper regions of the wooded bluff south of the camp site. Stands include a dense population northeast of the steel bridge along the foot of the bluff, and another associated with a swale set within the face of the bluff. This is thought to be the first documentation of a corydalis species within this region of the park.

Butternut (*Juglans cinerea*) trees located along the base of the bluff slope within the floodplain are also of interest as they are candidates for Category II federal listing.

High-quality vegetation—indicating the presence of high numbers of locally rare or unusual species—is also present within the vicinity of the camp site. The woodlands associated with the north bank slope include the following species of high quality: shingle oak (*Quercus imbricaria*), American beech (*Fagus grandifolia*), white baneberry, and tall white lettuce (*Preanthes altissima*).

The park is known to fall within the range of the endangered Indiana bat (*Myotis sodalis*) and the candidate species eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*). The park is also known to fall within the range of the bald eagle (*Haliaeetus leucocephalus*), which was recently delisted as a threatened species, but it continues to be monitored. The camp site does not appear to provide suitable habitat for the eastern massasauga, and there are no known bald eagle nesting sites within the vicinity.

The Indiana bat was first observed within the park in the Heron Rookery parcel in 2003. Although none have been observed within the Good Fellow Club Youth Camp site, summer roosting areas of maternity colonies are rarely discovered. However, Indiana Dunes National Lakeshore provides abundant preferred habitat for Indiana bat summer roost sites, including the higher quality woodland along the slopes south of the Good Fellow Youth Camp overlooking the Little Calumet River. While Indiana bats are known to hibernate during the winter in caves and mines, they spend summers in congregations or roosts, occupying the space behind the exfoliating bark of large, often dead trees, or in crevices or openings in other trees. Primary habitat criteria include older trees, access to water sources, and woodland gaps, clearings, or edges that present few obstacles to foraging for flying insects, and the ease and safety of accessing roost sites. Other criteria include relative proximity to winter hibernation sites, and migration corridors between summer and winter colony sites. Forest communities providing appropriate habitat for summer roosting Indiana bat populations tend vary, but riparian and upland forests with numerous large snags and proximity to water sources and gaps or openings afford the most suitable. Measures to protect the habitat associated with the bluffs and river terrace below the Good Fellow Club Youth Camp for the federally-endangered Indiana

bat include: 1) avoiding disruption of potential roosting areas during the summer season; 2) allowing larger snags of trees with preferred bark, including ash (*Fraxinus spp.*), elm (*Ulmus spp.*), hickory (*Carya spp.*), and oak (*Quercus spp.*) to remain unless they otherwise threaten visitors or other resources; and 3) considering opportunities to provide forest edge conditions nearby to support insect foraging.<sup>26</sup> The Environmental Assessment team for this project has been in consultation with the U.S. Fish and Wildlife Service (USFWS) to ensure that adequate protection measures associated with the potential habitat of the Indiana bat are considered as part of this study.

### **3.2 RECREATIONAL RESOURCES, AESTHETIC RESOURCES, AND VISITOR USE AND EXPERIENCE**

#### **Recreational Resources**

Park records indicate that 2,012,986 recreational visits occurred during fiscal year 2007, and 2,188,182 recreational visits occurred during fiscal year 2006. The Lakeshore offers a variety of recreational opportunities. Visitors can enjoy hiking, bird watching, picnicking, horseback riding, camping, fishing, and swimming, although the Lakeshore currently does not offer a readily accessible location designated for fishing from the shore. Interpretive tours, hikes, and programs are scheduled throughout the year. There are bike and hiking trails available to the public including the Calumet Bike Trail and the Marquette Trail and others. The West Unit includes some of the most intensely used recreation areas in the Lakeshore. West Beach, located approximately seven miles to the west of the Good Fellow Club Youth Camp site, is a popular recreation destination.

Recreational land uses associated with the Good Fellow Club Youth Camp site include walking and hiking. Historically the camp provided recreational opportunities such as tennis, swimming, baseball, archery, riflery, horseshoes, and other activities associated with a summer camp for children. Most of the facilities that survive on site to accommodate these activities are currently in degraded condition.



Figure 9. Existing Condition of the Pool.



Figure 10. Existing Condition of Diving Board.

#### **Aesthetics**

Historically the camp site was maintained in open vegetative cover, primarily mown grass and meadow. Woodland species have been allowed to grow up since use of the site as a summer camp ended. The extent of vegetation affects the overall views within the area. Most views are foreshortened or enclosed by surrounding forest. The prominent views are at the entrance, along the roads, and from the lodge to the cabin pads below. The view from the high vantage point of the lodge area southeast towards the cabins is an open view interrupted only by a few scattered trees in the lawn. The view is completely enclosed by the surrounding forest, the edge of which lies just behind the cabin pads. Likewise, the view from the lodge to the pool is nearly obscured by vegetation. The tennis courts cannot be seen from any vantage point due to surrounding dense

<sup>26</sup> Lori Pruitt and Leslie TeWinkel, eds., "Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision (Fort Snelling, MN: Department of the Interior; U.S. Fish and Wildlife Service, April 2007).

vegetation.<sup>27</sup> The quality of the woodland is diminished in many places by the presence of non-native thorny shrubs such as multiflora rose.



Figure 11. Remaining open area east of the former tennis courts.

## **Visitor Use and Experience**

The primary purpose of the Lakeshore is to protect the resources, while providing opportunities for recreation, education, inspiration, and enjoyment. Consequently one of the Lakeshore’s management goals is to ensure that visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and recreational opportunities.

There are several small communities that are completely surrounded by Lakeshore land. The roads through the Lakeshore serve visitors and local residents alike, as well as regional industrial and commercial sites. Indiana Dunes National Lakeshore encompasses these public road corridors and is therefore accessible to the public at all times. There are many buildings within the park that provide opportunities for visitors to learn about the history of the site, participate in activities and events, and gain access to recreational features. Each has distinct hours of operation. The nearest visitor contact facility to Good Fellow Club Youth Camp is the Bailly-Chellberg Visitor Center, open on a limited basis in support of scheduled special events. The associated parking area and trails are open between 7:00 a.m. and dusk. Also located adjacent to the site is the Dunes Learning Center, which is available for group education, including scheduled overnight visits. The park’s primary visitor facility—the Dorothy Buell Memorial Visitor Center—is located near the intersection of Indiana 49 and US Highway 20 on Munson Road. It is open daily during the summer between 8:30 a.m. and 4:30 p.m.

The 1997 General Management Plan suggested that new trails for pedestrian and bicycle transit were needed to “connect the diverse existing national lakeshore trails into one continuous and comprehensive trail network system” to link the river, natural and cultural resources, and recreational facilities. Four new trail components were planned at that time to complete the proposed network:

- the east-west connection route;
- the east branch Little Calumet River hiking trail;
- the US 12 hike/bike path; and
- the east end bike route.

Visitor activities along the trail system were to include hiking, biking, fishing, and cross-country skiing, and be tied closely to the natural, cultural, and recreational resource opportunities already provided in the area and existing land uses. The plan also

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<sup>27</sup> Bahr Vermeer & Haecker, Architects, Ltd., 90% draft “Historic Structure Report and Cultural Landscape Report; Good Fellow Club Youth Camp” (Omaha, NE: NPS, 15 July 2005), 3-16, 3-17.

suggested provision of better river access, parking, and recreational opportunities. Four new river access sites were to be established at:

- Howe Road
- Indiana State Route 149
- Boo Road
- Burns Ditch<sup>28</sup>

According to the 1997 Interpretive Plan, “Visitor experience goals describe what experiences (cognitive, emotional, active, and sensory) the NPS wants to make available for visitors to Indiana Dunes National Lakeshore. These provide direction for facility and media design, programs, and partnerships.” At the Lakeshore, the goal is for visitors to have the opportunity to:

- Know that they are visiting a national park;
- Enjoy themselves and have memorable experiences that allow them to go home feeling enriched;
- Successfully plan their visits and orient themselves to facilities, attractions, features, and experiences;
- Learn about the fragility of the lakeshore and threats to its resources and develop a sense of appreciation and responsibility that will result in actions to protect, support, and promote the lakeshore and the National Park System politically and financially through volunteer activities, and by adhering to park regulations;
- Understand the lakeshore’s significance as embodied in the primary interpretive themes by experiencing programs, media, and facilities that enhance their educational experiences.

The primary interpretive themes presented at the park include:

**National Park Theme:** Indiana Dunes National Lakeshore is one of 391 parks in the National Park System, and offers many opportunities for intellectual, physical, emotional, and spiritual connections to nature within an urban industrial environment.

**Succession Theme:** Due to the diversity and complexity of its natural systems, succession at Indiana Dunes National Lakeshore creates one of the most dynamic stages for the plant and animal survival. Today, science teachers and students study ecological succession in the Indiana Dunes just as they did a century ago.

**Lake Michigan Theme:** Lake Michigan, which provides transportation, drinking water, fishing, waste disposal, recreation, and industrial uses for 14 million people, is at risk. Indiana Dunes National Lakeshore is concerned about the health of the Great Lakes Ecosystem and works with partners and volunteers to improve its health and ours.

**Heritage Theme:** Indiana Dunes National Lakeshore has resources associated with some 6,000 years of heritage that provide insights into varieties of culture, values, and perceptions. The NPS and today’s park visitors play significant roles in the park’s heritage.

**Diversity Theme:** Indiana Dunes National Lakeshore contains one of the highest numbers of plant species in the National Park System. Community involvement is essential in sustaining the park’s exceptional biological diversity.

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<sup>28</sup> Bahr Vermeer & Haecker, Architects, Ltd., 90% draft “Historic Structure Report and Cultural Landscape Report; Good Fellow Club Youth Camp” (Omaha, NE: NPS, 15 July 2005), 3-16, 3-17.

### 3.3 CULTURAL RESOURCES



Figure 12. View to concrete cabin foundations.

#### **Cultural Landscape**

A cultural landscape is a geographic area, including both cultural and natural resources and the wildlife and domestic animals therein, associated with an historic event, activity, or person, or exhibiting other cultural or aesthetic value.

Good Fellow Club Youth Camp has been documented and evaluated as a cultural landscape found to be eligible for listing in the National Register of Historic Places for its contribution to the broad patterns of American history. The surviving characteristics and components of the cultural landscape of the Good Fellow Club Youth Camp contribute greatly to the significance and integrity of the site as it relates to the identified period of significance (ca. 1941-1976).

The numerous landscape resources that survive from the identified period of significance include: the landform and topography; grading for the pool and tennis courts; the main drive; access roads to the lodge and Caretaker's House; the remnant lodge flagstone walk; the primary parking area; the white and scotch pine plantings; the apple trees and arborvitae trees; lawn and meadow; almost all of the surviving buildings and structures; the steel swimming pool; the steel bridge and surviving recreational features on the site. The sewage lift station, water filtration plant and underground reservoirs are not from the period of significance.

#### **Historic Resources**

“Historic properties,” as defined by the implementing regulations of the National Historic Preservation Act (36 CFR 800) are any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the NRHP. This term includes artifacts, records, and the remains that are related to and located within such properties, as well as traditional and culturally significant Native American sites and historic landscapes. The term “eligible for inclusion in the National Register” includes both properties formally determined eligible and all other properties that meet NRHP listing criteria.

Good Fellow Club Youth Camp is a historic youth camp and recreation area that has been determined eligible for listing in the National Register of Historic Places. The Good Fellow Club Youth Camp is primarily significant for its association with broad patterns of history. From the late nineteenth century until about 1970 steel manufacturing was a dominant industry in the United States. The development of northwest Indiana in the twentieth century was defined economically, socially, and politically by the establishment of the U.S. Steel Gary Works in 1906, and the camp was a direct creation of the Gary Works. The camp reflected mid-twentieth century ideals of equality and social harmony by bringing together children of executives and mill laborers, but also reflected the racial segregation of the time. The camp provided recreational opportunities for employees and their children and respite from the industrial city. Recreation in nature was assumed to have social and ethical benefits, an idea derived from the early twentieth century progressive movement. The appreciation for nature and educational aspects of the camp program also are a part of the broader movement to protect and preserve the Indiana dunes. The rustic architectural design of the camp buildings, in particular the lodge, is a significant aspect of the site and its history.



1  
2 Figure 13. Lodge structure.



Figure 14. Lodge structure.

3 Contributing buildings include: the lodge, gatehouse, caretaker's house, caretaker's garage, pool house, staff cabin, director's  
4 cabin, pump house and utility shed. Contributing structures include: the steel foot bridge, riflery, cabin foundations, nurse's  
5 cabin foundation, washhouse foundation, handicraft cabin foundation, entrance limestone wall and columns, river entrance  
6 limestone columns and iron gate, stone retaining wall along the river, and the steel swimming pool. Contributing site  
7 furnishings, camp amenities and fencing include: the column light fixtures; pole mounted light fixtures; flagpole; accent  
8 boulder; tennis courts, baseball backstop, basketball goal (2); metal poles for tennis net, remnant play equipment; pool  
9 handrails, checkerboard; remnant concrete benches; high diving board; low diving board; pool ladders; clothesline; riflery;  
10 chain link fence; wood gate; iron gate at caretaker's house; iron gate at south entrance; original utility pole; concrete  
11 foundation for tanks and concrete pads.

## 12 Archeological Resources

13 The national lakeshore contains more than 240 known archeological sites. The earliest artifacts found in the park were  
14 projectile points dating from the Late Paleoindian period (8,800 to 8,400 BC). The more sedentary, trade-oriented and  
15 ceremonial society of hunter-gatherers of the Archaic Period traversed the national lakeshore between 7000 and 1000 BC,  
16 leaving some notched projectile points behind. People of the Woodland Tradition (1,000 BC to the historic period) left the  
17 greatest known archeological mark on the park, including many fragments of earthenware pottery. Woodland people led an  
18 even more sedentary lifestyle than their predecessors with elaborate burial customs (mound construction) and movement  
19 toward an agricultural economy.<sup>29</sup>

20 There have been two archeological surveys conducted at Good Fellow Club Youth Camp, *Archeologist Trip Report* (1996)  
21 and *An Archeological Survey of elected Areas at the Good Fellow Club South Camp* (1999). To date no archeological  
22 resources have been documented on this site.

## 23 3.4 NPS OPERATIONS AND INFRASTRUCTURE

### 24 Infrastructure/Utilities

#### 25 *Sewer Lines and Lift Station*

26 A sanitary sewer system and septic tank was built for Good Fellow Lodge in the 1930s. This system was amended in 1985  
27 through the construction of a new septic tank, a sewage pumping station and a three-inch force main connected to an existing  
28 sanitary sewer near the park headquarters along Mineral Springs Road. The force main is approximately 4,200 feet long with  
29 a vertical lift of about 42 feet.

30 The sewage pumping station is operational. The station has two five-horsepower three-phase submersible grinder pumps.  
31 These pumps provide an individual capacity of approximately 45 gallons per minute (gpm).

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<sup>29</sup> National Park Service, "Archeology at Indiana Dunes National Lakeshore,"  
<http://www.nps.gov/archive/indu/History/archeology.html> (accessed 25 March 2009).

1 There is a six-inch PVC stub-up on the southwest corner of the Lodge. The six-inch gravity flow pipe ties into an eight-inch  
2 line that runs to the liftstation.

### 3 ***Electric Power***

4 All electrical power is underground and operational. There is a 400 amp, 3 phase transformer which services the GF Lodge,  
5 pumphouse, well house and existing outbuildings. The liftstation has another 400 amp, 3 phase transformer.

### 6 ***Existing Water Well and Pumps***

7 The Good Fellow Club Youth Camp Lodge is served and protected by a well and pump system housed in a separate structure  
8 to the north of the building. The pumphouse system includes a pumphouse structure, interior water well, exterior clearwell,  
9 high-service pump for fire protection, and pump controls.

10 Water well and pump capacities and conditions meet all codes for public drinking water and fire suppression for the  
11 educational camp. The Park's long-term goal is to tie into the municipal water supply.

### 12 ***Transportation***

13 Indiana Dunes National Lakeshore is located approximately fifty miles southeast of Chicago, Illinois, and is bordered by  
14 Michigan City, Indiana, on the east, and Gary, Indiana, on the west. The area is easily accessed by vehicle via one of several  
15 routes: Interstate Highway 94, the Indiana Toll Road/Interstate Highway 80/Interstate Highway 90, U.S. Highway 20, Indiana  
16 State Highway 12, as well as various state roads. Gary/Chicago International Airport, South Bend Regional Airport, and  
17 Chicago's Midway and O'Hare Airports provide air transport to the region. The Chicago, South Shore, and South Bend  
18 Railroad, as well as Amtrak, provide passenger rail service to the park. Four station stops fall within the park: Dune Park  
19 Station, Beverly Shores Station, Ogden Dunes Station, and Miller Station. The Gary Public Transportation Corporation  
20 serves the park via Bus route 13 (Oak & County Line Road).

### 21 ***Road System***

22 Good Fellow Club Youth Camp is accessed via Howe Road, which extends southeast from Oak Hill Road. Howe Road  
23 provides access to the Little Calumet Rive. Oak Hills Road intersects with Mineral Springs Road, which extends south to  
24 U.S. Highway 20, which in turn intersects Interstate Highway 94 approximately one mile southwest of the site.

25 Walking and bike routes that provide access to the site include the East Branch Little Calumet River Hiking Trail, the East  
26 End Bike Route, and the Indiana Highway 12 Hike/Bike Path.

### 27 **Park Operations**

28 The superintendent at the Lakeshore is responsible for the full scope of managing the Lakeshore, its staff and residents, all of  
29 its programs, and its relations with persons, agencies, and organization interested in the park. Lakeshore staff fulfills the  
30 functions and activities to accomplish management objectives and meet requirements in law enforcement, emergency  
31 services, interpretation and education, utilities, housing, fee collection, and management support.

## 32 **3.5 LONG-TERM MANAGEMENT AND SUSTAINABILITY OF RESOURCES**

### 33 **Night-Sky Initiative**

34 With the rapid rise in population, and the sprawling nature of development around cities and along road corridors, the dark  
35 night sky is an endangered entity. Protecting the dark night sky is an important goal that takes initiative, public awareness,  
36 and concerted efforts aimed at curtailing light pollution.

37 Portions of the Good Fellow Club Youth Camp site are currently lighted. Lanterns are located in association with the  
38 entrance gates along Howe Road. These are replicas of the historic lanterns. Several light poles are located along the  
39 entrance drive leading to the lodge and beyond, some of which are historic. There are also light poles located elsewhere on

1 the site that no longer function. Wall-mounted lighting is also located at the entrances to some of the buildings. The  
2 luminaires are generally not shielded.

### 3 **Soundscapes**

4 Soundscapes are natural sounds or combinations of sounds, associated with a place that comprise its acoustical environment.  
5 The sounds associated with a natural acoustical environment are typically a combination of the natural sounds associated  
6 with weather, water, and animals, and the appropriate environmental sounds created by humans through conversation, work,  
7 mechanical operations, music, and industry. The disruption of an acoustic environment by excessive levels of noise can  
8 jeopardize the natural soundscape and be classified as noise pollution.

9 Soundscapes are addressed in Director’s Order #47: “Soundscape Preservation and Noise Management.” The policies  
10 outlined in the manual articulate the operational issues surrounding protection, maintenance, and restoration of natural  
11 soundscape resources associated with national park sounds in a condition unimpaired by inappropriate or excessive noise.

12 For national parks natural sounds are defined as “intrinsic elements of the environment that are often associated with park  
13 and park purposes. They are inherent components of ‘the scenery and the natural and historic objects and the wild life’  
14 protected by the NPS Organic Act. They are vital to the natural functioning of many parks and may provide valuable  
15 indicators of the health of various ecosystems. Intrusive sounds are of concern to the NPS because they sometimes impeded  
16 the Service’s ability to accomplish its mission.”<sup>30</sup>

17 Director’s Order #47 also qualifies appropriate and inappropriate noise as they apply to parks as follows: “Park activities may  
18 include transportation systems, visitor centers, maintenance activities, recreational activities, weapons-firing demonstrations,  
19 cultural events, and many others. These activities are often found to be appropriate even though they generate elevated sound  
20 level for areas within the park. However, when activities (either inside or outside a park) generate excessive levels of noise,  
21 they can jeopardize the natural soundscape resource and/or purposes for which the park was created.”<sup>31</sup>

22 To address the problem, Director’s Order #47 directs park managers to:

- 23 • measure baseline acoustic conditions
- 24 • determine which existing or proposed human-made sounds are consistent with park purposes
- 25 • set acoustic management goals and objectives based on these purposes and
- 26 • determine which noise sources are impacting the park and need to be addressed by management.

27 Furthermore, it requires park managers to evaluate and address self-generated noise and constructively engage with those  
28 responsible for other noise sources that impact parks to explore what can be done to better protect parks.<sup>32</sup>

29 Portions of the Good Fellow Club Youth Camp are currently occupied by participants in the programs offered by the adjacent  
30 Dunes Learning Center. Participants are engaged in on-site education and evaluation that typically generates little in the way  
31 of noise. Maintenance activities including mowing of lawn areas, and automobile traffic to and from the site are the only  
32 other human-generated sounds that regularly contribute to the local soundscape.

### 33 **Natural, Depletable, or Energy Resource Requirements and Conservation Potential**

34 As stated in the NPS Management Policies of 2006, the NPS strives to minimize the short- and long-term environmental  
35 impacts of development and other activities by conserving resources, recycling, minimizing waste, and using energy-efficient

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<sup>30</sup> NPS, Director’s Order #47: “Soundscape Preservation and Noise Management” available on-line at <http://www.nps.gov/policy/DOrders/DOrders47.html> (accessed 17 March 2009).

<sup>31</sup> NPS, Director’s Order #47: “Soundscape Preservation and Noise Management” available on-line at <http://www.nps.gov/policy/DOrders/DOrders47.html> (accessed 17 March 2009).

<sup>32</sup> NPS, Director’s Order #47: “Soundscape Preservation and Noise Management” available on-line at <http://www.nps.gov/policy/DOrders/DOrders47.html> (accessed 17 March 2009).

1 and ecologically responsible materials and techniques. The NPS is also committed to energy and resource conservation in  
2 facility planning and development as documented in Executive Orders 12873 and 12902.

3 **Socioeconomics**

4 Indiana Dunes National Lakeshore falls within Porter, Lake, and LaPorte Counties, in northwest Indiana. Porter, Lake, and  
5 LaPorte Counties are served by the Northwestern Indiana Regional Planning Commission, an organization that coordinates  
6 economic and infrastructure development in the region. The economy of this area relies on heavy industry, including steel  
7 mills, refineries, and manufacturing. Manufacturing jobs employ 16 percent of the workforce. Steel mills are located nearby  
8 in Gary, Portage, Burns Harbor, and East Chicago.

9 Tourism, casino gambling, and commercial development along the Lake Michigan shoreline are other major components of  
10 the area's economy, bringing millions of visitors to all three Counties. The Lakeshore is one of the popular destinations and  
11 serves local residents as well as residents from other regions.

12 Several community development and improvement projects are occurring within the region, including improvements to the  
13 Portage Marina, a new marina and associated residential community at Marina Shores, a mixed-use development at  
14 Ameriplex, and a new roadway (Burns Parkway). This roadway will provide access to a new business park.

# Chapter 4 • Environmental Consequences

## 4.0 INTRODUCTION

This chapter describes the environmental consequences associated with the no action alternative (Alternative A) and with the implementation of action alternatives B, C, and D. This chapter also provides the scientific and analytical basis for comparing the alternatives. Each alternative is organized in terms of impact topics, which serve as the basis for the analyses. These topics allow a standardized comparison between the alternatives based on their impact on the environment.

## 4.1 IMPACT TOPIC THRESHOLD DEFINITIONS

As required by the National Environmental Policy Act (NEPA) of 1969, as amended, potential impacts are described in terms of type (beneficial or adverse, direct or indirect), context (site-specific, local, or regional), duration (short-term or long-term), and level of intensity (negligible, minor, moderate, or major).

Director's Order 12, (DO#12) "Conservation Planning, Environmental Impact Analysis, and Decision Making," defines the terms used in this Environmental Assessment (EA) to analyze impacts including duration (short or long-term), type (adverse or beneficial), and intensity or magnitude (negligible, minor, moderate or major) of impacts as follows:

### 4.1.1 Type

**Beneficial:** A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.

**Adverse:** A change that moves the resource away from a desired condition or detracts from its appearance or condition.

**Direct:** An impact that is caused by an action and occurs at the same time and place. An example of a direct impact would be the filling of a portion of a stream, which would cause habitat loss.

**Indirect:** An impact that is caused by an action but is later in time or farther removed in distance but still reasonably foreseeable. An indirect impact could result from eroded soils washing into a stream, creating turbid conditions and negatively affecting water quality.

### 4.1.2 Duration

For all resources and values, the duration of impacts in this document are defined as follows:

**Short-Term:** Impacts that occur only during construction or last less than one year.

**Long-Term:** Impacts that last longer than one year.

### 4.1.3 Context

Context is the setting within which an impact is analyzed, such as the affected region or locality and the affected interests. In this EA the intensity of impacts is evaluated within a local context primarily considering effects on the immediate vicinity of the project area. The intensity of effects on cumulative impact is evaluated within a park-wide and local context, and considers effects later in time and the effects of other nearby projects.

#### **4.1.4 Level of Intensity**

Because levels of intensity definitions (negligible, minor, moderate, or major) vary they are not provided here, rather they are listed separately beneath each impact topic.

#### **4.1.5 Cumulative Impacts**

The Council on Environmental Quality (CEQ) regulations that implement NEPA requires assessment of cumulative impacts in the decision-making process for federal projects. A cumulative impact is described in the CEQ's regulation 1508.7 as follows:

*Cumulative impacts* are incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

Existing and anticipated future projects at Indiana Dunes National Lakeshore and in the surrounding area were identified in order to determine the potential cumulative impacts. These included lands administered by the National Park Service, the State of Indiana, and the Town of Porter. Projects were identified through discussions with the NPS staff. Potential projects identified as cumulative actions included any planning or development activity currently being implemented or expected to be implemented in the reasonably near future. The following projects were identified as contributing cumulative impacts:

The NPS is opening the **Porter Brickyard Trail**, which runs along Howe Road. This is a current project that would bring recreational bikers along the edge of the Good Fellow Club Youth Camp site. This trail is open to all visitors and is part of the overall trail system for Indiana Dunes National Lakeshore. There would be easy access to this trail for visitors to the Good Fellows Club Youth Camp.

The NPS has drafted a funding request for a "**An Area Plan for Howe Road**". This study would include assessing a new entry to the Dunes Learning Center (the DLC) from Oak Hill Road, crossing the power line right-of-way. The main gate to the Good Fellow Club Youth Camp is on Howe Road and all visitor access occurs at this point. This plan would also address the potential increase in traffic volume that may occur in the alternatives presented in this document due to increases in visitor use of Howe Road and the Porter Brickyard Trail.

The NPS is **proposing future studies (a Historic Structure Report, Cultural Landscape Report, and Environmental Analysis) for the Bailly Homestead**. These studies would explore alternatives for use and development of this historic site. The Bailly Homestead is a designated National Historic Landmark. It brings together an unusual combination of vernacular architecture including an imposing main house that features late 19<sup>th</sup> century architectural detail, rustic log and brick structures, and an unusual family cemetery. The Bailly Homestead is one of several historic sites near the Good Fellow Club Youth Camp. Future use of the homestead would affect the other sites in the vicinity.

The DLC is also considering a plan for the **Design and Construction of a new Education/Office Building**. The potential site for the building is northwest of the historic lodge. This project would affect the Good Fellow Club Youth Camp site and require construction of more parking and access in the vicinity of the lodge. The current administrative offices of the DLC are located in the staff cabin of the Good Fellow Club Youth Camp.

The NPS is considering future potential **Landscape Rehabilitation of the Peter Larson site**. This could include planned gardens of native and sustainable vegetation, a propagation area where the historic vegetable garden was located, and the rehabilitation of the historic barn for equipment and supply storage. This site is located north of the entrance road to Good Fellow Club Youth Camp and visible to all visitors to the camp. The Peter Larson site has a separate access which does not conflict with access to the camp.

The NPS is developing a study for **Reopening the Little Calumet River for Canoes and Kayaks**. As the Good Fellow Club Youth Camp is bordered to the south by the Little Calumet, increased recreational use of the river could impact the site and its programmatic uses.

The NPS plan for a **Municipal Water Line for Good Fellow Club Youth Camp** is in place and awaiting funding. This would allow for further development of the site, and eliminate the need for the existing underground reservoir structures on the site near the historic lodge.

The NPS is currently working on **Grading Plans around the Historic Lodge** to establish positive drainage away from the building and to alleviate basement flooding.

These potential actions are evaluated in the cumulative impact analysis in conjunction with the impacts upon particular actions associated with the alternatives. Because most of these cumulative actions are in the early planning stages, the evaluation of cumulative impacts was based on a general description of each project. Cumulative impacts are considered for all alternatives, and are presented at the end of each impact topic discussion. In defining the contribution of each alternative to cumulative impacts, the following terminology is used:

- Imperceptible:** The incremental effect contributed by the alternative to overall cumulative impacts is such a small increment that it is impossible or extremely difficult to discern.
- Noticeable:** The incremental effect contributed by the alternative, while evident and observable, is still relatively small in proportion to the overall cumulative impacts.
- Appreciable:** The contribution by the alternative to overall cumulative impacts is an increment that constitutes a large portion of the total cumulative impact.

#### **4.1.6 Impairment of Park Resources**

In addition to determining the environmental consequences of implementing the preferred and other alternatives, *NPS Management Policies 2006* and DO #12 require analysis of potential impacts to determine whether or not proposed actions would impair park resources and values.

A fundamental purpose statement of the NPS, as provided in the Organic Act (1916) and reaffirmed by the General Authorities Act (1970), amended in 1978, begins with a mandate to conserve park resources and values. However, the laws afford the NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS management discretion to allow certain impacts within parks, that discretion is limited by statutory requirements that mandate leaving park resources and values unimpaired, unless an exception is specifically legislated. Prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that would otherwise be present for the enjoyment of those resources and values. An impact would be likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in establishing the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents.

Impairment may result not only from activities in managing the park, but also visitor activities or activities undertaken by concessionaires, contractors, and others operating in the park. An impairment determination is provided for each impact topic, where appropriate, within the conclusion section of each alternative.

## 4.2 NATURAL RESOURCES

### 4.2.1 Soils

#### *Methodology*

All information on soils that would potentially be impacted at the site was compiled and, where possible, map locations of sensitive soils were compared with locations of proposed development and modifications of existing facilities. Predictions about short- and long-term site impacts were based on a comparison of soil characteristics (as described in the county soil survey) and anticipated construction efforts.

The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** Impact to soils would be below or at the lower levels of detection.
- Minor:** The impacts to soils would be detectable and small. Mitigation may be needed to offset adverse impacts and would be relatively simple to implement and likely be successful.
- Moderate:** The impacts on soils would be readily apparent and result in a change to soils over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and likely be successful.
- Major:** The impacts on soils would be readily apparent and would substantially change the character of the soils over a large area in and out of the park. Extensive mitigation measures would be necessary to offset adverse impacts and their success could not be guaranteed.

#### *Impacts of Alternative A (No Action) on Soils*

Under Alternative A, no changes would be made that would impact the existing conditions of the site. Areas currently paved in asphalt and gravel would remain, while undeveloped areas under successional forest and culturally-derived plantings of grass, shrubs, and trees would retain their current character and configuration. Current levels of erosion would continue, and possibly increase with continued visitor wear on paths and use of other areas. Existing stands of invasive plants such as multiflora rose (*rosa multiflora*) that preclude growth of other plants with root systems with better soil holding capability may contribute to soil erosion over time, given that removal would not occur as part of this alternative. This alternative does not include construction or other activities that would alter the site as it exists today. Overall this alternative would have *long-term, negligible, adverse impact* on soils.

#### Cumulative Impacts

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to soils at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, and future construction at the DLC. These projects along with Alternative A would have a *long-term, minor, adverse, cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

#### Conclusion

The overall impact to soils under Alternative A would be a ***long-term, negligible, and adverse***. Alternative A contributes an *imperceptible adverse increment to a long-term, minor, adverse cumulative impact*.

Because there would be no major adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to soils.

### ***Impacts of Elements Common to the Action Alternatives on Soils***

The following proposed actions would impact the soils underlying the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to soils during implementation because soils would be exposed, displaced or otherwise disturbed. *Long-term, minor, adverse impacts* upon the soils would also result from displacement as well as compaction. Best management practices (BMPs) would be employed during construction, and for other activities such as tree removal, to minimize impacts to soils.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Soils***

Under Alternative B areas of existing successional woodland cover (approximately 11.6 acres) would be removed and new grass cover established. Tree removal is anticipated to lead to soil disturbance and erosion, particularly in clearing trees from the site and stump grinding. In addition, new cabins would be constructed on the site of former camp cabins on the land terrace below the lodge. Although these cabins would be sited on existing concrete pads to avoid soil disturbance, construction of the cabins is still anticipated to contribute to soil disturbance and erosion. Construction materials and equipment could be stored along the parking area west of the site to diminish the impacts of construction. Rehabilitation of outdoor recreation features such as the tennis courts, riflery, and archery sites are also anticipated to involve tree removal, and thus soil disturbance and erosion. Once new grass cover is established, soil erosion and disturbance would be abated. This alternative would have a *short-term, moderate, adverse impact* on soils.

### **Cumulative Impacts**

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to soils are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, minor, adverse cumulative impact* on soils. Alternative B would contribute a *noticeable adverse increment to the cumulative impact*.

### **Conclusion**

Overall, Alternative B would have a *short-term, moderate, adverse impact* on soils and Alternative B would contribute a *noticeable adverse increment to a long-term, minor, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to soils.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Soils***

Under Alternative C the existing successional woodland would be retained, while invasive plant populations, such as multiflora rose, would be removed. Removal of these shrubs would likely have some impact on soils, including disturbance. Replacement of plants with more desirable ground covers would lead to a diminishment of erosion. Implementation of sustainability practices such as filter strips, rain gardens, and rainwater harvesting techniques, and promotion of a healthy

ecosystem on-site as part of the ecological study program established therein would lead to a diminishment of erosion problems. Construction of new cabins on existing pads and rehabilitation of the swimming pool for use in ecological study would potentially disturb small areas of soil. Sustainable building techniques would be employed with the intent of disturbing as little soil as possible. This alternative would have a *long-term, minor, beneficial impact* on soils.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to soils are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, minor, adverse cumulative impact* on soils. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

#### Conclusion

Alternative C would have a **long-term, minor, beneficial impact** on soils and contribute an imperceptible beneficial increment to a *long-term, minor, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to soils.

#### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Soils***

Under Alternative D 5.3 acres of the existing successional woodland would be removed and replaced with grass or meadow. New lodging facilities would be sited upon the existing cabin pads. Tree removal and stump grinding activities would lead to soil disturbance and erosion. The increased erosion potential would continue until new grass cover is established. Construction of new facilities on the existing pads, establishment of suitable locations for receptions and tent covers (such as the former tennis court site), development of additional parking, and rehabilitation of the swimming pool would also disturb soils and potentially exacerbate erosion. Removal of invasive plant colonies would diminish long-term soil erosion. This alternative would have a *short-term, moderate, adverse impact* on soils.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to soils are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, minor, adverse cumulative impact* on soils. Alternative D would contribute a *noticeable adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to soils under Alternative D would be **short-term, moderate, adverse impact** on soils and contribute a *noticeable adverse increment to a long-term, minor, adverse cumulative impact*. Because there would be no major adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to soils.

## **4.2.2 Air Quality**

### ***Methodology***

Air quality in the region of the National Lakeshore is generally poor and does not meet all standards of the Clean Air Act. It is possible that some of the actions associated with the proposed alternatives would deleteriously contribute to air quality due to tree removal and an overall increase in turf management that requires mowing and burning.

The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** Air quality would not be impacted, or the impacts on air quality would be below or at the lower levels of detection. Any impact on air quality would be slight and would return to normal shortly after project implementation activities.
- Minor:** Impacts on air quality would be measurable, although the changes would be small and short-term, and the impacts would be localized, temporary, and limited to sensitive resources. For adverse impacts, no air quality mitigation measures would be necessary.
- Moderate:** Impacts on air quality would be measurable, and would have noticeable consequences, although the impact would be relatively local. For adverse impacts, all air quality standards would still be met. There would be short-term exposure to sensitive resources. Air quality mitigation measures would be necessary, and the measures would likely be successful.
- Major:** Changes in air quality would be measurable, and would have substantial consequences, and would be noticed regionally. For adverse impacts, there would be possible violations of state and federal air quality standards, violation of Class II air quality standards, and/or prolonged exposure to sensitive receptors. Air quality mitigation measures would be necessary, and the success of the measures could not be guaranteed.

### ***Impacts of Alternative A (No Action) on Air Quality***

Under Alternative A there would be no change in site resources, character, or management. Existing plant communities, including areas maintained through mowing, would remain as they are currently. Woodlands currently undergoing succession would continue to mature. As the community becomes more mature, plants are anticipated to provide benefits to the environment including fixing carbon and oxygenating the air. This alternative would have a *long-term, negligible, beneficial impact* on air quality.

### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to air quality at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, and future construction at the DLC. Though the effect would be low there may be additions to particulate matter in the air due to construction of some or all of these projects. These projects along with Alternative A would have a *long-term, negligible, adverse cumulative impact*. Alternative A would contribute an *imperceptible beneficial increment to this cumulative impact*.

### **Conclusion**

Alternative A would have a *long-term, negligible, beneficial impact* on air quality. Alternative A would contribute an *imperceptible beneficial increment to a long-term, minor, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to air quality.

### ***Impacts of Elements Common to the Action Alternatives on Air Quality***

The following proposed actions would impact air quality at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to air quality due to air-borne particulate matter released during construction activity or vegetation removal. Vehicular use on the site, select tree removal, and maintenance of expanded lawn areas by mowing or burning would also have *long-term, minor, adverse impact* to air quality.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Air Quality***

Under this alternative, removal of (approximately 11.6 acres) area of existing successional woodland tree cover and replacement with grass cover would occur within the relatively level area south of the cabins. Replacement of the tree cover with turf would require future maintenance through mowing and/or burning, both of which have the potential to degrade air quality. Tree removal also reduces overall carbon fixation and oxygenation of the atmosphere. Overall, the alternative would have a *long-term, minor, adverse impact* on air quality.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to air quality are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, negligible, adverse cumulative impact* on air quality. Alternative B would contribute an *imperceptible adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to air quality under Alternative B would be **long-term, minor and adverse** and it would contribute an *imperceptible, adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents, there would be no impairment of park resources or values related to air quality.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Air Quality***

Under this alternative, existing woodlands would remain, diminishing areas to be mown, invasive plants would be removed, and maintenance and management practices would be implemented to enhance woodland health and promote development of a stand of higher quality vegetation. Woodlands currently undergoing succession would continue to mature. As the community becomes more mature, the plants may continue to provide benefits to the environment including fixing carbon and oxygenating the air. This alternative would have a *long-term, negligible, beneficial impact* on air quality.

### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to air quality are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, negligible, adverse cumulative impact* on air quality. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

### Conclusion

Overall, Alternative C would have a ***long-term, negligible, beneficial impact*** on air quality and it would contribute an *imperceptible beneficial increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to air quality.

### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Air Quality***

Under this alternative removal of (approximately 5.3 acres) of existing successional woodland, and maintenance and management practices would be implemented to enhance woodland health and promote development of a stand of higher quality vegetation. The 5.3 acres would require mowing and maintenance as an open grass lawn. Remaining woodlands currently undergoing succession would continue to mature. As the community becomes more mature, the plants may continue to provide benefits to the environment including fixing carbon and oxygenating the air. In this alternative there would be a more diverse group of visitors at regular intervals during the year and thus increased vehicular traffic. This alternative would have a *long-term, negligible, adverse impact* on air quality.

### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to air quality are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, negligible, adverse cumulative impact* on air quality. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact*.

### Conclusion

Overall, Alternative D would have a ***long-term, negligible, adverse impact*** on air quality and it would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to air quality.

## **4.2.3 Water Quality**

### ***Methodology***

All available information on water quality associated with the nearby Little Calumet River potentially impacted by proposed actions in the alternatives was compiled. Predictions about short- and long-term site impacts were based on the anticipated effects of construction and vegetative cover change on soil erosion, and the potential for increased sediment loads on the river. Also considered was the potential for actions to increase flow quantities during storm events, and the addition of other

measurable pollutants that would be detrimental to existing water quality. The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** Impacts would not be detectable. For adverse impacts, water quality parameters would be well below all water quality standards for the designated use of the water. Both quality and quantity of flows would be within historical conditions
- Minor:** Impacts would be measurable, but water quality parameters would be well within all water quality standards for the designated use. Both quality and quantity of flows would be within the range of historical conditions.
- Moderate:** Impacts on water quality would be readily apparent, but water quality parameters should be within all water quality standards for the designated use. Water quality or flows would be outside historical baseline on a limited time and space basis. For adverse impacts, mitigation would be necessary to offset adverse impacts, and would likely be successful.
- Major:** Impacts on water quality would be readily measurable. For adverse impacts, some quality parameters would periodically be approached, equaled, or exceeded. Flows would be outside the range of historical conditions, and could include flow cessation or flooding. Extensive mitigation measures would be necessary, and their success would not be ensured.

### ***Impacts of Alternative A (No Action) on Water Quality***

Under this alternative there would be no soil disturbance, chemical application to maintain vegetative communities, or construction that would increase impervious surfaces and, therefore, runoff quantities. The Little Calumet River would continue to receive shade and organic matter from the overhanging forest canopies along the floodplain, and a modest amount of sediment particles would continue to reach the stream through limited soil erosion from stormwater. Continuing existing management and maintenance practices would result in *long-term, negligible, adverse impacts* on surface water quality and quantity. .

### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to water quality at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, and future construction at the DLC. These projects along with Alternative A would have a *long-term, negligible, adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

### **Conclusion**

Alternative A would have a **long-term, negligible, adverse impact** and would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to water quality.

### ***Impacts of Elements Common to the Action Alternatives on Water Quality***

The following proposed actions would impact water quality the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins

- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in short-term, minor, adverse impacts to water quality, because runoff from soil disturbance would cause infiltration into streams or the Little Calumet River. Long-term impacts to water quality would be adverse but minor and would result from compaction and displacement of soil. Use of best management practices (BMPs) would be implemented during construction and other soil-disturbing activities, such as removal of selected woodlands, to minimize impacts to water quality.

***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Water Quality***

Under this alternative, removal of (approximately 11.6 acres) area of existing tree cover and replacement with grass cover, as well as paving of new walks (approximately 2,750sf), would result in *short-term, moderate, adverse impacts* to stream quality as soil erosion could potentially occur leading to sediments and particulate matter reaching the Little Calumet River. Mitigation in the form of erosion control fencing and hay bales would be used to control erosion during construction. After implementation, filter strips would be established along the borders of open lawns to capture sediments, reducing the long-term potential for sedimentation. The co-efficient of runoff for additional cover and paved areas would be higher and the quantity of water reaching the stream system over the long-term would increase. Overall, this alternative would result in *long-term, minor, and adverse impact* to water quality.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to water quality are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, negligible, adverse cumulative impact* on water quality. Alternative B would contribute an *imperceptible adverse increment to the cumulative impact*.

Conclusion

Alternative B would have a **long-term, minor, adverse overall impact** on water quality and would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to water quality.

***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Water Quality***

Under this alternative existing woodlands would remain, invasive plants would be removed, and rainwater harvesting, stormwater infiltration features, such as rain gardens, would be incorporated into the landscape to support ecological education and the health of the site’s natural resources. With the exception of invasive plant control, which might involve limited soil disturbance and the use of systemic herbicides, most of these actions would have a beneficial impact on water resources by diminishing overland flow of stormwater, and cleansing the stormwater that does reach the system of sediments to some extent. Overall, this alternative would result in a *long-term, minor and beneficial impact on water quality*.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to water quality are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, negligible,*

*adverse cumulative impact on water quality.* Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact.*

#### Conclusion

The overall impact to water quality under Alternative C would be **long-term, minor, and beneficial** and Alternative C would contribute an *imperceptible beneficial increment to a long-term, negligible, adverse cumulative impact.*

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to water quality.

#### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Water Quality***

Under this alternative, construction of new walks, parking, and event-related facilities would have a *short-term, minor, adverse impact* on water quality by contributing to sedimentation of the Little Calumet due to soil erosion and disturbance. Removal of some existing areas of woodland (approximately 5.3 acres), the addition of grass cover, and the additional area of impervious pavement associated with new universally accessible walks would increase the co-efficient of runoff and potentially lead to an increase in the quantity of runoff into the river. Overall, this alternative would have a *long-term, negligible, adverse impact* on water quality.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to water quality are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D, would have a *long-term, negligible, adverse cumulative impact* on water quality. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact.*

#### Conclusion

The overall impact to water quality under Alternative D would be **long-term, negligible, and adverse** and Alternative D would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact.*

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to water quality.

### **4.2.4 Wetlands**

#### ***Methodology***

The NPS has adopted a goal of “no net loss” of wetlands, and has set goals for a long-term net gain of wetlands service-wide (NPS 2002). The EA team based the impact analysis on wetland sites on existing literature, studies and information provided by National Lakeshore staff, and professional judgment. The Historic Structure Report/Cultural Landscape Report (HSR/CLR) study shows a hydromesophytic forest (slough) occurring within the southeastern portion of the floodplain of the Little Calumet River below the project site. A steep bluff separates the project site from the floodplain area. This low, frequently-flooded, area contains sedges, cattails, and shrubs tolerant of flooding. Changes in land cover, management

practices, and the amount of impervious surface that would occur in association with the proposed alternatives have been considered for their potential to impact this off-site wetland area.

The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** Impacts would not be detectable. Both quality and quantity of water flow associated with the wetland would be within historical conditions
- Minor:** Impacts would not result in alteration of natural hydrology of wetlands or floodplains. A USACE 404 permit would not be required. There would be no filling or disconnecting of the floodplain. The functionality of the floodplain would not be impacted. For adverse impacts, no mitigation measure associated with floodplains or wetlands would be necessary.
- Moderate:** Impacts on natural hydrology of wetlands or floodplains would be apparent such that a USACE 404 permit could be required. Alteration of the floodplain would be apparent. Wetland or floodplain functions would not be impacted in the long-term. For adverse impacts, mitigation measures associated with floodplains or wetlands would be necessary and the measures would likely succeed.
- Major:** Impacts on wetlands or floodplains would be observable over a relatively large area, would be long-term, and would require a USACE 404 permit. Adverse impacts from filling or disconnecting the floodplain would occur. Long-term impacts would affect the functionality of the floodplain. For adverse impacts, mitigation measures would be necessary and their success would not be guaranteed.

### ***Impacts of Alternative A (No Action) on Wetlands***

Continuing existing management and maintenance practices would result in *long-term, negligible, and adverse impacts* on wetland and floodplain functions, due to the on-going input of modest amounts of sediment that would continue to reach these areas due to limited soil erosion from stormwater. Under this alternative, there would be no soil disturbance, application of chemicals to maintain the vegetative communities, or construction to increase impervious surfaces and therefore runoff quantities.

### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to the *off-site* wetland at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, future construction at the DLC, and the re-opening of the Little Calumet River for canoes and kayaks. These projects along with Alternative A would have a *long-term, negligible, adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

### **Conclusion**

The overall impact to wetlands under Alternative A would be ***long-term, negligible, and adverse*** and Alternative A would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to wetlands.

### ***Impacts of Elements Common to the Action Alternatives on Wetlands***

The following proposed actions could impact *off-site* wetlands south of the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to the off-site wetlands, because soil would be exposed, displaced or disturbed. There would be *long-term, minor, adverse impact* to the off-site wetlands resulting from compaction and displacement of soil. Use of best management practices (BMPs) would be implemented during construction and other soil disturbing activities such as tree removal, to minimize impacts to the wetland.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Wetlands***

Under this alternative, removal of (approximately 11.6 acres) area of existing tree cover and replacement with grass cover, as well as paving of new walks (approximately 2,750sf), would result in *short-term, moderate, and adverse impacts* to the wetlands and floodplain as soil erosion could potentially occur, leading to sedimentation and an increase in overland flow of stormwater. Mitigation in the form of erosion control fencing and hay bales would be used to control erosion during construction. After implementation, filter strips would be established along the edges of open lawns to capture sediments, reducing the long-term potential for sedimentation. The co-efficient of runoff of the new grass cover and paved areas would lead to an increase in the quantity of water reaching the wetland and floodplain system over the long-term. Overall, this alternative would result in a *long-term, minor, and adverse impact* to the *off-site* wetland.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to wetlands are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, negligible, adverse cumulative impact* on wetlands. Alternative B would contribute an *imperceptible adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to wetlands under Alternative B would be *long-term, minor, and adverse* and Alternative B would contribute an imperceptible adverse increment to a *long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to wetlands.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Wetlands***

Under this alternative, existing woodlands would remain, invasive plants would be removed, and rainwater harvesting, stormwater infiltration features, such as rain gardens, and other sustainable features, would be incorporated into the landscape to support ecological education and the health of the site’s natural resources. With the exception of invasive plant control, which might involve limited soil disturbance and the use of systemic herbicides, most of these actions would have a beneficial impact on water resources by diminishing overland flow of stormwater, and cleansing the stormwater that does reach the system of sediments to the extent possible. Overall, this alternative would result in a *long-term, minor, and beneficial impact* on wetlands and the floodplain.

### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to wetlands are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, negligible, adverse cumulative impact* on wetlands. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

### Conclusion

The overall impact to wetlands under Alternative C would be **long-term, minor, and beneficial** and Alternative C would contribute an *imperceptible beneficial increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to wetlands.

### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Wetlands***

Under this alternative, construction of new walks, parking, and event-related facilities would have a *short-term, minor, adverse impact* on water quality by contributing to sedimentation of the wetland and floodplain due to soil disturbance leading to erosion. Removal of some existing areas of woodland (approximately 5.3 acres), replacement with grass cover, and the addition of impervious pavement associated with new universally accessible walks would increase the co-efficient of runoff and potentially lead to an increase in the quantity of runoff into the wetland and the floodplain. Overall, this alternative would have a *long-term, negligible, and adverse impact* on wetlands.

### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to wetlands are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, negligible, adverse cumulative impact* on wetlands. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact*.

### Conclusion

The overall impact to wetlands under Alternative D would be **long-term, negligible and adverse** and Alternative D would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to wetlands.

## **4.2.5 Vegetation**

### ***Methodology***

The existing natural and cultural vegetation has been considered for its species composition, stand age, density, and quality. The presence and locations of sensitive species, species of special concern, and invasive species were mapped and considered. Predictions about short- and long-term site impacts were based on the anticipated effects of construction and vegetative cover change on soil erosion, soil moisture, community stability, and wildlife.

Most identified development activities for the Good Fellow Club Youth Camp area are within existing highly disturbed habitats and, thus, do not represent an immediate or direct resource management concern. Potential concerns may arise later based upon future activities proposed for the site such as recreational activities or event use of the site.

Current conditions appear limited to the wooded areas associated with the south side of the Good Fellow Club Youth Camp. Of specific concern is the potential impact to several existing high quality and rare plant species associated with the woodland area through both direct and indirect development activities. An indirect threat to the high quality wooded bluffs is the spread of garlic mustard from existing populations within the adjacent highly disturbed habitat due to roadway and trail placements.

In *Special Vegetation of the Indiana Dunes National Lakeshore*, botanist, Gerould Wilhelm notes “The bottomland, while of not the highest quality, nevertheless represents some of the finer of the bottomland communities of this type remaining in the Chicago region today, and one of the only local examples of a riparian community with forested mesophytic bluffs intact to any degree at all. Thus, these bluffs rank among the more significant regional natural areas.”<sup>33</sup> Any significant disturbance to, or increase in use of this area would seriously jeopardize these habitats.

The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** Individual native plants may occasionally be impacted, but measureable or perceptible changes in plant community size, integrity, or continuity would not occur.
- Minor:** Impacts on native plants would be measurable or perceptible, but would be localized within a small area. The viability of the plant community would not be impacted and the community, if left alone, would recover.
- Moderate:** Impacts would occur to a sizable segment of the native plant community over a relatively large area that would be readily measurable in terms of abundance, distribution, quantity, or quality. Mitigation measures to offset/reduce adverse impacts would be necessary and would likely be successful.
- Major:** Impacts on native plant communities would be readily apparent and would substantially change vegetative community types over a large area, inside and outside the site. Extensive mitigation measures would be necessary to offset adverse impacts, and their success would not be ensured.

### ***Impacts of Alternative A (No Action) on Vegetation***

Continuing existing management and maintenance practices would result in *long-term, minor, adverse impacts* on vegetation due to the anticipated proliferation of invasive plants. Otherwise, the existing successional woodland would continue to mature. Cultural vegetation would continue to decline due to the influence of successional vegetation.

#### Cumulative Impacts

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to vegetation at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, future construction at the DLC, and landscape rehabilitation of the Peter Larson site. These projects along with Alternative A would have a *long-term minor adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

#### Conclusion

The overall impact to vegetation under Alternative A would be **long-term, minor, and adverse** and Alternative A would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

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<sup>33</sup> G.S. Wilhelm, G.S., *Special vegetation of the Indiana Dunes National Lakeshore*, Indiana Dunes National Lakeshore Research Program, Rep. 90-02 (Porter, IN: 1990), 120;130.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to vegetation.

### ***Impacts of Elements Common to the Action Alternatives on Vegetation***

The following proposed actions would impact vegetation at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to vegetation, because soil would be exposed, displaced, or disturbed inviting growth of invasives. *Long-term, minor adverse impacts* to vegetation would result from woodland removal and removal of cultural vegetation. Use of best management practices (BMPs) would be implemented during construction and other soil disturbing activities such as tree removal.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Vegetation***

Under this alternative, removal of approximately 11.6 acres of existing successional woodland tree cover and associated invasive plant species and replacement with grass cover would result in the diminishment of community and species diversity and wildlife habitat. Sensitive plant stands would be avoided during clearing activities and as part of any new site amenity development. Otherwise, the existing woodland is not of high quality and is associated with formerly disturbed soils, and removal is not, therefore, a tremendous loss. One beneficial impact would be the removal of stands of invasives such as multiflora rose. A greater adverse impact would be to affect the hardwood forest present on the slopes and floodplain to the south of the site, which is a community of higher quality, and reducing the larger block of forest cover for wildlife. Overall, the alternative would have a *long-term, moderate and adverse impact* on vegetation.

### **Cumulative Impacts**

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to vegetation are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative B would have *long-term, minor, adverse cumulative impact* on vegetation. Alternative B would contribute a *noticeable adverse increment to the cumulative impact*.

### **Conclusion**

The overall impact to vegetation under Alternative B would be *long-term, moderate and adverse* and Alternative B would contribute a *noticeable adverse increment to a long-term minor adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or

- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to vegetation.

***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Vegetation***

Under this alternative, existing woodlands would remain, invasive plants would be removed, and maintenance and management practices would be implemented to enhance woodland health and promote development of a stand of higher quality vegetation. Overall, this alternative would result in a *long-term, minor, and beneficial impact* on vegetation.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to vegetation are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, minor, and adverse cumulative impact* on vegetation. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

Conclusion

The overall impact to vegetation under Alternative C would be **long-term, minor, and beneficial** and Alternative C would contribute an *imperceptible beneficial increment to a long-term minor adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to vegetation.

***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Vegetation***

Under this alternative, removal of approximately 5.3 acres of existing successional woodland, and construction of new visitor access and event features would disrupt and disturb some existing plant communities on-site. Sensitive plant communities would be avoided and measures taken to remove nonnative invasive species on the site. Measures would also be taken to protect the higher quality forest community on the slopes above the floodplain, and the wetland area. Replacement of some areas of woodland with grass cover would diminish the species diversity of the site. Overall, this alternative would have a *long-term, negligible and adverse impact* on vegetation.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to vegetation are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, minor, and adverse cumulative impact* on vegetation. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact*.

Conclusion

The overall impact to vegetation under Alternative D would be **long-term, negligible and adverse** and Alternative D would contribute an *imperceptible adverse increment to a long-term minor adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or

- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to vegetation.

## **4.2.6 Wildlife and Wildlife Habitat**

### ***Methodology***

Impacts on wildlife are closely related to impacts on habitat. The analysis considered whether actions would be likely to displace some or all individuals of a species in the park or would result in loss or creation of habitat conditions needed for the viability of local or regional populations. Impacts associated with wildlife could include any change in roosting or foraging areas, food supply, protective cover, or distribution or abundance of species.

There currently do not appear to be any wildlife populations or habitats of special importance associated with the Good Fellow Club Youth Camp site. The land to the south of the site, including the quality woodlands, the wetland, the Little Calumet River, and its associated floodplain, however, are of importance to several wildlife populations, and proposed projects on the site have the potential to impact these areas. Indiana Dunes National Lakeshore provides abundant preferred habitat for Indiana bat summer roost sites, including the higher quality woodland along the slopes south of the Good Fellow Youth Camp overlooking the Little Calumet River. Predictions about short and long-term site impacts were based on the anticipated affects of construction and vegetative cover change on soil erosion, soil moisture, community stability, and associated wildlife and wildlife habitat. The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** Terrestrial wildlife and their habits would not be impacted, or the impacts would be at or below the level of detection and would not be measurable or of perceptible consequence to wildlife populations.
- Minor:** Adverse impacts on wildlife or habitat would be measurable or perceptible, but localized within a small area. For adverse impacts, the mortality of an individual animal might occur but the viability of wildlife populations would not be impacted, and the community, if left alone, would recover.
- Moderate:** A change to terrestrial wildlife populations or habitat would occur over a relatively large area. The change would be readily measurable in terms of abundance, distribution, quantity, or quality of population. Mitigation measures would be necessary to offset adverse impacts, and they would likely be successful.
- Major:** Impacts on terrestrial wildlife populations or habitat would be readily apparent, and would substantially change wildlife populations over a large area in and out of the park. Extensive mitigation would be needed to offset adverse impacts, and the success of mitigation measures could not be ensured.

### ***Impacts of Alternative A (No Action) on Wildlife and Wildlife Habitat***

Under Alternative A, there would be little change in the park character and management. Existing habitat would remain in place to continue to support populations of birds, mammals, and reptiles that currently use the site. There would be no changes to vegetation or new construction projects to jeopardize the important habitats on the slopes to the south of the site. Invasive plant stands such as multiflora rose are expected to increase, diminishing slightly the diversity of the plant community and thereby potential wildlife habitat. Over time, the existing successional woodland would continue to mature, and may provide additional habitat for some species of interest. This alternative would have a *long-term, negligible adverse impact* on wildlife.

### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to wildlife and wildlife habitat at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, future construction at the DLC, landscape rehabilitation of the Peter Larson site, and re-opening the Little Calumet River for canoes and kayaks. These projects along with Alternative A would have a *long-term minor adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

## Conclusion

The overall impact to wildlife and wildlife habitat under Alternative A would be **long-term, negligible, and adverse** and Alternative A would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to wildlife and wildlife habitat.

## ***Impacts of Elements Common to the Action Alternatives on Wildlife and Wildlife Habitat***

The following proposed actions would impact wildlife and wildlife habitat at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to wildlife and wildlife habitat, because vegetation would be exposed, displaced or disturbed. *Long-term, minor, adverse impacts* to wildlife and wildlife habitat would result from some removal of vegetative habitat or disturbance to wildlife due to more programmed activities on the site. Use of best management practices (BMPs) would be implemented during construction and other soil disturbing activities such as tree removal, to minimize impacts to wildlife habitat.

## ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Wildlife and Wildlife Habitat***

Under this alternative, removal of approximately 11.6 acres area of existing successional woodland tree cover and replacement with grass cover would result in the diminishment of diversity and wildlife habitat. Measures to protect the higher quality vegetative communities and wetland habitat to the south of the site would be used to mitigate any potential affect. Overall, the alternative would have a *long-term, moderate, and adverse impact* on wildlife.

## Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to wildlife and wildlife habitat are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative B would have *long-term, minor, and adverse cumulative impact* on wildlife and wildlife habitat. Alternative B would contribute a *noticeable adverse increment to the cumulative impact*.

## Conclusion

The overall impact to wildlife and wildlife habitat under Alternative B would be **long-term, moderate, and adverse** and Alternative B would contribute a *noticeable adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in establishing the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or

- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to wildlife and wildlife habitat.

***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Wildlife and Wildlife Habitat***

Under this alternative, existing woodlands would remain, invasive plants would be removed, and maintenance and management practices would be implemented to enhance woodland health and promote development of a stand of higher quality vegetation. Overall, this alternative would result in a *long-term, minor, and beneficial impact* on wildlife and wildlife habitat.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to wildlife and wildlife habitat are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, minor, and adverse cumulative impact* on wildlife and wildlife habitat. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

Conclusion

The overall impact to wildlife and wildlife habitat under Alternative C would be *long-term, minor, and beneficial* and Alternative C would contribute an *imperceptible beneficial increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to wildlife and wildlife habitat.

***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Wildlife and Wildlife Habitat***

Under this alternative, removal of approximately 5.3 acres of existing successional woodland, and construction of new visitor access and event features would disrupt and disturb some areas of existing plant communities and associated wildlife habitat on-site. Measures would be taken to protect the higher quality community on the slopes above the floodplain and the wetland area. Overall, this alternative would have a *long-term, minor, and adverse impact* on wildlife and wildlife habitat.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to wildlife and wildlife habitat are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, minor, and adverse cumulative impact* on wildlife and wildlife habitat. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact*.

Conclusion

The overall impact to wildlife and wildlife habitat under Alternative D would be *long-term, minor, and adverse* and Alternative D would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to wildlife and wildlife habitat.

## **4.2.7 Rare, Threatened and Endangered Species**

### ***Methodology***

Endangered species information was requested from the U.S. Fish and Wildlife Service on May 1, 2009. In a letter dated May 15, 2009, the Fish and Wildlife Service provided the following information. The Good Fellow Club Youth Camp site is within the range of the following Federally endangered, threatened, and candidate species: Indiana bat (*Myotis sodalis*), Karner blue butterfly (*Lycæides Melissa samuelis*), Pitcher's thistle (*Cirsium pitcheri*), Piping plover (*Charadrius melodus*), and Eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*). Of these species, the only one potentially present in the Good Fellow Club Youth Camp vicinity is the Indiana bat because there is no suitable habitat for the other species in that portion of the Lakeshore. The only bat mist net surveys conducted along the East Branch Little Calumet River in the Bailly Unit to date (2003- 04 Heather Brookhart and John O. Whitaker Jr.) did not capture any bats of any species. A Biological Assessment was submitted to the Fish and Wildlife Service. The BA includes the following recommendations for the protection of the Indiana bat in the proposed project area:

1. Avoid disruption of potential roosting areas during the summer season. Tree thinning operations must adhere to the tree cutting restriction dates between April 1 and October 1. Tree thinning operations for the trails, retaining wall, and columns must also adhere to the restricted period between April 1 and October 1. If it is determined that tree clearing or thinning operations must occur during the restricted period, a biologist will conduct a mist net survey of the site to demonstrate the presence or absence of Indiana bats.
2. Allow larger snags of trees with preferred bark, including ash (*Fraxinus spp.*), elm (*Ulmus spp.*), hickory (*Carya spp.*), and oak (*Quercus spp.*) to remain unless they otherwise threaten visitors or other resources.
3. Consider opportunities to provide forest edge conditions nearby to support insect foraging.
4. Identify suitable migration corridors between summer roosting sites and winter hibernation areas and work to protect their integrity.

Plant surveys of the site have indicated populations of rare species along the bluffs and floodplains, including white baneberry (*Actæa pachypoda*); Virginia snakeroot (*Aristolochia serpentaria*); shooting star (*Dodecatheon media*); American columbo (*Frasera caroliniensis*); and pink corydalis (*Corydalis sempervirens*). Predictions about short- and long-term site impacts on these populations were based on the anticipated effects of construction and vegetative cover change on soil erosion, soil moisture, and community stability.

The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** Rare, threatened, or endangered species and their associated habitats would not be impacted, or the impacts would be at or below the level of detection and would not be measurable or of perceptible consequence to plant or animal populations.
- Minor:** Adverse impacts on plants, wildlife, or associated habitats would be measurable or perceptible, but localized within a small area. For adverse impacts, the mortality of an individual plant or animal might occur but the viability of biotic populations of concern would not be impacted, and the community, if left alone, would recover.
- Moderate:** A change to plant or wildlife populations or their associated habitat would occur over a relatively large area. The change would be readily measurable in terms of abundance, distribution, quantity, or quality of population. Mitigation measures would be necessary to offset adverse impacts, and they would likely be successful.
- Major:** Impacts on plant or wildlife populations or associated habitat would be readily apparent, and would substantially change the populations over a large area in and out of the park. Extensive mitigation would be needed to offset adverse impacts, and the success of mitigation measures could not be ensured.

### ***Impacts of Alternative A (No Action) on Rare, Threatened or Endangered Species***

Under Alternative A, there would be little change in park character and management. Existing habitat would remain in place and continue to support populations of birds, mammals, and reptiles that currently inhabit the site. There would be no changes to vegetation or new construction projects to jeopardize the important habitats on the slopes to the south of the site. Invasive plant stands, such as multiflora rose, could be expected to increase, potentially threatening plant communities of interest and important wildlife habitat. Over time, the existing successional woodland would continue to mature, and may alter light and moisture conditions to the extent that habitat conditions for existing rare plant populations would no longer be conducive to their growth. Habitat for the Indiana bat would not be threatened by this alternative. This alternative would have a *long-term, negligible, adverse impact* on existing rare plant populations and bat habitat.

#### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to rare, threatened or endangered species at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, future construction at the DLC, landscape rehabilitation of the Peter Larson site, and the re-opening of the Little Calumet River for canoes and kayaks. These projects along with Alternative A would have a *long-term, negligible, adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

#### **Conclusion**

The overall impact to rare, threatened and endangered species under Alternative A would be ***long-term, negligible, and adverse*** and Alternative A would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to rare, threatened or endangered species.

### ***Impacts of Elements Common to the Action Alternatives on Rare, Threatened or Endangered Species***

The following proposed actions would impact rare, threatened, and endangered species at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term negligible adverse impacts* to rare, threatened or endangered species, because soil would be exposed, displaced or disturbed and vegetation removed. *Long-term, negligible, adverse impacts* to rare plant species would result from compaction and displacement of soil and vegetation removal or management. Use of best management practices (BMPs) would be implemented during construction and other soil disturbing activities such as tree removal, to minimize impacts to rare plant communities.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Rare, Threatened or Endangered Species***

Under this alternative, removal of approximately 11.6 acres of existing successional woodland tree cover and replacement with grass cover would occur within the relatively level area south of the cabins. Tree removal would not occur in areas where rare plants have been identified and measures to protect these associated communities and the wetland habitat to the south of the site would be used to mitigate any potential affect. Measures would be taken to protect of the higher quality community on the slopes above the floodplain, and any associated rare plant species or habitat. Recommendations from the Biological Assessment would be implemented to protect the Indiana bat and its habitat. Overall, the alternative would have a *long-term, moderate and adverse impact* on rare plant species and animal species of special concern.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to rare, threatened and endangered species are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, moderate, adverse cumulative impact* on wildlife and wildlife habitat. Alternative B would contribute an *appreciable adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to rare, threatened and endangered species under Alternative B would be ***long-term, moderate, and adverse*** and Alternative B would contribute an *appreciable adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to rare, threatened or endangered species.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Rare, Threatened or Endangered Species***

Under this alternative, existing woodlands would remain, invasive plants would be removed, and maintenance and management practices would be implemented to enhance woodland health and promote development of a stand of higher quality vegetation. Efforts would be conducted to protect and perpetuate the habitat supporting any rare plant species and animal species of special concern. Measures would be taken to protect of the higher quality community on the slopes above the floodplain, and any associated rare plant species and associated habitat as well as the wetland area that may support the Northern leopard frog, a species of special concern. Overall, this alternative would result in a *long-term, minor, beneficial impact* on rare, threatened and endangered species.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to rare, threatened and endangered species are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, negligible, adverse cumulative impact* on wildlife and wildlife habitat. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to rare, threatened and endangered species under Alternative C would be ***long-term, minor, and beneficial*** and Alternative C would contribute an *imperceptible beneficial increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;

- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to rare, threatened or endangered species.

***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Rare, Threatened or Endangered Species***

Under this alternative, removal of an area (approximately 5.3 acres) of existing successional woodland, and construction of new visitor access and event features would disrupt and disturb some areas of existing plant communities. Measures would be taken to protect of the higher quality community on the slopes above the floodplain, and any associated rare plant species and associated habitat. Recommendations from the Biological Assessment would be implemented to protect the Indiana bat and its habitat. Overall, this alternative would have a *long-term, minor, adverse impact* on rare, threatened or endangered species.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to rare, threatened and endangered species are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, minor, adverse cumulative impact* on wildlife and wildlife habitat. Alternative D would contribute a *perceptible adverse increment to the cumulative impact*.

Conclusion

The overall impact to rare, threatened and endangered species under Alternative D would be *long-term, minor and adverse* and Alternative D would contribute a *perceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to rare, threatened or endangered species.

**4.3 RECREATIONAL RESOURCES, VISITOR USE AND EXPERIENCE AND AESTHETIC RESOURCES**

**4.3.1 Recreational Resources and Visitor Use and Experience**

***Methodology***

*NPS Management Policies 2001* (NPS 2000) states that enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks and that the NPS is committed to providing appropriate, high-quality opportunities for visitors to enjoy parks. One of the park’s management goals is to ensure that visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of its facilities, services, and recreational opportunities.

At Good Fellow Club Youth Camp, the alternatives accommodate activities already occurring in association with the DLC and provide for new experiences for visitors in the context of a traditional camp, an environmental education facility, or special events or gatherings orchestrated by a concessionaire or lessee of the site. Under any of the alternatives, the site would not be open to the general public, but to campers, school groups, program participants, and visitors associated with the special events, gatherings, or conferences. The site would offer those visitors a variety of recreational opportunities and programs throughout the year. Past interpretive and administrative planning documents provide background on changes to visitor use and experience over time. Analysis of potential intensity of impacts to visitor use and experience were derived from the available information in the park, expertise of park staff and best professional judgment.

Recreational land uses associated with the site include walking and biking along the road and trail corridors. Visitor use includes access to the site as part of the DLC programs. The proposed actions all include the establishment of new recreational opportunities on the site. The thresholds for change for the intensity of the associated impacts are as follows:

- Negligible:** Changes in recreational land use or recreational resources would be below or at the lowest level of detection. Visitors would not be affected.
- Minor:** Changes in recreational land use or recreational resources would be detectable and localized. The visitor would be aware of the impacts associated with the alternative, but the impacts would be slight.
- Moderate:** Changes in recreational land use or recreational resources would be readily apparent. The visitor would be aware of the impacts associated with the alternative and would likely be able to express an opinion about the changes.
- Major:** Changes in recreational land use or recreational resources would be readily apparent and have important consequences. The visitor would be aware of the impact associated with the alternative and would likely express a strong opinion about the changes.

### ***Impacts of Alternative A (No Action) on Recreational Resources and Visitor Use and Experience***

Under Alternative A, there would not be any change to existing recreational resources or uses within the Good Fellow Club Youth Camp site. Existing former recreational features of the camp would continue to be maintained as possible, although some would likely decline in condition. Use of the site by the DLC would continue, but may be negatively affected by continued growth of invasive plant species within woodland areas. This growth affects the aesthetics and visitor experience of the site. Beyond the boundaries of the site, Lakeshore visitors would still be able to participate in walking, biking, hiking, and other recreational activities. Lakeshore attendance and availability of recreational resources are also not expected to change if this alternative were implemented. Overall, the no action alternative would have a *long-term, negligible, adverse impact* on recreational resources and visitor experience.

#### Cumulative Impacts

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts recreational resources and visitor use and experience at Good Fellow Club Youth Camp. These projects include: re-opening the Little Calumet River for canoes and kayaks, opening the Porter Brickyard Trail, and the completion of a traffic impact study of Howe Road. These projects along with Alternative A would have a *long-term, moderate, beneficial cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

#### Conclusion

The overall impact to recreational resources and visitor experience under Alternative A would be ***long-term, negligible, and adverse*** and Alternative A would contribute an *imperceptible adverse increment to a long-term, moderate, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to recreational resources and visitor use and experience.

### ***Impacts of Elements Common to the Action Alternatives on Recreational Resources and Visitor Use and Experience***

The following proposed actions would impact recreational resources and the visitor experience at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to recreational resources and visitor experience. *Long-term, moderate, beneficial impacts* to recreational resources and visitor experience would result from enhanced recreational resources on the site and enhanced opportunities for the visitor experience.

***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Recreational Resources and Visitor Use and Experience***

Under Alternative B, the majority of the historic recreational features of the site would be restored and incorporated into future camp uses. Restoration of the tennis courts, swimming pool, archery and riflery ranges, baseball, horseshoe, and croquet areas would enhance recreational opportunities within the site. Provision of lodging facilities in the form of new cabins and a rehabilitated lodge building would further enhance recreational uses, and the visitor experience associated with the site. Overall, Alternative B would have a *long-term, moderate, beneficial impact* on recreational resources and visitor experience.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to recreational resources and visitor experience are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, moderate, beneficial cumulative impact* on recreational resources and visitor experience. Alternative B would contribute a *noticeable beneficial increment to the cumulative impact*.

Conclusion

The overall impact to recreational resources and visitor experience under Alternative B would be ***long-term, moderate and beneficial*** and Alternative B would contribute a *noticeable beneficial increment to a long-term, moderate, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to recreational resources and visitor use and experience.

***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Recreational Resources and Visitor Use and Experience***

Under Alternative C, former recreational features of the site would not be restored, and some would be removed. Trails would be established that would support some increased recreational use of the site. Generally, however, recreational uses of the site would be replaced by educational uses. Aesthetics would likely improve with the enhancement of the health of native plant communities. The visitor experience would be enhanced by the establishment of an educational facility that provides access to hands-on learning opportunities throughout the site. Overall, Alternative C would have a *long-term, minor, and beneficial impact* on recreational resources and visitor experience.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to recreational resources and visitor experience are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C

would have *long-term, moderate, beneficial cumulative impact* on recreational resources and visitor experience. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to recreational resources and visitor experience under Alternative C would be ***long-term, minor, and beneficial*** and Alternative C would contribute an *imperceptible beneficial increment to a long-term, moderate, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to recreational resources and visitor use and experience.

#### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Recreational Resources and Visitor Use and Experience***

Under Alternative D, some of the historic recreational features of the site would be restored and incorporated into future special events uses. Restoration of the swimming pool, horseshoe, and croquet areas would enhance recreational opportunities within the site. Provision of lodging facilities in the form of new cabins and a rehabilitated lodge building would further enhance recreational uses, and the visitor experience associated with the site. Overall, Alternative D would have a *long-term, moderate, beneficial impact* on recreational resources and visitor experience.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to recreational resources and visitor experience are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative D would have *long-term, moderate, beneficial cumulative impact* on recreational resources and visitor experience. Alternative D would contribute a *noticeable beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to recreational resources and visitor experience under Alternative D would be ***long-term, moderate and beneficial*** and Alternative D would contribute a *noticeable beneficial increment to a long-term, moderate, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to recreational resources and visitor use and experience.

### **4.3.2 Aesthetic Resources**

#### ***Methodology***

The existing visual environment is defined as what is seen by the visitor during the approach to Good Fellow Club Youth Camp as well as what is seen by the visitor within the area itself. The visual environment impacts both the anticipation and experience at Good Fellow Club Youth Camp. The quality of the visual environment is a vital resource and is instrumental in setting the stage for this site experience within Indiana Dunes National Lakeshore.

The intensities of the impact are defined as follows:

- Negligible:** Impacts to the visual quality of the landscape would be at or below the level of detection, and the changes would be so slight that they would not be of any measurable or perceptible consequence to the visitor experience.
- Minor:** Impacts to the visual quality of the landscape would be detectable, although the impacts would be localized and would be small and of little consequence to the visitor experience. Mitigation measures, if needed to offset adverse impacts, would be simple and likely successful.
- Moderate:** Impacts to the visual quality of the landscape would be readily detectable and localized, with consequences at the regional level including localities, cities, or towns surrounding the park. Mitigation measures, if needed to offset adverse impacts, would be extensive and likely successful.
- Major:** Impacts to the visual quality of the landscape would be obvious and would have substantial consequences to the visitor experience in the region including localities, cities, or towns surrounding the park. Extensive mitigation measures would be needed to offset any adverse impacts, and their success would not be guaranteed.

### ***Impacts of Alternative A (No Action) on Aesthetic Resources***

Under Alternative A, existing former recreational features of the camp would continue to be maintained as possible, although some would likely decline in condition. Use of the site by the DLC would continue, but may be negatively affected by continued growth of invasive plant species within woodland areas. This growth affects the aesthetics and visitor experience of the site. Existing vegetation and open space patterns will be perpetuated through current management and operations. Viewsheds experienced by visitors would remain the same and also be susceptible to change due to invasive plant growth. Overall, the no action alternative would have a *long-term, negligible, adverse impact* on aesthetic resources.

### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to aesthetic resources at Good Fellow Club Youth Camp. These projects include: re-opening the Little Calumet River for canoes and kayaks, opening the Porter Brickyard Trail, landscape rehabilitation at the Peter Larsen site, future construction at the DLC, and future use of the Bailly Homestead. These projects along with Alternative A would have a *long-term, minor, beneficial cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

### **Conclusion**

The overall impact to aesthetic resources under Alternative A would be **long-term, negligible, and adverse** and Alternative A would contribute an *imperceptible adverse increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to aesthetic resources.

### ***Impacts of Elements Common to the Action Alternatives on Aesthetic Resources***

The following proposed actions would impact aesthetic resources at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins

- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to aesthetic resources. *Long-term, moderate, beneficial impacts* to aesthetics would result from the restoration of viewsheds and historic landscape patterns that are restored and as invasive plants are removed and managed.

***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Aesthetic Resources***

Under Alternative B, the majority of the historic recreational features of the site would be restored and incorporated into future camp uses and the overall cultural landscape patterns are restored. This action creates new viewsheds for the visitor as they travel onto the site. Open space patterns are visible and the entire site is generally more open to extended views of the structures. Invasive plants species are removed which contributes to the overall aesthetic value of the site. Overall, Alternative B would have a *long-term, moderate, beneficial impact* on aesthetic resources.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to aesthetic resources are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, minor, beneficial cumulative impact* on aesthetic resources. Alternative B would contribute a *noticeable beneficial increment to the cumulative impact*.

Conclusion

The overall impact to recreational resources and visitor experience under Alternative B would be ***long-term, moderate and beneficial*** and Alternative B would contribute a *noticeable beneficial increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to aesthetic resources.

***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Aesthetic Resources***

Under Alternative C, former recreational features of the site would not be restored, and some would be removed. The successional woodland would remain, however invasive species would be removed. Aesthetics would likely improve with the enhancement of the health of native plant communities and removal of invasive species. Viewsheds would remain as they currently exist, with vegetation obscuring views to the site along the entrance drive. Overall, Alternative C would have a *long-term, negligible, adverse impact* on aesthetic resources.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to aesthetic resources are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, minor, beneficial cumulative impact* on aesthetic resources. Alternative C would contribute *an imperceptible adverse increment to the cumulative impact*.

### Conclusion

The overall impact to aesthetic resources under Alternative C would be **long-term, negligible, and adverse** and Alternative C would contribute *an imperceptible adverse increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to aesthetic resources.

### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Aesthetic Resources***

Under Alternative D, some of the historic recreational features of the site would be restored and incorporated into future special events uses. Selected woodland removal would create distinct viewsheds into the site and open spaces for special use activities. Invasive plants would be removed, which would enhance the aesthetic value of the site. Overall, Alternative D would have a *long-term, moderate, beneficial impact* on aesthetic resources.

### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to aesthetic resources are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative D would have *long-term, minor, beneficial cumulative impact* on aesthetic resources. Alternative D would contribute a *noticeable beneficial increment to the cumulative impact*.

### Conclusion

The overall impact to aesthetic resources under Alternative D would be **long-term, moderate and beneficial** and Alternative D would contribute a *noticeable beneficial increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to aesthetic resources.

## **4.4 CULTURAL RESOURCES**

Potential impacts to cultural resources including cultural landscapes, historic structures, and archeology are explained in terms of type, context, duration, and intensity, which is consistent with the CEQ regulations. Analyses of potential impacts are intended to comply with the requirements of both NEPA and Section 106 of the National Historic Preservation Act (NHPA).

In accordance with the Advisory Council on Historic Preservation's (ACHP) regulations implementing Section 106, impacts to cultural resources were identified and evaluated by:

- Determining the Area of Potential Effects (APE);
- Identifying cultural resources present in the APE that were either listed on or eligible for listing on the National Register of Historic Places (NRHP);
- Applying the criteria of adverse effect to affected cultural resources listed on or eligible for listing on the NRHP; and

- Considering ways to avoid, minimize, or mitigate adverse effects.

Under the (ACHP) regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected NRHP eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource, which qualifies it for inclusion on the NRHP, by diminishing the integrity of the resource’s location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur at a later time or that would be cumulative over the course to time. A determination of *no adverse effect* means that there is an effect, but the effect would not diminish in any way characteristics of a cultural resource that would qualify it for inclusion on the NRHP.

#### **4.4.1 Cultural Landscapes**

##### ***Methodology***

In 1993, a reconnaissance survey of the Good Fellow Club Youth Camp site determined that it was potentially eligible for listing in the NRHP due to its association with regional industrial history. The period of significance for the Good Fellow Club Youth Camp has been defined as 1941 to 1976. This determination was reached after review of available documentary evidence presented in the HSR/CLR and in the draft Determination of Eligibility prepared by the park historian. The beginning date of 1941 and closing date of 1976 coincide with the period in which the site was used as a summer recreation camp by the Good Fellow Club, under U.S. Steel ownership. During this period, various additions and modifications were made including building renovations, lodge additions in 1957, and other minor changes in the 1960s and 70s.

The HSR/CLR states: “In consideration of the need to protect the integrity and character-defining qualities of the Good Fellow Club Youth Camp landscape, and the need to address future administrative, educational, and interpretive needs, the recommended treatment approach is “rehabilitation.” Alternatives in this document follow the *Secretary of the Interior’s Standards for the Treatment of Historic Properties* basic principles and standards for rehabilitation created to help preserve the distinctive character of a cultural landscape and historic structures while allowing for reasonable change to meet new needs.

The impact indicators used to define impacts on cultural landscapes are based on the Section 106 methodology to determine adverse and no adverse effect. The intensities are defined as:

**Negligible:** Impacts are at the lowest levels of detection with neither adverse nor beneficial consequences. For the purposes of Section 106, the determination of impact would be no adverse effect.

**Minor:** Adverse Impact – Patterns or features of the cultural landscape would be altered but the overall integrity of the landscape would not be diminished. Change would be detectable but slight. For the purposes of Section 106, the determination of impact would be no adverse effect.

Beneficial Impact – Preservation of landscape patterns or features in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. For the purposes of Section 106, the determination of impact would be no adverse effect.

**Moderate:** Adverse Impact – Patterns or features of the cultural landscape would be altered, diminishing the integrity of the cultural landscape, but not to an extent that would jeopardize its National Register eligibility. For the purposes of Section 106, the determination of impact would be no adverse effect.

Beneficial Impact – Rehabilitation landscape patterns or features in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. For the purposes of Section 106, the determination of impact would be no adverse effect.

**Major:** Adverse Impact – Patterns or features of the cultural landscape that would be altered and the overall integrity of the cultural landscape diminished to the extent that it is no longer eligible to be listed on the National Register. For the purposes of Section 106, the determination of impact would be adverse effect.

**Beneficial Impact** – Restoration of landscape patterns and features in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. For the purposes of Section 106, the determination of impact would be no adverse effect.

**Duration:** **Short-term** – Impacts on the natural elements of a cultural resource may be comparatively short-term (e.g. three to five years) until new vegetation grows or historic plantings are restored.

**Long-term** – Impacts on the natural elements longer than three to five years.

### ***Impacts of Alternative A (No Action) on Cultural Landscapes***

No changes would be made to impact the cultural landscape. Areas that are currently wooded would continue to be wooded, and existing features that are not currently in use would continue to receive minimal maintenance and upkeep. Overall, this alternative would have a *long-term, minor, and adverse* impact on cultural landscape resources by allowing the current degraded conditions of site features to remain, threatening and diminishing the integrity of resources that contribute to the NRHP-eligible district.

### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to the cultural landscape at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, and future construction at the DLC. These projects along with Alternative A would have a *long-term, minor, beneficial cumulative impact*. Alternative A would contribute a *noticeable adverse increment to this cumulative impact*.

### **Conclusion**

The overall impact to the cultural landscape under Alternative A would be *long-term, minor, and adverse* and Alternative A would contribute a *noticeable adverse increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to cultural landscapes.

### ***Impacts of Elements Common to the Action Alternatives on Cultural Landscapes***

The following proposed actions would impact cultural landscapes at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to the cultural landscape. Rehabilitation of the site to accommodate more intense uses as a camp, an educational facility, or an events venue would potentially impact the cultural landscape through the addition of new programmatic elements to accommodate contemporary needs, and changes to existing vegetative communities. The impacts would range from beneficial to adverse depending on how historic resources, including historic patterns of spatial organization, are integrated into the proposed action.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Cultural Landscapes***

Alternative B would rehabilitate the site, to the extent possible, to its character during the period of significance. Rehabilitation allows for some new construction, such as the development of contemporary cabin facilities on the site of former, now missing, cabins. Non-contributing woodland would be removed, historic building and recreational features would be repaired and reused, and historic uses would be reinstated, resulting in a *long-term, moderate and beneficial impact*, including stabilization and repair of the features and spatial patterns associated with the historic camp and the NRHP-eligible cultural landscape.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to the cultural landscape are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, minor, and beneficial cumulative impact* on the cultural landscape. Alternative B would contribute a *noticeable beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to the cultural landscape under Alternative B would be **long-term, moderate and beneficial** and Alternative B would contribute a *noticeable beneficial increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to cultural landscapes.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Cultural Landscapes***

Under Alternative C existing non-contributing features such as the successional woodland would remain, while some historic features would be adaptively reused, requiring some alteration, and other new features would be added to the cultural landscape. This alternative would allow non-contributing woodland vegetation to remain, allow for adaptive reuse of historic recreation features that would result in changes to their contributing character, removing recreation features in poor condition, and adding new features to accommodate visitor access and sustainability initiatives that would further alter the historic character of the NRHP-eligible cultural landscape. This would have a *long-term, moderate and adverse impact* on the cultural landscape.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to the cultural landscape are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, minor, beneficial cumulative impact* on the cultural landscape. Alternative C would contribute a *noticeable adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to the cultural landscape under Alternative C would be **long-term, moderate and adverse** and Alternative C would contribute a *noticeable adverse increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or

- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to cultural landscapes.

***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Cultural Landscapes***

Under Alternative D selected non-contributing woodland would be removed, helping to reinstate the historic patterns of spatial organization, and many of the existing historic structures and recreational features would be adaptively reused. New features would also be added to the cultural landscape to accommodate the new uses associated with the alternative. Overall, this alternative would have a *long-term, minor and beneficial impact* on the cultural landscape.

Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to the cultural landscape are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, negligible, beneficial cumulative impact* on the cultural landscape. Alternative D would contribute a *noticeable beneficial increment to the cumulative impact*.

Conclusion

The overall impact to the cultural landscape under Alternative D would be **long-term, negligible and beneficial** and Alternative D would contribute a *noticeable beneficial increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to cultural landscapes.

**4.4.2 Historic Resources**

***Methodology***

The primary significance of the Good Fellow Club Youth Camp is related to its social and industrial associations, rather than to its architectural design. However, the architectural character and physical integrity of its primary built features is a reflection of the social and cultural attitudes that led to the establishment of the camp. As stated in the HSR/CLR, “based on the need to protect the historic structures while allowing for future programmatic, administrative, and interpretive needs at the site, the treatment rehabilitation (the process of returning a building or structure to a useful state through repairs or alterations while retaining significant historic features) is appropriate for the lodge and other primary structures of the camp.”

The impact indicators used to define impacts on historic resources are based on the Section 106 methodology to determine adverse and no adverse effect. The intensities are defined as:

**Negligible:** Impact(s) is at the lowest levels of detection, barely perceptible and not measurable, with neither adverse nor beneficial consequences.

**Minor:** Adverse impact – Alternation of character-defining features of a NRHP eligible or listed structure would not diminish the overall integrity of the resource. For the purposes of Section 106, the determination of impact would be no adverse effect.

Beneficial Impact – Stabilization/preservation of character-defining feature(s) in accordance with the *Secretary of the Interior Standards for the Treatment of Historic Properties*. For the purposes of Section 106, the determination of impact would be no adverse effect.

**Moderate:** Adverse Impact – Alteration of a character-defining feature(s) of the structure or building that would not diminish the integrity of the resource to the extent that its NRHP eligibility is jeopardized. For purposes of Section 106, the determination of effect would be no adverse effect.

Beneficial Impact – Rehabilitation of a structure or building in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be no adverse effect.

**Major:** Adverse Impact – Alteration of a character-defining feature (s) of the structure or building, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the NRHP. For purposes of Section 106, the determination of effect would be adverse effect.

Beneficial Impact – Restoration of a structure or building in accordance with the *Secretary of Interior’s Standards for the treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be no adverse effect.

### ***Impacts of Alternative A (No Action) on Historic Resources***

Under Alternative A no changes would be made to impact the historic resources. The lodge would remain unused, while other buildings would continue to be used for the DLC intern housing and temporary visitor uses. The sites of missing historic features would continue to be unused. Other historic resources that survive on the site would continue to receive minimal maintenance and upkeep. Overall, this alternative would have a *long-term, moderate, adverse impact* on historic resources by allowing current degraded conditions to remain and not to engage in stabilization and repair activities to prevent further decline, threatening and diminishing the integrity of resources that contribute to the NRHP-eligible site.

### Cumulative Impacts

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to the historic resources at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, and future construction at the DLC. These projects along with Alternative A would have a *long-term, moderate, adverse cumulative impact*. Alternative A would contribute a *noticeable adverse increment to this cumulative impact*.

### Conclusion

The overall impact to the historic resources under Alternative A would be **long-term, moderate, and adverse** and Alternative A would contribute a *noticeable adverse increment to a long-term, moderate, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to historic resources.

### ***Impacts of Elements Common to the Action Alternatives on Historic Resources***

The following proposed actions would impact historic resources at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation

- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to historic resources. Rehabilitation of the site to accommodate more intense uses as a camp, an educational facility, or an events venue would potentially impact the historic resources through the rehabilitation of the lodge, adaptive reuse of other historic structures, and restoration and reuse of some or all historic recreational features. *The impacts would be long-term and beneficial* to historic resources as they ensure the rehabilitation and preservation of the historic structures that are integrated into the proposed actions.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Historic Resources***

Under Alternative B, existing historic buildings and recreational features would be stabilized and repaired and adaptively reused for traditional camp needs. Contemporary cabins would be built on the former cabin pads. This alternative would have a *long-term, moderate and beneficial impact*, resulting in stabilization and repair of the features and spatial patterns associated with the historic camp and the NRHP-eligible site.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to historic resources are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, negligible, beneficial cumulative impact* on historic resources. Alternative B would contribute a *noticeable beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to the historic resources under Alternative B would be **long-term, moderate and beneficial** and Alternative B would contribute a *noticeable beneficial increment to a long-term, negligible, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to historic resources.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Historic Resources***

Under Alternative C, existing buildings and historic recreational features would be adaptively reused for educational learning needs. On-going use and maintenance of historic buildings would support their repair and stabilization. In many cases, the existing character of the recreational features would be altered to accommodate the new programmatic use, such as the tennis courts and the swimming pool. New cabins would be built on the historic cabin pads in a contemporary design style. The alternative would have a *long-term, negligible, beneficial impact* by stabilizing and repairing features to accommodate new uses.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to historic resources are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, negligible, beneficial cumulative impact* on historic resources. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to historic resources under Alternative C would be **long-term, negligible and beneficial** and Alternative C would contribute an *imperceptible beneficial increment to a long-term, negligible, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to historic resources.

### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Historic Resources***

Under Alternative D, existing buildings and historic recreational features would be adaptively reused for special events and programs. On-going use and maintenance of historic buildings would help to repair and stabilize them. Historic recreational features would be repaired for use. New cabins would be built on the historic cabin pads in a contemporary design style. The alternative would have a *long-term, minor, beneficial impact* by stabilizing and repairing features to accommodate new uses.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to historic resources are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative D would have *long-term, negligible, beneficial cumulative impact* on historic resources. Alternative D would contribute a *noticeable beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to historic resources under Alternative D would be **long-term, minor, and beneficial** and Alternative D would contribute a *noticeable beneficial increment to a long-term, negligible, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to historic resources.

## **4.4.3 Archeological Resources**

### ***Methodology***

Based upon two reports: *Archeologist Trip Report* (1996) and *An Archeological Survey of Selected Areas at the Good Fellow Club South Camp* (1999), no archeological resources have been documented on this site. However, to avoid endangering unknown archeological resources, areas that are to be disturbed for construction or other activity, should be tested by an archeologist before soil-disturbing activity occurs and construction activity should be monitored by an archeologist at the time of soil disturbance. The impact indicators used to define impacts on archeology are based on the Section 106 methodology to determine adverse and no adverse effect. The intensities are defined as:

**Negligible:** Impact(s) is at the lowest level of detection and is barely measurable with no perceptible consequences to known archeological sites.

**Minor:** The impact affects a known archaeological site with little or no potential to yield information important to prehistory or history. These archeological resources are generally ineligible to be listed in the NRHP.

**Moderate:** The impact affects a known archeological site with the potential to yield information important to prehistory or history. The historic context of the affected site would be local or state.

**Major:** The impact affects a known archeological site with the potential to yield important information about human history or prehistory. The historic context of the affected site would be national.

### ***Impacts of Alternative A (No Action) on Archeological Resources***

Under Alternative A, no changes would be made that would result in soil disturbance. Current site management and maintenance practices would continue. This alternative would have a *long-term, negligible, adverse impact* on archeological resources if soil erosion were to occur due to unforeseen events such as drought that resulted in vegetation loss, or soil disturbance due to unforeseen maintenance or access actions.

#### Cumulative Impacts

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to archeological resources at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, and future construction at the DLC. These projects along with Alternative A would have a *long-term, minor, and adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

#### Conclusion

The overall impact to the historic resources under Alternative A would be **long-term, negligible, and adverse** and Alternative A would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to archeological resources.

### ***Impacts of Elements Common to the Action Alternatives on Archeological Resources***

The following proposed actions would impact soils the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features. The historical features must be recorded before implementation of activities or elements associated with any of the action alternatives.

Rehabilitation of the site to accommodate more intense uses as a camp, an educational facility, or an events venue would potentially impact archeological resources if soil disturbance to establish roads, walks or trails, new cabins, new recreational or educational features, or event facilities results in disruption of subsurface resources. Although there have never been any archeological resources discovered on-site, insufficient investigation has been conducted to determine the information potential of the site. The impacts would *range from negligible to adverse* depending on whether currently unidentified archeological resources are discovered through implementation of the proposed actions.

Prior to construction or implementation of these activities, archeological investigation would have to be conducted and the earth excavations monitored. There are no known archeological resources on the site but any construction/implementation could have a *long-term adverse impact* on potential archeological resources on the site.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Archeological Resources***

Under Alternative B removal of non-contributing woodland and construction of new cabins on the existing concrete pad sites could result in soil disturbance due to construction activities. Also, parking would be expanded and new universally accessible walkways would be constructed. This alternative would have a *long-term, moderate and adverse impact*, resulting in diminished integrity of archeological resources should construction activities impact currently unidentified resources.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to archeological resources are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, minor, and adverse cumulative impact* on archeological resources. Alternative B would contribute an *imperceptible adverse increment to the cumulative impact*.

#### Conclusion

The overall impact historic resources under Alternative B would be **long-term, moderate and adverse** and Alternative B would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to archeological resources.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Archeological Resources***

Under Alternative C, construction of new cabins on the existing concrete pad sites could result in soil disturbance due to construction activities. Also, parking is expanded in this alternative and new universally accessible walkways are constructed. This alternative would have a *long-term, negligible, and adverse impact*, resulting in diminished integrity of archeological resources should construction activities impact currently unidentified resources.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to archeological resources are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, minor, and adverse cumulative impact* on archeological resources. Alternative C would contribute an *imperceptible adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to archeological resources under Alternative C would be **long-term, negligible, and adverse** and Alternative C would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to archeological resources.

### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Archeological Resources***

Under Alternative D, removal of non-contributing woodland and construction of new cabins on the existing concrete pad sites could result in soil disturbance due to construction activities. Also, parking would be expanded and new universally accessible walkways would be constructed. This alternative would have a *long-term, moderate and adverse impact* resulting in diminished integrity of archeological resources should construction activities impact currently unidentified resources.

#### **Cumulative Impacts**

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to archeological resources are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, minor, and adverse cumulative impact* on archeological resources. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact*.

#### **Conclusion**

The overall impact to archeological resources under Alternative D would be *long-term, moderate and adverse* and Alternative D would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to archeological resources.

## **4.5 NPS OPERATIONS AND INFRASTRUCTURE**

### ***Methodology***

Park operations, for this document, refers to the quality and effectiveness of the infrastructure and the ability to maintain the infrastructure used in the operation of the park in order to adequately protect and preserve vital resources and provide for an effective visitor experience.

The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** Impacts to park operations would be at low levels of detection and would not have a substantial impact on park operations.
- Minor:** The impact would be detectable but would be of a magnitude that would not have a substantial impact on park operations. If mitigation was needed to offset adverse impacts, it would be simple and likely successful.
- Moderate:** The impacts would be readily apparent and would result in a substantial change in park operations in a manner noticeable to staff and the public. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.
- Major:** The impacts would be readily apparent, would result in a substantial change in park operations in a manner noticeable to staff and the public, and be markedly different from existing operations. Mitigation measures to offset adverse impacts would be needed, would be extensive, and their success could not be guaranteed.

### ***Impacts of Alternative A (No Action) on NPS Operations and Infrastructure***

Under the no-action alternative park operations would remain consistent with those currently being undertaken. For example, the DLC interns are housed in some of the former camp facility buildings, the site is used by the DLC, and there is an

infrastructure of water and sewer systems. Overall, this alternative would have a *long-term, negligible adverse impact* on the NPS operations and facilities, infrastructure, and utilities.

#### Cumulative Impacts

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to park operations and infrastructure at Good Fellow Club Youth Camp. These projects include: installation of municipal water lines, site grading around the historic lodge, future construction at the DLC, future use of the Bailly Homestead, opening the Porter Brickyard Trail; and expansion of the Field Station Cooperative with more office and classroom space. These projects, along with Alternative A, would have a *long-term, minor, and adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

#### Conclusion

The overall impact to park operations and infrastructure under Alternative A would be *long-term, negligible, and adverse* and Alternative A would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to park operations and infrastructure.

#### ***Impacts of Elements Common to the Action Alternatives on NPS Operations and Infrastructure***

The following proposed actions would impact park operations and infrastructure at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor and adverse impacts* to park operations. When the proposed new facilities are constructed and open, the result is a *long-term moderate adverse impact* to park operations and infrastructure, as facilities would require water, electrical and sewer expansions and upgrades.

#### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on NPS Operations and Infrastructure***

Under this alternative, park operations could increase to accommodate new camp uses of the site. Park staff would need to administer use of the site by a concessionaire or site management partner, potentially leading to a long-term increase in staffing and the associated workload. Existing buildings would need to be rehabilitated, and additional buildings would need to be built, leading to a short-term impact on park operations and personnel work load. Completion of the sewage system, additional electrical systems, and the new municipal water supply systems would be required to accommodate the proposed use of the site. Additional parking and trails would also need to be constructed. Overall, this alternative would have a *long-term, minor and adverse impact* on NPS operations and facilities, infrastructure, and utilities.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to park operations and infrastructure are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative B would

have *long-term, minor, and adverse cumulative impact* on park operations and infrastructure. Alternative B would contribute a *noticeable adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to park operations and infrastructure under Alternative B would be *long-term, minor and adverse* and Alternative B would contribute a *noticeable adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to park operations and infrastructure.

#### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on NPS Operations and Infrastructure***

Under this alternative, park operations could increase to accommodate new educational programs uses of the site. Park staff would need to administer use of the site by a concessionaire or site management partner, potentially leading to a long-term increase in staffing and the associated workload. Existing buildings would need to be rehabilitated, and additional buildings would need to be built, leading to a short-term impact on park operations and personnel work load. Completion of the sewage system, additional electrical systems, and new municipal water supply systems would be required to accommodate the proposed expanded use of the site. Additional parking and trails would also need to be constructed. Overall, this alternative would have a *long-term minor adverse impact* on NPS operations and facilities, infrastructure, and utilities.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to park operations and infrastructure are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative C would have *long-term, minor, and adverse cumulative impact* on park operations and infrastructure. Alternative C would contribute a *noticeable adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to park operations and infrastructure under Alternative C would be *long-term, minor and adverse* and Alternative C would contribute a *noticeable adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to park operations and infrastructure.

#### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on NPS Operations and Infrastructure***

Under this alternative park operations would increase to accommodate new special events and activities use of the site. Park staff would need to ensure that administration of the site by a third is undertaken in a manner that is consistent with NPS standards, leading to a potential long-term increase in staffing and the associated workload. Existing buildings would need to be rehabilitated, and additional buildings would need to be built, leading to a short-term impact on park operations. Completion of the sewage system, additional electrical systems, and the new municipal water supply systems would be required to accommodate the proposed expanded use of the site. Additional parking and trails would also need to be constructed to accommodate increased traffic volumes on Howe Road and the opening of the Porter Brickyard Trail. Overall, this alternative would have a *long-term, minor adverse impact* on NPS operations and facilities, infrastructure, and utilities.

## Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to park operations and infrastructure are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D would have *long-term, minor, and adverse cumulative impact* on park operations and infrastructure. Alternative D would contribute *a noticeable adverse increment to the cumulative impact*.

## Conclusion

The overall impact to park operations and infrastructure under Alternative D would be **long-term, minor and adverse** and Alternative D would contribute *a noticeable adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to park operations and infrastructure.

## **4.6 LONG-TERM MANAGEMENT AND SUSTAINABILITY OF RESOURCES**

### **4.6.1 Nightskies/Lightscaapes**

#### ***Methodology***

The NPS Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources (NPS 2003b) defines lightscaapes as, “a term encompassing the dark night sky, the experience of darkness, and the ecological importance of natural light cycles.” The NPS recognized the importance of protecting natural lightscaapes not only for the visitor experience, but also for the protection of ecological integrity.

The Good Fellow Club Youth Camp site is generally lighted in a few key locations. Existing light fixtures do not conform to sustainable policies intended to reduce light pollution. It is possible that some of the actions associated with the proposed alternatives would contribute to night sky concerns through the addition of new lighting to accommodate proposed future use of the site. The Good Fellow Club Youth Camp is affected by existing light sources outside park boundaries, as the glow of lights from Chesterton and Porter can be seen in the sky reducing the visible number of stars. The following intensity levels are based on changes to the existing lightscape. Impacts can be beneficial (removing existing impacts to lightscaapes) or adverse (adding further lighting to already impacted or semi-impacted areas).

- Negligible:** Illumination levels are below what would alter biological processes or behavior. The change to the existing lightscape is virtually undetectable to wildlife or park visitors.
- Minor:** Illumination levels may be within the detectability of numerous species, but fundamental biological processes such as navigation, cover, and photosynthesis are unfiltered. Artificial lights may be noticed, but are quickly forgotten and do not affect the experience of a historic or cultural landscape or other resources unique to a particular park. All visible lights are shielded or produce no glare to the observer, allowing full use of night vision.
- Moderate:** Illumination levels are detectable by numerous species, and biological processes are suspected of being altered. Artificial lights are frequently noticed and continue to intrude into the experience of other resources. The human eye never fully adapts to darkness due to ambient illumination or glare. Outdoor light fixtures are unshielded, too bright or otherwise produce glare.
- Major:** Illumination levels are high enough to affect a range of species, resulting in suspected or documented stress and ecological disruption. Artificial lights are frequently noticed and continue to intrude into the experience

of other resources. Numerous unshielded lights are visible, even at a distance, and produce enough glare that the human eye never fully adapts.<sup>35</sup>

### ***Impacts of Alternative A (No Action) on Nightskies/Lightscaapes***

Under Alternative A, there would be no change to site resources, character, or management. Existing lighting would remain on-site, and continue to cast limited light along roads, parking areas, and at building entrances. Light fixtures that are not shielded or do not cast their light down toward the ground rather than up into the sky would not be replaced. This alternative would have a *long-term, negligible adverse impact* on the night sky.

#### Cumulative Impacts

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to nightskies/lightscaapes at Good Fellow Club Youth Camp. These projects include future construction at the DLC as well as other smaller site projects. These projects, along with Alternative A, would have a *long-term, negligible, adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

#### Conclusion

The overall impact to nightskies/lightscaapes under Alternative A would be ***long-term, negligible, and adverse*** and Alternative A would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to nightskies/lightscaapes.

### ***Impacts of Elements Common to the Action Alternatives on Nightskies/Lightscaapes***

The following proposed actions would impact nightskies/lightscaapes at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in short-term, minor, adverse impacts to nightskies/lightscaapes. The facilities, including walkways, when completed would have a *long-term, moderate adverse impact* on nightskies. Use of appropriate fixtures and hoods, as well as minimizing the use of outdoor lighting can mitigate impacts to the night sky.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Nightskies/Lightscaapes***

Under this alternative, revitalization of camp uses may suggest the addition of new lighting to facilitate outdoor activities and to ensure safety of camp users at night. Mitigation of new lighting would occur through the use of light fixtures that diminish

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<sup>35</sup> National Park Service, *Valley Forge Draft General Management Plan/Environmental Impact Statement* (2006). <http://parkplanning.nps.gov/document.cfm?parkID=284&projectId=11314&documentID=17583> (accessed 15 April 2009).

light trespass – the amount of excess light spilling outside of the premises the fixture is intended to illuminate. Overall, the alternative would have a *long-term, minor, adverse impact* on the night sky.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to nightskies/lightscapes are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, negligible, adverse cumulative impact* on nightskies/lightscapes. Alternative B would contribute an *imperceptible adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to nightskies/lightscapes under Alternative B would be **long-term, minor, and adverse** and Alternative B would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to nightskies/lightscapes.

#### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Nightskies/Lightscapes***

Under this alternative, revitalization of camp uses as an environmental education facility may suggest the addition of new lighting to facilitate outdoor activities and to ensure safety of camp users at night. As part of the ethic inherent in the environmental education use of the site, new lighting would be designed so as to not intrude on the night sky. Overall, the alternative would have a *long-term, negligible, adverse impact* on the night sky.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to nightskies/lightscapes are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C, would *have long-term, negligible, adverse cumulative impact* on nightskies/lightscapes. Alternative C would contribute an *imperceptible adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to nightskies/lightscapes under Alternative C would be **long-term, negligible, and adverse** and Alternative C would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to nightskies/lightscapes.

#### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Nightskies/Lightscapes***

Under this alternative, use of the camp for special events and activities, including lodging and recreation, would likely suggest the addition of new lighting to facilitate outdoor activities and to ensure safety of site users at night. Mitigation of new lighting would occur through the use of light fixtures that diminish light trespass. Overall, the alternative would have a *long-term, minor, adverse impact* on the night sky.

### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to nightskies/lightscapes are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D, would have *long-term, negligible, adverse cumulative impact* on nightskies/lightscapes. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact*.

### Conclusion

The overall impact to nightskies/lightscapes under Alternative D would be **long-term, minor, and adverse** and Alternative D would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to nightskies/lightscapes.

## **4.6.2 Soundscapes**

### ***Methodology***

NPS Management Policies 2006 state that the NPS would strive to preserve the natural quiet and natural sounds associated with the physical and biological resources of parks. NPS policy requires the restoration of degraded soundscapes to the natural condition whenever possible, and the protection of natural soundscapes from degradation due to noise (undesirable human-caused sound) Management Policies 2006, section 4.9. The NPS is specifically directed to “take action to prevent or minimize all noise that, through frequency, magnitude, or duration, adversely affects the natural soundscape or other park resources or values, or that exceeds levels that have been identified as being acceptable to, or appropriate for, visitor uses at the sites being monitored.”(Management Policies 2006, section 4.9).

The natural soundscape of the Good Fellow Club Youth Camp site is generally composed of the natural sounds of winds rustling vegetation, and animal populations such as frogs and birds. The soundscape is also composed of motor vehicular noise emanating from Howe Road and the entrance and parking areas, and the sounds produced by human visitors. It is possible that some of the actions associated with the proposed alternatives would affect the natural soundscape through the increase in gatherings and activities. The visitor experience can be adversely impacted by noise and disruption of solitude and contemplation. However, the programmed uses of the Good Fellow Youth Camp are specifically intended to support visitor activities and recreation and there would, therefore, be human-generated noise at the site. For purposes of analyzing potential impacts to existing soundscapes within the park, the thresholds of change for the intensity of an impact are defined by NPS Management Policies (2006) as follows:

**Negligible:** Natural sound environment would not be affected or the impacts would be at or below the level of detection, would be short-term, and the changes would be so slight that they would not be of any measurable or perceptible consequence to the visitor experience or to biological resources (0 to 1 dBA increase).

**Minor:** Impacts to the natural sound environment would be detectable, although the impacts would be short-term, localized, and would be small and of little consequence to the visitor experience or to biological resources. Mitigation measures, if needed to offset adverse impacts, would be simple and successful (2 to 3 dBA increase).

**Moderate:** Impacts to the natural sound environment would be readily detectable, long-term and localized, with consequences at the regional or population level. Mitigation measures, if needed to offset adverse impacts, would be extensive and likely successful. (4 to 5 dBA increase) and/or approaching 66 dBA.

**Major:** Impacts to the natural sound environment would be obvious, long-term, and would have substantial consequences to the visitor experience or to biological resources in the region. Extensive mitigation measures would be needed to offset any adverse impacts and their success would not be guaranteed (greater than 5 dBA increase or exceeding 66 dBA).<sup>36</sup>

### ***Impacts of Alternative A (No Action) on Soundscapes***

Under Alternative A, there would be no change in site resources, character, or management. Existing soundscapes would continue as present, with the periodic interruption from use by the DLC with groups gathering on the site to receive lessons in association with the outdoor site resources. This alternative would have a *long-term, negligible and beneficial impact* on the natural soundscape.

### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to natural soundscapes at Good Fellow Club Youth Camp. These projects include: future construction at the DLC; re-opening the Little Calumet River for canoes and kayaks; site grading around the historic lodge, and installation of municipal water lines, landscape rehabilitation of the Peter Larson site, and the opening of the Porter Brickyard Trail. These projects, along with Alternative A, would have a *long-term, negligible, adverse cumulative impact*. Alternative A would contribute an *imperceptible beneficial increment to this cumulative impact*.

### **Conclusion**

The overall impact to natural soundscapes under Alternative A would be **long-term, negligible, and beneficial** and Alternative A would contribute an *imperceptible beneficial increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to natural soundscapes.

### ***Impacts of Elements Common to the Action Alternatives on Soundscapes***

The following proposed actions would impact natural soundscape at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to natural soundscape during construction. Revitalization of camp uses would increase the levels of noise associated with human use and vehicular traffic on the site. Most noise levels would have *long term, negligible adverse impact* on the natural soundscape.

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<sup>36</sup> National Park Service, *Valley Forge Draft General Management Plan/Environmental Impact Statement* (2006). <http://parkplanning.nps.gov/document.cfm?parkID=284&projectId=11314&documentID=17583> (accessed 15 April 2009).

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Soundscapes***

Under this alternative, revitalization of camp uses would increase the levels of noise associated with human use. Additional cars would enter the site, and there would be many more activities occurring, including active recreation, than are there currently. This use, however, would perpetuate sounds historically associated with the site as an outdoor recreational camp and would likely be of a quality that would contribute to rather than detract from the natural soundscape. Overall, the alternative would have a *long-term, minor, and beneficial impact* on the natural soundscape.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to natural soundscapes are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B, would have *long-term, negligible, adverse cumulative impact* on natural soundscapes. Alternative B would contribute an *imperceptible beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to natural soundscapes under Alternative B would be **long-term, minor, and beneficial** and Alternative B would contribute an *imperceptible beneficial increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to natural soundscapes.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Soundscapes***

Under this alternative, revitalization of use of the site by educational groups would increase the levels of noise. Additional cars would enter the site, and there would be many more outdoor activities occurring than there are currently. Most of these noise levels are likely of a quality that would contribute to rather than detract from the natural soundscape. Overall, the alternative would have a *long-term, minor, and beneficial impact* on the natural soundscape.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to natural soundscapes are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C, would have *long-term, negligible, adverse cumulative impact* on natural soundscapes. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to natural soundscapes under Alternative C would be **long-term, minor, and beneficial** and Alternative C would contribute an *imperceptible beneficial increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to natural soundscapes.

### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Soundscapes***

Under this alternative, special events and activities and on-going use of the site by the DLC would increase the levels of noise periodically. Additional cars would enter the site, and there would be an elevation in the number of outdoor events on the site. Events that include large gatherings of people with sound systems and music would be temporary and limited to the capacity of the site, but would have an adverse impact on the natural soundscape. Overall, this alternative would have a *long-term, minor and adverse impact* on the natural soundscape.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to natural soundscapes are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative D, would have *long-term, negligible, adverse cumulative impact* on natural soundscapes. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to natural soundscapes under Alternative D would be **long-term, minor, and adverse** and Alternative D would contribute an *imperceptible adverse increment to a long-term, negligible, adverse cumulative impact*.

Because there would be no major adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to natural soundscapes.

### **4.6.3 Natural or Depletable Energy Resource Requirements and Conservation Potential**

#### ***Methodology***

As directed by NPS Management Policies 2006 (NPS 2006), the NPS strives to minimize the short and long-term environmental impacts of development and other activities through resource conservation, recycling, waste minimization, and the use of energy-efficient and ecologically responsible materials and techniques. Each of the alternatives would require energy for day-to-day operations and the action alternatives require materials for construction. Quantification of the energy required for the alternatives is not addressed in this EA. The NPS is committed to energy and resource conservation in facility planning and development as documented in Executive Orders 12873 and 12902. All of the action alternatives include the rehabilitation of the lodge and construction of new overnight facilities on the historic cabin foundations. All action alternatives, however, would support the practice of sustainable planning, design, and use.

The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** No impacts would occur to energy requirements and conservation potential, or impacts would be below or at the lowest level of detection.
- Minor:** Impacts to energy requirements and conservation potential would be detectable and localized. Effects would not cause changes to energy requirements and conservation potential park wide.
- Moderate:** Impacts would be readily apparent and would result in changes to energy requirements and conservation potential park wide.
- Major:** Impacts would be readily apparent and would result in changes to energy requirements and conservation potential outside the park on a regional scale.

### ***Impacts of Alternative A (No Action) on Natural or Depletable Energy Resource Requirements and Conservation Potential***

Under the no action alternative no improvements would occur at the project site and the DLC would continue to use facilities and site features of Good Fellow Club Youth Camp. Operation of the site would continue under the current management and operations plans and no new structures or features would be constructed. Facility activities and environmental impacts studied in the park's *Environmental Management Plan (2007)* would retain their current status with no upgrades or improvements to current conditions at the site. Implementation of this alternative would maintain the existing conditions and current maintenance operations. This alternative would have a *long-term, negligible, adverse impact* to natural or depletable energy resource requirements and conservation potential.

#### Cumulative Impacts

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to energy resource requirements and conservation potential at Good Fellow Club Youth Camp. These projects include: future construction at the DLC, re-opening the Little Calumet River for canoes and kayaks, site grading around the historic lodge, installation of a municipal water line, landscape rehabilitation of the Peter Larson site, and the opening of the Porter Brickyard Trail. These projects, along with Alternative A, would have a *long-term, minor, and adverse cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

#### Conclusion

The overall impact to energy resource requirements and conservation potential under Alternative A would be *long-term, negligible, and adverse* and Alternative A would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to natural or depletable energy resource requirements and conservation potential.

### ***Impacts of Elements Common to the Action Alternatives on Natural or Depletable Energy Resource Requirements and Conservation Potential***

The following proposed actions would impact natural or depletable energy resource requirements and conservation potential at the Good Fellow Club Youth Camp site and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins
- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to energy resource requirements. *Long-term, minor adverse impacts* would result due to the expansion of facilities, lighting for parking and walkways, and use of some of the historic recreational facilities. All of the action alternatives include the rehabilitation of the lodge and construction of new overnight facilities on the historic cabin foundations. All would require energy for operations. All action alternatives, however, would support the practice of sustainable planning, design, and use, thus mitigating many *long-term adverse impacts* to energy resources.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Natural or Depletable Energy Resource Requirements and Conservation Potential***

Alternative B would return the site to its character during the period of significance, with the addition of contemporary cabin facilities on the site of former, now missing, cabins. Non-contributing woodland would be removed, historic building and recreational features would be repaired and reused, and historic uses would be reinstated. Lighting would be provided in and around both historic structures and new cabins and at parking areas and walking paths. This alternative would require greater energy resources in construction and operations of the new facilities. However this would be mitigated by use of multiple strategies in accordance with NPS “Guiding Principles of Sustainable Design.” These principles articulate approaches in the design and management of facilities that emphasize environmental sensitivity in construction, use of non-toxic materials, resource conservation, recycling, and the integration of visitors with the natural and cultural setting. This alternative would have a *long-term, minor and adverse impact* to natural or depletable energy resource requirements and conservation potential.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to natural or depletable energy resource requirements and conservation potential are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B, would have *long-term, minor, and adverse cumulative impact* on natural, or depletable energy resource requirements and conservation potential. Alternative B would contribute an *imperceptible adverse increment to the cumulative impact*.

#### Conclusion

The overall impact to natural or depletable energy resource requirements and conservation potential under Alternative B would be *long-term, minor and adverse* and Alternative B would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to natural or depletable energy resource requirements and conservation potential.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Natural or Depletable Energy Resource Requirements and Conservation Potential***

Under Alternative C existing non-contributing features such as successional woodland would remain, while some historic features would be adaptively reused and other new features would be added to the cultural landscape. This alternative would allow non-contributing woodland vegetation to remain, allow for adaptive reuse of historic recreation features, removal of recreational features in poor condition, and addition of new features to accommodate visitor access to the proposed environmental education center for programs that would complement the adjacent the DLC. Rehabilitation of the Lodge, construction of new structures, and installation of lighting for parking and walkways would all contribute to increased energy requirement for this alternative. The energy requirements would be mitigated through the application of multiple strategies in accordance with NPS “Guiding Principles of Sustainable Design.” This alternative would have a *long-term, minor, and adverse impact* on natural or depletable energy resource requirements and conservation potential.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to natural or depletable energy resource requirements and conservation potential are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, minor, and adverse cumulative impact* on to natural, or depletable energy resource requirements and conservation potential. Alternative C would contribute an *imperceptible adverse increment to the cumulative impact*.

### Conclusion

The overall impact to natural or depletable energy resource requirements and conservation potential under Alternative C would be **long-term, minor, and adverse** and Alternative C would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to natural or depletable energy resource requirements and conservation potential.

### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Natural or Depletable Energy Resource Requirements and Conservation Potential***

Under Alternative D the Good Fellow Club Youth Camp would be rehabilitated for special events and activities rental such as conferences, professional and recreational retreats, and other types of activities. In addition to offering the overall camp landscape as an attraction this alternative would require developing reception areas, kitchen facilities, and overnight lodging, as well as adaptations for universal accessibility. Rehabilitation of the landscape would accommodate anticipated needs for outdoor activities associated with the facility. Energy requirements would increase due to the rehabilitation of facilities, site features, night use of the site, and lighting of parking and walkways. The energy requirements would be mitigated by use of multiple strategies in accordance with NPS "Guiding Principles of Sustainable Design." This alternative would have a *long-term, minor and adverse impact* on natural, depletable or energy resource requirements and conservation potential.

### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to natural or depletable energy resource requirements and conservation potential are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative D would have *long-term, minor, and adverse cumulative impact* on natural, or depletable energy resource requirements and conservation potential. Alternative D would contribute an *imperceptible adverse increment to the cumulative impact*.

### Conclusion

The overall impact to natural or depletable energy resource requirements and conservation potential under Alternative D would be **long-term, minor and adverse** and Alternative D would contribute an *imperceptible adverse increment to a long-term, minor, and adverse cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to natural or depletable energy resource requirements and conservation potential.

## **4.6.4 Socioeconomics**

### ***Methodology***

The NPS applied logic, experience, professional expertise, and professional judgment to analyze the impacts on the social and economic environment resulting from each alternative. Economic data, historic visitor use data, expected future visitor

use, and future developments at Indiana Dunes National Lakeshore were all considered in identifying, discussing, and evaluating expected impacts.

The thresholds for change for the intensity of an impact are defined as follows:

- Negligible:** No impacts would occur or the impacts to socioeconomic conditions would be below or at the level of detection.
- Minor:** The impacts to socioeconomic conditions would be detectable, although short-term. Any impacts would be small and if mitigation is needed to offset potential adverse impacts, it would be simple and successful.
- Moderate:** The impacts to socioeconomic conditions would be readily apparent and likely long-term. Any impacts would result in changes on a local scale. If mitigation is needed to offset potential adverse impacts, it would be extensive, but likely would be successful.
- Major:** The impacts to socioeconomic conditions would be readily apparent, long-term, and would cause substantial changes to socioeconomic conditions in the region. Mitigation measures to offset potential adverse impacts would be extensive, and their success could not be guaranteed.

### ***Impacts of Alternative A (No Action) on Socioeconomics***

With the no action alternative management activities that would occur include ongoing maintenance of all contributing buildings, structures, circulation, and small-scale features in their current condition. Use of the site would continue by the DLC and there would be no new construction or rehabilitation of historic structures. Visitor use of the site would be limited to the DLC programs and occasional NPS programs and activities. This would result in little to no visitation to the Good Fellow Club Youth Camp from visitors in the localities or the region, either for the day or for overnight lodging. Underserved populations would not have any increased opportunities at this site. This alternative would have a *long-term, negligible adverse impact* to socioeconomics.

### **Cumulative Impacts**

Present and reasonably foreseeable actions have and would continue to contribute to cumulative impacts to socioeconomics at Good Fellow Club Youth Camp. These projects include: future construction at the DLC, re-opening the Little Calumet River for canoes and kayaks, landscape rehabilitation of the Peter Larson site, and the opening of the Porter Brickyard Trail. These projects along with Alternative A would have a *long-term, minor, beneficial cumulative impact*. Alternative A would contribute an *imperceptible adverse increment to this cumulative impact*.

### **Conclusion**

The overall impact to socioeconomics under Alternative A would be **long-term, negligible, and adverse** and Alternative A would contribute an *imperceptible adverse increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to socioeconomics.

### ***Impacts of Elements Common to the Action Alternatives) on Socioeconomics***

The following proposed actions would impact socioeconomics and are common to all the action alternatives:

- Adaptive reuse of the lodge
- Construction of camping or lodging facilities on the footprints of the historic camp cabins

- Expansion of parking
- Management of vegetation
- Restoration and reuse of some or all historic recreational features

Implementing this construction or undertaking these strategies would result in *short-term, minor, adverse impacts* to socioeconomics as the site would not be open to visitors. *Long-term impacts would be beneficial* and would result from increased use of the site by local and regional visitors and use of the site for overnight lodging.

### ***Impacts of Alternative B (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth) on Socioeconomics***

Alternative B would rehabilitate the Good Fellow Club Youth Camp landscape in support of re-establishment of its traditional use as a recreational camp. Rehabilitation would focus on accommodating the contemporary programmatic needs of a relatively rustic camp. Modeled on the historic programs of the Good Fellow Club Youth Camp the new camp would be active during the traditional summer period as well as expanded spring and fall shoulder seasons to augment the potential revenue stream. Underserved populations could take advantage of increased opportunities of the recreational camp. This alternative would have a *long-term, minor, and beneficial impact* to socioeconomics of the localities and region

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to socioeconomics are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative B would have *long-term, minor, beneficial cumulative impact* on socioeconomics. Alternative B would contribute a *noticeable beneficial increment to the cumulative impact*.

#### Conclusion

The overall impact to socioeconomics under Alternative B would be **long-term, minor, and beneficial** and Alternative B would contribute a *noticeable beneficial increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park’s general management plan or other relevant planning documents there would be no impairment of park resources or values related to socioeconomics.

### ***Impacts of Alternative C (Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities) on Socioeconomics***

Under this alternative the NPS, engaged in a partnership with a public or private entity, would rehabilitate the Good Fellow Club Youth Camp site as an environmental education center for programs and activities that would complement the DLC. Should the existing buildings and structures prove insufficient to accommodate the needs of the facility, additional lodging, classroom, laboratory, storage and training facilities would be established using the former sites of the camp cabins. The intent of this alternative is to build upon the mission of the DLC and emphasize environmental stewardship while also rehabilitating the camp. This alternative would offer opportunities for underserved populations in the region. This alternative would have a *long-term, minor, and beneficial impact* on socioeconomics of the locality and region.

#### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to socioeconomics are described under “Cumulative Impacts” for Alternative A. These projects, along with Alternative C would have *long-term, minor, beneficial cumulative impact* on socioeconomics. Alternative C would contribute an *imperceptible beneficial increment to the cumulative impact*.

### Conclusion

The overall impact to socioeconomics under Alternative C would be **long-term, minor, and beneficial** and Alternative C would contribute an *imperceptible beneficial increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to socioeconomics.

### ***Impacts of the NPS Preferred Alternative D (Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental) on Socioeconomics***

Under Alternative D the Good Fellow Club Youth Camp would be rehabilitated for special events and activities rental such as conferences, professional and recreational retreats, and other types of activities. This alternative would demand the most upgrades and expansion of physical infrastructure at the camp. The existing woodland would be selectively cleared for events, but large areas of the encroaching forest would remain. This alternative would cater to the broadest range of potential visitors. This alternative would have a *long-term, moderate, beneficial impact* to the socioeconomics of the locality and region.

### Cumulative Impacts

Present and reasonably foreseeable future actions that would contribute to cumulative impacts to socioeconomics are described under "Cumulative Impacts" for Alternative A. These projects, along with Alternative D would have *long-term, minor, beneficial cumulative impact* on socioeconomics. Alternative D would contribute a *noticeable beneficial increment to the cumulative impact*.

### Conclusion

The overall impact to socioeconomics under Alternative D would be **long-term, moderate and beneficial** and Alternative D would contribute a *noticeable beneficial increment to a long-term, minor, beneficial cumulative impact*.

Because there would be no major, adverse impacts to a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant planning documents there would be no impairment of park resources or values related to socioeconomics.

# Chapter 5 • Consultation and Coordination

## 5.0 INTRODUCTION

NPS DO#12 requires the NPS to make “diligent” efforts to involve the interested and affected public in the NEPA process. This chapter documents the scoping process for this project as well as interagency consultation and coordination and the list of recipients.

## 5.1 SCOPING PROCESS

Groundwork preparation for the formal scoping process was developed by the Park staff in 2008. During the last fiscal year a committee was developed, opening up a dialog with stakeholders. The Planning Work Group committee met on March 31, 2008, April 15, 2008 and September 3, 2008. The following stakeholders were identified as having an interest in the Good Fellow site: U.S. Steel, former owners and operators of the camp; Friends of Camp Good Fellow, an alumni group; the Dunes Learning Center, residential camp currently using the site and the new buildings adjacent to it; Historic Landmarks Foundation of Indiana, historic preservation organization; the State historic Preservation Office, state agency which oversees compliance for historic sites; Eppley Institute, education agency associated with Indiana University; Bradford Woods, residential environmental education camp south of Indianapolis and connected with Indiana University; and Friends of the Indiana Dunes, a local support group for interpretation and education.

To officially initiate this project, a kickoff meeting was held via conference call on November 3, 2008 which included Indiana Dunes National Lakeshore staff, Marla McEnaney, MWRO-CR, and planning team members. Public scoping strategy was part of the agenda and the planning team was given all the notes from the previous meetings in 2008. A second conference call was held with Park staff and the planning team on November 18, 2008 and key issues were discussed pertaining to partners, project objectives, program requirements and feasible alternatives. The planning team was tasked to develop the discussed alternatives and send to the park for review. After reviews and revisions, these alternatives were approved for presentation to stakeholders. Park staff then requested that the planning team come to the Park for the formal stakeholder meeting to present the environmental assessment process, schedule, goals and objectives, and the conceptual alternatives. The stakeholder meeting at the Park was held on January 22, 2009. Input from park staff and stakeholders was then incorporated into the alternatives by the planning team. The draft document was made available to the public through the Park and letters of availability sent to stakeholders.

The scoping process continued during the public review period and the scheduled public meeting. Solicitation of comments also continued during the formal review period from agencies and Indian tribes. The Public Meeting was held on July 15, 2009 where alternative concepts were presented and comments solicited. Upon request from stakeholders, the public review period was extended for 45 days and additional comments were posted on the PEPC site. Additional comments were also sent by mail to the Superintendent’s office at the Park.

## 5.2 INTERAGENCY CONSULTATION AND COORDINATION

Indian Tribes

U.S. Fish and Wildlife Service

Indiana Department of Natural Resources

Indiana Dunes State Park

State Historic Preservation Office

### **5.3 LIST OF LETTER RECIPIENTS FOR DRAFT EA AVAILABILITY AND SOLICITATION OF COMMENTS**

Citizen Band Potawatomi Nation of Oklahoma

Hannahville Indian Community of Wisconsin 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

Nottawaseppi Huron Potawatomi Indians, Michigan

Miami Nation of Indians (MNI)

Miami Tribe of Oklahoma (MTO)

Mr. Frank Hurdis : State Historic Preservation Office

Mr. Marsh Davis, President: Historic Landmarks Foundation of Indiana

Mr. Tom Magnuson: U.S. Fish and Wildlife Service

Mr. Scott Pruitt: U.S. Fish and Wildlife Service

Mr. John Rogner: U.S. Fish and Wildlife Service

Ms. Linda Byer: Indiana Department of Natural Resources

Mr. Robert Carter: Indiana Department of Natural Resources

Mr. Gary Pagac: Indiana Department of Natural Resources

Mr. John Bacone: Indiana Department of Natural Resources

Ms. Emily Kress: Indiana Department of Natural Resources

Mr. Glenn Lange: Indiana Department of Natural Resources

Mr. Brandt Baughman: Indiana Dunes State Park

Mr. John Hays, Executive Director: Dunes Learning Center

Mr. Stephen Wolter, Executive Director: Eppley Institute

Ms. Zella Olson, Chairman: Friends of Indiana Dunes

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# Acronyms

ACHP – Advisory Council on Historic Preservation  
ADA – Americans with Disabilities Act  
AMSL – Above Mean Sea Level  
APE – Area of Potential Effects  
AQA – Air Quality Act  
BA – Biological Assessment  
BMP – Best Management Practice  
BVH – Bahr Vermeer Haecker Architects  
CEQ – Council on Environmental Quality  
CFR - Code of Federal Regulations  
CLR – Cultural Landscape Report  
DBH – Diameter at Breast Height  
DLC – Dunes Learning Center  
DNR – Department of Natural Resources  
DO – Director’s Order  
EA – Environmental Assessment  
EPA – Environmental Protection Agency  
ESA – Endangered Species Act  
GMP – General Management Plan  
HSR – Historic Structures Report  
INDR – Indiana Department of Natural Resources  
JMA – John Milner Associates, Inc.  
LRIP – Long Range Interpretive Plan  
MBTA – Migratory Bird Treaty Act  
NAAQS – National Ambient Air Quality Standards  
NEPA – National Environmental Policy Act  
NHPA – National Historic Preservation Act  
NRHP – National Register of Historic Places  
NPS – National Park Service  
SHPO – State Historic Preservation Officer  
USFWS – United States Fish and Wildlife Service

# List of Preparers and Contributors

This document was prepared by Bahr Vermeer Haecker Architects with input from staff at Indiana Dunes National Lakeshore and the NPS Midwest Regional Office.

## **Bahr Vermeer Haecker Architects**

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## **John Milner Associates**

Laura Knott	Historical Landscape Architect Principal and Senior Project Manager	Alternative development, public and stakeholder meetings and project management
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Jane Jacobs	Project Landscape Architect	Alternative development, public and stakeholder meetings, impact analysis, overall document preparation, document review
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Elizabeth Sargent	Historical Landscape Architect	Affected environment and impact analysis, overall document preparation, document review
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Christina Osborn	Landscape Architectural Designer	Graphic production, overall document preparation
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## **Indiana Dunes National Lakeshore Staff, Contributors and Reviewers**

Constantine J. Dillon	Superintendent
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Garry Traynham	Deputy Superintendent
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Bob Daum	Chief, Resources Management
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Judith Collins	Historical Architect and INDU Project Manager
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Randy Knutson	Wildlife Biologist
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# Appendix A • Agency and Stakeholder Correspondence



Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739  
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.IN.gov

July 16, 2009

Jane Jacobs  
John Milner Associates, Inc.  
300 West Main Street, Suite 201  
Charlottesville, Virginia 22903

Federal Agency: National Park Service

Re: Draft Phase II: Environmental Assessment regarding redevelopment of Good Fellow Club Youth Camp  
(DHPA #6588)

Dear Ms. Jacobs:

Pursuant to the National Environmental Policy Act of 1969, as amended (42 U.S.C. § 4321, *et seq.*) and Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470f) and implementing regulations at 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated June 16, 2009 and received on June 17, 2009 for the above indicated project in Indiana Dunes National Lakeshore, Porter County, Indiana.

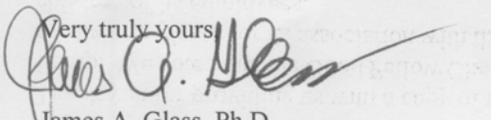
Thank you for providing us with a copy of the Draft Environmental Assessment for rehabilitation of the Good Fellow Club Youth Camp. We noted that the Good Fellow Club Youth Camp was previously determined eligible for inclusion in the National Register of Historic Places for its association with the efforts of U.S. Steel Gary Works to provide a camp setting of social harmony for the children of its employees.

In regard to buildings and structures, we agree that Alternative D, which is the National Park Service's preferred approach to redevelopment of Good Fellow Club Youth Camp, generally appears to be consistent with the 'Secretary of the Interior's Standards for the Rehabilitation of Historic Properties.'

In terms of archaeological resources, we concur that archaeological investigations are necessary prior to any ground disturbance and that the historic features must be recorded before implementation of the project activities. Please provide our office with a copy of the archaeological report and any associated site forms for review and comment.

We noted in the letter of transmittal accompanying the submission that Judith Collins of the National Park Service will be sending a letter to the Indiana SHPO shortly. We look forward to receiving Ms. Collins' letter, in addition to a copy of the Final Environmental Assessment and additional information on the proposed rehabilitation projects as detailed project plans and specifications are developed.

A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004 may be found on the Internet at [www.achp.gov](http://www.achp.gov) for your reference. If you have questions about archaeological issues please contact Cathy Draeger at (317) 234-3791 or [cdraeger@dnr.IN.gov](mailto:cdraeger@dnr.IN.gov). If you have questions about buildings or structures please contact Chad Slider at (317) 234-5366 or [cslider@dnr.IN.gov](mailto:cslider@dnr.IN.gov). Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA #6588.

Very truly yours,  
  
James A. Glass, Ph.D.  
Deputy State Historic Preservation Officer

JAG:CWS:CLD:cws

cc: Judy Collins, National Park Service  
Jay Sturdevant, National Park Service

*Barely K.*  
JAN 22 '10 PM 3:42



United States Department of the Interior  
Fish and Wildlife Service



Bloomington Field Office (ES)  
620 South Walker Street  
Bloomington, IN 47403-2121  
Phone: (812) 334-4261 Fax: (812) 334-4273

January 22, 2010

Superintendent Constantine Dillon  
Indiana Dunes National Lakeshore  
1100 North Mineral Springs Road  
Porter, Indiana 46304-1299

Dear Mr. Dillon:

This responds to your letter of December 10, 2009 concerning the proposed restoration/rehabilitation of structures and landscapes at the Good Fellow Club Youth Camp at the Indiana Dunes National Lakeshore, Porter, Porter County, Indiana. A copy of the Biological Assessment addressing expected impacts of the project on the Federally endangered Indiana bat (*Myotis sodalis*) was provided with the letter. You requested initiation of formal consultation under Section 7 of the Endangered Species Act of 1973, as amended, even though you concluded that the action is not likely to adversely affect the Indiana bat when all the protective measures outlined in the Biological Assessment are implemented.

Formal consultation is not necessary for this proposed project because the U.S. Fish and Wildlife Service concurs with your "May Affect, Not Likely to Adversely Affect" determination concerning the Indiana bat. Section 6.1.7 of the BA lists actions that the Indiana Dunes National Lakeshore will undertake to protect and enhance potential Indiana bat habitat within the Youth Camp area. We believe that these actions will be protective of the species.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. If, however, new information on endangered species at the site becomes available or if project plans are changed significantly, please contact our office for further consultation. Please contact us if you determine that a bat mist net survey will be conducted.

Thank you for the opportunity to review this document. For further discussion, please contact Elizabeth McCloskey at (219) 983-9753 or [elizabeth\\_mccloskey@fws.gov](mailto:elizabeth_mccloskey@fws.gov).

Sincerely yours,

*Elizabeth S. McCloskey*  
for Scott E. Pruitt  
Supervisor *acting*



# United States Department of the Interior

## NATIONAL PARK SERVICE

Indiana Dunes National Lakeshore  
1100 N. Mineral Springs Road  
Porter, Indiana 46304-1299

IN REPLY REFER TO:

March 2, 2010

H4217(INDU)

Mr. Robert E. Carter, Jr.  
State Historic Preservation Officer  
Division of Historic Preservation and Archaeology  
402 W. Washington Street, W274  
Indianapolis, Indiana 46204-2739

Dear Mr. Carter:

We have completed the Final Draft of the Environmental Assessment (EA) for the Good Fellow Club Youth Camp located within Indiana Dunes National Lakeshore. Enclosed is an electronic copy of the document for your review. We have chosen Alternative D as the preferred alternative for the rehabilitation of the site.

In your letter dated July 16, 2009, you stated that Alternative D was consistent with the "Secretary of the Interior's Standards for the Rehabilitation of Historic Properties." In addition, you concurred with the NPS that archaeological investigations would be necessary prior to any ground disturbance and that historic features of the site must be recorded before implementation of any project activities.

The following assessments were made during the preparation of the EA based upon the National Environmental Policy Act definition of impacts on historic resources and the National Historic Preservation Act Section 106 methodology to determine "Adverse" and "No Adverse Effect" on historic resources:

Cultural Landscape: No Adverse Effect

Historic Resources: No Adverse Effect with the stipulation that historic features must be recorded before implementation of any project activity.

Archaeological Resources: No Adverse Effect on known archaeological sites. This determination is based upon two previously completed archeological surveys of the site during which no resources were documented. These surveys are documented in the *Archeologist Trip Report (1996)* and *An Archeological Survey of Selected Areas at the Good Fellow Club Camp (1999)*. Your staff should have copies of these reports on file.

The impact assessment for archaeological resources was based upon the potential for effect on unknown resources which could be “Adverse” unless the following stipulations are followed. To avoid damage to unknown archeological resources areas that are to be disturbed for construction should be tested by an archaeologist before ground disturbance occurs, and construction should be monitored by an archaeologist.

We appreciate the assistance of Mr. Frank Hurdis and Mr. Paul Diebold for their expert guidance during the preparation of the EA. We hope they will concur with our finding of “*No Adverse Effect*” on the historic resources of the Good Fellow Club Youth Camp. If they agree, please submit a letter of concurrence to the national lakeshore at their earliest convenience so that we may complete the Section 106 compliance process.

If you have any questions concerning the EA and the preferred alternative, or the historic resources at Good Fellow Club Youth Camp, please feel free to call Ms. Judith Collins, Historical Architect, at 219-395-1986.

Sincerely,

/s/ Signed Original on File

Constantine J. Dillon  
Superintendent

Enclosures (3)

bcc:  
CRM files  
General/Reading files

Jcollins:jc:12/10/09

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739  
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.IN.gov



June 21, 2010

Constantine J. Dillon  
U.S. Department of the Interior  
National Park Service  
Indiana Dunes National Lakeshore  
1100 N. Mineral Springs Road  
Porter, Indiana 46304-1299

Federal Agency: National Park Service

Re: Final Draft of the Environmental Assessment regarding redevelopment of Good Fellow Club Youth Camp  
(DHPA #6588)

Dear Mr. Dillon:

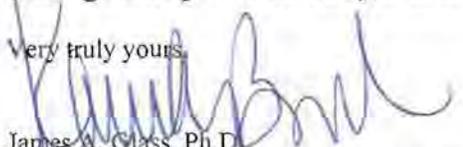
Pursuant to the National Environmental Policy Act of 1969, as amended (42 U.S.C. § 4321, *et seq.*) and Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470f) and implementing regulations at 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated March 2 and April 23, 2010 and received on March 8 and April 26, 2010 and personal communication (Ms. Collins and Ms. Draeger-Williams) on June 21, 2010 for the above indicated project in Indiana Dunes National Lakeshore, Porter County, Indiana.

Thank you for providing us with a copy of the Final Draft Environmental Assessment for rehabilitation of the Good Fellow Club Youth Camp. It is our understanding that Alternative D has been chosen by the National Park Service for rehabilitation of the site. We noted that the Good Fellow Club Youth Camp was previously determined eligible for inclusion in the National Register of Historic Places for its association with the efforts of U.S. Steel Gary Works to provide a camp setting of social harmony for the children of its employees.

In terms of archaeological resources, it is our understanding that not all of the Good Fellow Club Youth Camp has been subjected to archaeological investigations to determine the presence or absence of prehistoric and historic archaeological resources. It is also our understanding that archaeological investigations (including documentation of the historic features) and a Section 106 review will be completed prior to each individual project.

*A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004 may be found on the Internet at [www.achp.gov](http://www.achp.gov) for your reference. If you have questions about archaeological issues please contact Cathy Draeger at (317) 234-3791 or [cdraeger@dnr.IN.gov](mailto:cdraeger@dnr.IN.gov). If you have questions about buildings or structures please contact Chad Slider at (317) 234-5366 or [eslider@dnr.IN.gov](mailto:eslider@dnr.IN.gov). Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA #6588.*

Very truly yours,

  
James A. Glass, Ph.D.  
Deputy State Historic Preservation Officer

JAG:CWS:CDW:cdw

cc: Judy Collins, National Park Service  
Jay Sturdevant, National Park Service  
Jane Jacobs, John Milner Associates, Inc.



# United States Department of the Interior

## NATIONAL PARK SERVICE

Indiana Dunes National Lakeshore  
1100 N. Mineral Springs Road  
Porter, Indiana 46304-1299

IN REPLY REFER TO:

July 16, 2010

H4217(INDU)

Mr. Robert E. Carter, Jr.  
State Historic Preservation Officer  
Division of Historic Preservation and Archaeology  
402 W. Washington Street, W274  
Indianapolis, Indiana 46204-2739

Dear Mr. Carter:

The National Park Service (NPS) submitted the Final Draft of the Environmental Assessment (EA) for the rehabilitation of the Good Fellow Club Youth Camp, located within Indiana Dunes National Lakeshore, to your office for review and determination of effect on March 2, 2010. Under the National Environmental Policy Act's and the National Historic Preservation Act's definition of impacts on historic resources the NPS determined that the rehabilitation of the camp would have *No Adverse Effect* on the site's historic resources including the cultural landscape, historic buildings, and known archeological resources.

During your initial review of, and comment on, the EA in July 2009 you stated that the NPS's preferred alternative, Alternative D, was consistent with the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties. In addition, you concurred with the NPS that further archaeological investigations would be necessary prior to any ground disturbance and that historic features of the site must be recorded before implementation of any project activities.

Since the EA was submitted to your office for determination of effect there have been several email and phone conversations between your staff, the national lakeshore's Historical Architect, Ms. Judith Collins, and Mr. Jay Sturdevant, Archeologist, of the NPS's Midwest Archeological Center (MWAC). Most recently, on June 22, 2010, Ms. Collins spoke with Ms. Cathy Draeger-Williams concerning the determination of effect, and she agreed to a finding of *No Adverse Effect* if the national lakeshore would submit a letter to your office which would include stipulations that would be adhered to during the rehabilitation of the camp.

The NPS shall ensure the following stipulations are implemented in order to maintain the finding of *No Adverse Effect* during the rehabilitation of the camp.

- 1) The NPS prepared the EA as an "umbrella" document for planning purposes, and shall ensure that each phase of the project is reviewed for compliance with the National Environmental Policy Act, and the National Historic Preservation Act.

- 2) The national lakeshore shall ensure that each phase of the project meets the Secretary of the Interior's Standards for Historic Preservation.
- 3) The national lakeshore shall consult with the Midwest Regional Office (MWR) of the NPS, your office, and the Tribal Historic Preservation Officer (THPO) of the Pokagon Band of Potawatomi Indians on each phase of the project.
- 4) Historic features of the Good Fellow Club Youth Camp, including the cultural landscape features and historic buildings, shall be recorded before implementation of any project activities.
- 5) For each phase of the project which does not require ground disturbance:
  - a) The national lakeshore shall prepare and submit compliance documents to the MWR for review and comment utilizing the NPS's Planning, Environmental, and Public Comment (PEPC) online system.
  - b) Upon receipt of their comments the national lakeshore shall submit the documents to your office for review and comment.
  - c) If your office has any comments which require modification to the project the national lakeshore shall consult with the MWR and your staff to modify this phase of the project to address your concerns while meeting the Secretary of the Interior's Standards and the goals of the project.

These phases of the project could include, but are not limited to:

Modifying any or all of the following previously rehabilitated historic buildings for new uses: Gatehouse; Caretaker's Cabin; Caretaker's Garage; Pumphouse; Staff Cabin; and Director's Cabin.

- 6) For each phase of the project which does require ground disturbance to avoid damage to unknown archeological resources:
  - a) The national lakeshore shall request the assistance of MWAC for archeological inventory of the area in question.
  - b) The national lakeshore shall prepare and submit compliance documents to the MWR and MWAC for review and comment utilizing PEPC.
  - c) Upon receipt of their comments the national lakeshore shall submit the documents, including the archeology report/s, to your office for review and comment.
  - d) If your office has any comments which require modification to the project the national lakeshore shall consult with the MWR, MWAC, and your staff to modify this phase of the project to address your concerns while meeting the Secretary of the Interior's Standards and the goals of the project.
  - e) Construction shall be monitored by an archeologist.

These phases of the project could include, but are not limited to:

Rehabilitation of the Lodge  
 Rehabilitation of the Poolhouse Area  
 Development of New Cabins on the Historic Cabin Pads  
 Development of the Landscape for New Recreational Uses

7) If through any archeological inventory a site/s which is/are potentially eligible for the National Register of Historic Places is discovered, then the site/s shall be documented and if required negotiations concerning mitigation procedures shall be initiated by the national lakeshore with the MWR, MWAC, your office, and the THPO of the Pokagon Band of Potawatomi Indians.

If these stipulations fulfill your staff's requirements to maintain the determination of *No Adverse Effect* on the Environmental Assessment for the rehabilitation of the Good Fellow Club Youth Camp please submit a letter to the national lakeshore indicating such for our records. If your staff is of the opinion that these stipulations do not fulfill their requirements, or if they have any questions, please have them call Ms. Collins at 219-395-1986.

Sincerely,

/s/ Signed Original on File

Garry M. Traynham  
Acting Superintendent

cc:

Mr. Ernie Quintana, Regional Director, Midwest Regional Office, National Park Service,  
601 Riverfront Drive, Omaha, Nebraska 68102-4226

Mr. Steve Adams, Associate Regional Director, Cultural Resources, Midwest Regional Office,  
National Park Service, 601 Riverfront Drive, Omaha, Nebraska 68102-4226

Mr. Todd Zeiger, Director, Northern Regional Office, Indiana Landmarks, 402 West Washington  
Street, South Bend, Indiana 46601

bcc:

CRM files

General/Reading files

Jcollins;jc:06/23/10



Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739  
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.IN.gov

July 29, 2010

Garry M. Traynham  
Acting Superintendent  
National Park Service  
Indiana Dunes National Lakeshore  
1100 N. Mineral Springs Road  
Porter, Indiana 46304-1299

Federal Agency: National Park Service

Re: Notification of the NPS's finding of "no adverse effect" regarding redevelopment of Good Fellow Club Youth Camp (DHPA #6588)

Dear Mr. Traynham:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated July 16, 2010 and received on July 19, 2010 for the above indicated project in Indiana Dunes National Lakeshore, Porter County, Indiana.

We concur with the National Park Service's July 16, 2010 finding that there are no historic buildings, structures, districts, objects, or archaeological resources within the area of potential effects that will be adversely affected by the above indicated project, subject to the conditions enumerated in your letter of July 16, 2010.

If you have questions about archaeological issues please contact Cathy Draeger-Williams at (317) 234-3791 or [cdraeger-williams@dnr.IN.gov](mailto:cdraeger-williams@dnr.IN.gov). If you have questions about buildings or structures please contact Chad Slider at (317) 234-5366 or [cslider@dnr.IN.gov](mailto:cslider@dnr.IN.gov).

Very truly yours,

James A. Glass, Ph.D.  
Deputy State Historic Preservation Officer

JAG:CWS.CDW:cdw

emc: Judy Collins, National Park Service  
Jay Sturdevant, National Park Service

# Appendix B • Biological Assessment

**Indiana Dunes National Lakeshore  
GOOD FELLOW CLUB YOUTH CAMP  
ENVIRONMENTAL ASSESSMENT  
BIOLOGICAL ASSESSMENT**



**Indiana Dunes National Lakeshore, Porter Indiana  
Contact Person: Randy Knutson  
Phone Number: 219-395-1550**

*Cover photo: Adam Mann, Environmental Solutions and Innovations*

U.S. Fish and Wildlife Service Endangered Species Program

“Indiana Bat (*Myotis sodalis*)”

*<http://www.fws.gov/Midwest/Endangered/mammals/inba/index.html> accessed 18 June 2009.*

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Appendix A – USFWS Correspondence

## 1.0 Introduction

The National Park Service (NPS) is completing an Environmental Assessment (EA) for Good Fellow Club Youth Camp. Since 1994, the NPS began planning the rehabilitation and renovation of the Good Fellow Club Youth Camp within the Indiana Dunes National Lakeshore (National Lakeshore). The NPS is currently planning for rehabilitation to accommodate needs of partnering entities to share costs associated with management, operations and upkeep and benefit from cultural landscape values of the site. It is the intention of the NPS to develop the site in a manner that protects its historic and natural resources, while rehabilitating its historic buildings, recreational features and portions of the cultural landscape. This proposed expansion is the subject of this Environmental Assessment (EA).

This EA seeks to identify three action alternatives and determine the potential impacts and recommended mitigation measures related to their implementation. The EA will also identify a No Action Alternative and a preferred alternative as required by the Council on Environmental Quality (CEQ). The EA addresses short-term construction-related impacts and long-term effects, as well as the cumulative impacts that would result from this and other projects which have been completed recently, are currently under development, or are proposed within the project area.

The purpose of this Biological Assessment (BA) is to determine whether the actions proposed in the preferred alternative of the Draft Good Fellow Club Youth Camp Environmental Assessment (EA) may affect any federally listed endangered, threatened, proposed or candidate species. This BA is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (ESA) [16 USC 1536 (c)] and follows the standards established in NPS' Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making. The species considered in this document are only those federally listed as endangered, threatened, proposed, or candidate species that potentially occur in Indiana Dunes National Lakeshore in areas that may be affected by the Good Fellow Youth Camp proposed action plan.

This BA analyzes the potential impacts of the proposed project on listed species identified in informal consultation discussions with the U.S. Fish and Wildlife Service (USFWS) as needing detailed evaluation in the BA. An updated species list was received from USFWS on May 15, 2009 which omitted species presumed extirpated from the National Lakeshore.

The effects of the EA preferred alternative (referred to as the "proposed action" in this biological assessment) on federally listed special status species have been analyzed. The determinations of effect for species considered in this document are summarized below:

- *May affect, not likely to adversely affect* – Indiana bat (*Myotis sodalis*)

- *No effect* –Karner blue butterfly (*Lycaeides melissa samuelis* Nobokov), eastern massasauga (*Sistrurus catenatus catenatus*), and Pitcher’s thistle (*Cirsium pitcheri*), piping plover (*Charadrius melodus*).
- *Presumed extirpated – no effect* – N/A

**2.0 Federally Listed Endangered, Threatened and Candidate Species**

The species considered in this document are those federally listed as endangered, threatened, proposed, or candidate species that potentially occur in Indiana Dunes National Lakeshore in areas that may be affected by the proposed action for the Good Fellow Youth Camp. The BA addresses federally listed and candidate species, as presented in Table 1.

**Table 1: Federally Listed Species with Potential to be Affected by the Treatment in Indiana Dunes National Lakeshore under the Proposed Action**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>Designated Critical Habitat in National Lakeshore?</b>
Indiana Bat	<i>Myotis sodalis</i>	Endangered	No

Federally listed species which have been extirpated and/or are not known to currently occur at Indiana Dunes National Lakeshore are presented in Table 2.

**Table 2: Federally listed and candidate species which have been extirpated and/or are not known to currently occur at Indiana Dunes National Lakeshore**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>Designated Critical Habitat in National Lakeshore?</b>
American Burying Beetle	<i>Nicrophorus americanus</i>	Endangered	No
Hine's Emerald Dragonfly	<i>Somatochlora hineana</i>	Endangered	No
Mitchell's Satyr butterfly	<i>Neonympha mitchellii mitchellii</i>	Endangered	No

## **2.1 Critical Habitat**

Piping plover is the only species listed in Table 1 that has designated critical habitat within the Indiana Dunes National Lakeshore. The shoreline of the Great Lakes and Porter County, Indiana, are listed as designated critical habitat for piping plovers (USFWS 2001). This species nests on shoreline and island sandy beaches with sparse vegetation and the presence of cobble. Piping plovers spend 3 to 4 months a year on the breeding grounds and nesting in the Great Lakes region begins in early to mid-May (USFWS 2008). Thus, the proposed action would not adversely affect these species in their respective federally designated critical habitats.

## **3.0 Project Background**

### **3.1 Federal Action**

The ESA requires federal agencies to consult with the USFWS on actions that have the potential to affect federally listed species and/or their designated critical habitat. The proposed action plan for the Good Fellow Club Youth Camp is a federal action that necessitates consultation with the USFWS. The proposed action in the EA addresses:

- Expansion of Environmental Learning Camp Facilities
- Rehabilitation of Historic Structures and Landscape
- Improvement of Visitor Accessibility
- Protection of Natural and Cultural Resources
- Provision for Flexible Management Opportunities in Public/Private Partnership with the Park

### **3.2 Background Information**

Indiana Dunes National Lakeshore is located approximately 50 miles southeast of Chicago, Illinois, in the counties of Lake, Porter, and LaPorte in northwest Indiana's industrial-urban community. The park is comprised of over 15,000 acres of dunes, oak savannas, swamps, bogs, marshes, prairies, rivers, and forests, including the 2,182-acre Indiana Dunes State Park managed by the Indiana Department of Natural Resources (IDNR).

The National Lakeshore contains 15 miles of Lake Michigan shoreline spanning the distance from Gary to Michigan City (Figure 1). Lake Michigan is part of the largest complex of freshwater lakes in the world. Immediately inland from the beaches, sand dunes rise to almost 200 feet in a series of ridges, blowouts, and valleys. Extensive wetlands fill many depressions between the dune ridges. The National Lakeshore preserves an important remnant of a once vast and unique environment, resulting from the retreat of the last great continental glacier some 14,000 years ago. The park landscape represents at least four major successive stages of historic Lake Michigan

shorelines, making it one of the most extensive geologic records of one of the world's largest fresh water bodies.

The biological diversity within the National Lakeshore is among the highest per unit area of all our national parks. Over 1,100 flowering plant species and ferns are native here. From predacious bog plants to native prairie grasses and from towering white pines to rare algal species, the plant diversity is rich. The wildlife is also diverse. A wide variety of habitats coupled with the moderating effects of Lake Michigan make the region an ideal home for hundreds of animal species:

- 46 species of mammals
- 352 species of birds, with 113 of these being regular nesters
- 18 species of amphibians
- 23 species of reptiles
- 71 species of fish
- 60 species of butterflies
- 60 species of dragonflies and damselflies.

The largest herbivore is the white-tailed deer and the largest predator is the coyote. The National Lakeshore also provides habitat for a great blue heron rookery and sandhill cranes.



**Figure 1. Map of Indiana Dunes National Lakeshore – Good Fellow Club Youth Camp.**

Since the creation of the National Lakeshore, development has increased to the point that most of its surroundings now consist of homes, farms, roads, or businesses. Residential communities, open rural areas, light and heavy industry, and agricultural lands exist within or adjacent to the National Lakeshore’s boundary (NPS 1993). The National Lakeshore is primarily divided into two large lakefront units by an industrial complex, which includes two steel companies, a public service company, and the Port of Indiana. The National Lakeshore’s East Unit contains over 8,000 acres (approximately 12 square miles) of land east of the Port of Indiana; the West Unit contains 3,600 acres (approximately 5.5 square miles) of land west of the Port of Indiana. Pinhook Bog, the Heron Rookery, Hobart Prairie Grove, Calumet Prairie, and Hoosier Prairie are small, noncontiguous satellite units within the National Lakeshore with resources that differ from the lakefront units (NPS 1997). These smaller units are geographically separated from the East and West Units by major road and rail corridors, residential development, agricultural fields, and industrial development.

The biological diversity of the National Lakeshore is many times greater than that of most areas of similar size because Indiana Dunes encompasses several ecological transition zones, including where the northern conifers meet the temperate hardwood forests of the northern and eastern United States (U.S.), and the tallgrass prairies of the Midwest (NPS 1997). Indiana Dunes National Lakeshore contains over 1,445 species of vascular plants, of which 1,135 are native.

The National Lakeshore’s position in the midst of an urban and industrial setting, as well as increased visitation, has resulted in potential threats to its ecosystem. For example, the number of sensitive and rare plant species that have been extirpated from the National Lakeshore has increased from 16 to 25 since 1986. Recognition of such threats occurred early in the National Lakeshore’s development (NPS 2006b).

### 3.3 Description of the Project Area

The historic footprint of the Good Fellow Club Youth Camp is set in sixty-three acres of woodland along the Little Calumet River near Lake Michigan. The camp consists of wooded and open areas, historic camp buildings, and site recreational facilities. The property is generally rectangular in shape, approximately 1,600 feet deep and 1,000 feet wide. The northern boundary of the property is irregular and is formed by the adjacent power company property. The southern boundary is also irregular and is formed by the top of the bluff overlooking the Little Calumet River. The western boundary is an area of woodland while the eastern boundary is formed by Howe Road. The main buildings of the camp stand at the top of a moraine overlooking the Little Calumet River. The highest elevation, approximately 690 feet above mean sea level, is at the northern boundary of the camp. The ground slopes down across hills and terraces to the river's edge at approximately 606 feet above mean sea level.

The camp was designed by U.S. Steel engineers to provide recreational and educational opportunities for the employees' children. Built starting in 1941, the camp embodies visions of an Adirondack style summer camp, including a rural, rustic character that blends with the natural environment.

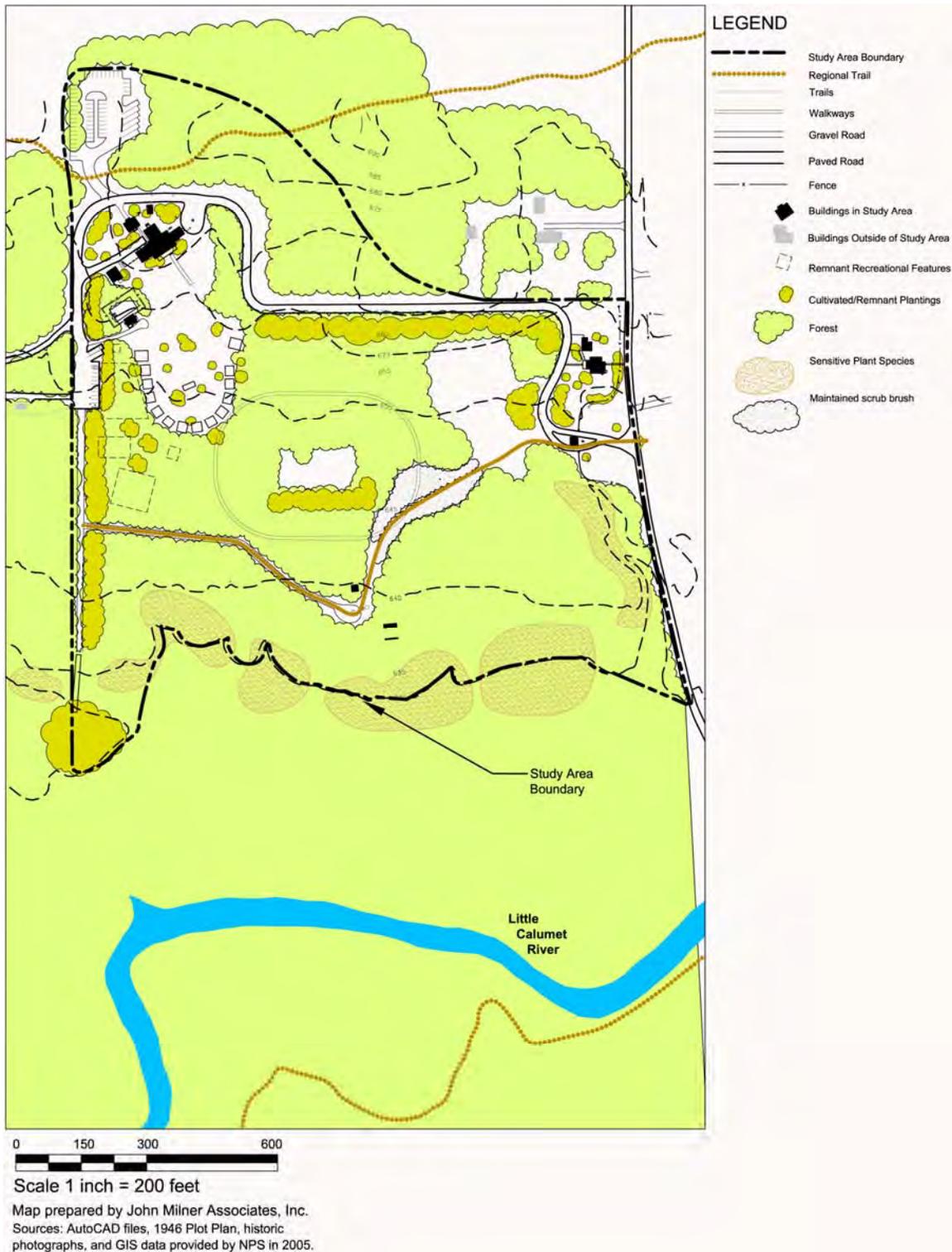
The camp occupies a wooded site near the center of the National Lakeshore. The camp contains nine one to three-story rustic buildings with redwood tongue and groove siding and rectangular massing. These historic buildings are located at the northwest corner of the site. During the camp's operation from 1941 to 1976, a large portion of the site (about thirty-five acres) was maintained as open lawn areas to serve as playing fields.

At the base of the steep hill where the Lodge is located, fourteen concrete slabs are arranged in a horseshoe pattern within a field. These concrete slabs are all that remain of the children's camp cabins, the former handicraft cabin and the former nurse's cabin. The washhouse foundation is located in the center of the cabin pads. To the southeast of the concrete pads, within the dense wooded area of the southern boundary, is located the overgrown remains of the large tennis court and the basketball court. To the south of the courts nearer the river are the remnants of the riflery.

The action alternative described in this EA would take place within the sixty-three acres of the historic footprint and approximately 6.5 acres north of the access road and lodge that are not in the historical footprint of the site. The boundaries of the project area are shown in Figure 3. *Study Area Boundary*.



**Figure 2. Site location map of Good Fellow Club Youth Camp on Howe Road.**



**Figure 3. Study Area Boundary**

### **3.4 Federally Listed Species**

Indiana Dunes National Lakeshore provides habitat for three federally endangered species: Indiana bat, piping plover, and Karner blue butterfly. Three additional species listed as endangered are considered to be extirpated from the National Lakeshore: American burying beetle, Hine's emerald dragonfly, and Mitchell's satyr. One candidate species, eastern massasauga, is thought to occur only in the East Unit of Indiana Dunes and is observed at least once every few years. The threatened plant species pitcher's thistle occurs at the National Lakeshore.

### **3.5 U.S. Fish and Wildlife Service Consultation to Date**

A letter dated May 1, 2009, to the U.S. Fish and Wildlife Service from Indiana Dunes National Lakeshore requested a list of federally listed rare, threatened, or endangered species in the vicinity of the National Lakeshore. The U.S. Fish and Wildlife Service replied with a list of federally endangered species within project range on May 15, 2009. This letter is included in Appendix A and states that "of the species listed the only one potentially present in the Good Fellow Club Youth Camp vicinity is the Indiana bat because there is no suitable habitat for the other species in that portion of the Lakeshore."

### **4.0 Current Management Direction**

The enabling legislation further states that the "National 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." Indiana Dunes National Lakeshore's mission goals were created to support its overall purpose and to protect the resources that define its significance.

### **5.0 Description of the Proposed Action (Alternative D): Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental, and also Accessible Facilities and Overnight Accommodations for Special Needs Clients (NPS preferred alternative)**

This alternative assumes a partnership between the NPS and a third party interested in sensitively rehabilitating the Good Fellow Club Youth Camp site for commercial special events and activities rental such as conferences, professional and recreational retreats, and other types of events. In addition to offering the overall camp landscape as an attraction this alternative would require developing reception areas, kitchen facilities and overnight lodging, and adaptations for universal accessibility so that the facility could host events for clients with disabilities. Existing historic buildings would be adaptively reused to accommodate programmatic needs. The management would be permitted to construct additional buildings; as with the previous alternatives, they would need to be sited on the existing concrete pads that mark the former cabin sites. The exterior design of the new buildings would be expected to be contemporary, yet compatible with the historic setting. The level of finish and details of the interiors of new buildings would be permitted to meet the needs and target audience of the facility.

Rehabilitation of the landscape would accommodate the anticipated needs for outdoor activity associated with the facility, such as tented events and recreational opportunities. To that end, this alternative indicates selected clearing of existing woodland within the center of the site and establishment of open turf or meadow for outdoor activities and gatherings. The existing overflow parking area will be expanded and there will be continued use of this area by the NPS for festivals and large special events as well as any program needs of the third party. To accommodate recreational needs of guests, this alternative recommends that the swimming pool and pool house be restored. Additional recreational trails will be developed within and along the margins of the remaining wooded areas and provide a connection to the DLC and the river and regional trail networks. Universally accessible paths would be developed between roads, parking and key destinations.

Missing historic recreation features such as the horseshoe pits and the croquet court are recommended for re-establishment if sufficient historic documentation exists to guide their reconstruction. Historic resources in fair to poor condition would be stabilized to the extent possible, but not integrated into use of the site. Features in degraded condition that cannot be repaired would be documented and removed.

Also, this alternative recommends the documentation, stabilization and maintenance of the historic retaining wall found along the Little Calumet River and maintenance of the historic stone columns near Howe Road.

In this alternative, to align with Park goals and objectives for all sites, maintenance and management of the Good Fellow Club Youth Camp would follow a set of best management practices developed specifically for the property to promote environmental stewardship and the protection of historic resources. Environmental processes could be interpreted and demonstrated through the use of green technologies.

This alternative would include upgrading and expansion of physical infrastructure at the camp. The existing woodland would be selectively cleared for events but large areas of the encroaching forest would remain. Native woodland would be protected and invasive species removed. This alternative would cater to the broadest range of potential visitors.

## **6.0 Description of Species Anticipated to be Affected by the Proposed Action**

It is anticipated that the implementation of the Environmental Assessment *May affect, not likely to adversely affect* the federally listed species described in this section.

### **6.1 Indiana Bat**

#### **6.1.1 Introduction**

The Indiana bat was originally listed as in danger of extinction under the Endangered Species Preservation Act of 1966 and is currently listed as endangered under the Endangered Species Act of 1973 as amended. The U.S. Fish and Wildlife Service (USFWS) developed the Indiana bat (*Myotis sodalis*) Draft Recovery Plan in 2007 to provide guidance toward the protection and recovery of the Indiana bat.<sup>1</sup>

#### **6.1.2 Life History**

The Indiana bat is a migratory bat, hibernating in caves and mines in the winter and migrating to summer habitat. Although some Indiana bat bachelor colonies have been observed (Hall 1962, Carter et al. 2001), males and nonreproductive females typically do not roost in colonies and may stay close to their hibernaculum (Brack 1983, Whitaker and Brack 2002) or migrate long distances to their summer habitat (e.g., Kurta and Rice 2002). Reproductive females may migrate great distances, up to 575 km (357 mi) (Winhold and Kurta 2006), to form maternity 38 colonies to bear and raise their young. Both males and females return to hibernacula in late summer or early fall to mate and enter hibernation.

#### **Fall Swarming and Mating**

Indiana bats arrive at their hibernacula in preparation for mating and hibernation as early as late July; usually adult males or nonreproductive females make up most of the early arrivals (Brack 1983). The number of Indiana bats active at hibernacula increases through August and peaks in September and early October (Cope and Humphrey 1977, Hawkins and Brack 2004, Rodrigue 2004, Hawkins et al. 2005). Males may remain active through mid-October or later, especially at southern sites. Upon arrival at a hibernaculum, Indiana bats "swarm," a behavior in which "large numbers of bats fly in and out of cave entrances from dusk to dawn, while relatively few roost in the caves during the day" (Cope and Humphrey 1977). Swarming continues for several weeks, and during this time mating occurs, generally in the latter part of the period. Adult females store sperm from autumn copulations throughout winter, and fertilization is delayed until soon after spring emergence from hibernation (Guthrie 1933). Limited mating activity occurs throughout winter and in spring as bats leave hibernation (Hall 1962).

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<sup>1</sup> Lori Pruitt and Leslie TeWinkel, eds., "Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision (Fort Snelling, MN: Department of the Interior; U.S. Fish and Wildlife Service, April 2007).

Prior to hibernating Indiana bats must store sufficient fat to support metabolic processes until spring. During fall swarming, fat supplies for Indiana bats are replenished as they forage in the vicinity of the hibernaculum.

### **Hibernating**

Most Indiana bats enter hibernation by the end of November (mid-October in northern areas) (Kurta et al. 1997), although populations of hibernating bats may increase throughout fall and into early January at some hibernacula (Clawson et al. 1980). Indiana bats usually hibernate in large, dense clusters ranging from 300 bats per square foot (LaVal and LaVal 1980) to 484 bats per square foot (Clawson et al. 1980, Hicks and Novak 2002), although cluster densities as high as 500 bats per square foot have been recorded (Stihler 2005).

### **Spring Emergence**

The timing of annual spring emergence of Indiana bats from their hibernacula may vary across the range, depending on latitude and weather (Hall 1962). In spring when fat reserves and food supplies are low, migration provides an additional stress and, consequently, mortality may be higher immediately following emergence (Tuttle and 44 Stevenson 1977). This increased risk of mortality may be one reason why many males do not migrate far from the hibernacula (Brack 1983, Gardner and Cook 2002, Whitaker and Brack 2002). Female Indiana bats may leave immediately for summer habitat or linger for a few days near the hibernaculum. Once en route to their summer destination, females move quickly across the landscape. Little information is available to determine habitat use and needs for Indiana bats during migration.

### **Summer Life History and Behavior**

Reproductive females arrive at their summer habitats as early as mid-April in Illinois, New York, and Vermont (Gardner et al. 1991a, Britzke 2003, Hicks 2004). Humphrey et al. (1977) reported that Indiana bats first appeared at their maternity roost sites in early May in Indiana, with substantial numbers arriving in mid-May. Relatively little is known about the summer habits of males and nonreproductive females.

### **Maternity Roosts**

Indiana bat maternity roosts can be described as primary or alternate based upon the proportion of bats in a colony consistently occupying the roost site (Kurta et al. 1996, Callahan et al. 1997, Kurta et al. 2002). On average, Indiana bats switch roosts every two to three days, although reproductive condition of the female, roost type, and time of year affect switching (Kurta et al. 2002, Kurta 2005). Lactating females may change roosts less often than pregnant or post-lactating females. Bats roosting under exfoliating bark may change more often than bats roosting in crevices (Kurta et al. 1996, 2002; Gumbert et al. 2002; Carter 2003; Kurta 2005).

### **Fall Migration**

Maternity colonies begin disbanding during the first two weeks in August, although some large colonies may maintain a steadily declining number of bats into mid-September (Humphrey et al. 1977, Kurta et al. 1993b).

### **Food Habits**

The Indiana bat is a nocturnal insectivore. It emerges shortly after sunset and begins feeding on a variety of insects that are captured and consumed while flying (Sparks et al. 2005b). Indiana bats feed on flying insects, with only a very small amount of spiders (presumably ballooning individuals) included in the diet. Four orders of insects contribute most to the diet: Coleoptera, Diptera, Lepidoptera, and Trichoptera (Belwood 1979, Brack 1983, Brack and LaVal 1985, Lee 1993, Kiser and Elliot 1996, Kurta and Whitaker 1998, Murray and Kurta 2002, Whitaker 2004). Consistent use of moths, flies, beetles, and caddisflies throughout the year at various colonies suggests that Indiana bats are selective predators to a certain degree, but incorporation of ants into the diet also indicates that these bats can be opportunistic (Murray and Kurta 2002). Hence, Brack and LaVal (1985) and Murray and Kurta (2002) suggested that the Indiana bat may best be described as a “selective opportunist,” as are a number of other *Myotis* species (Fenton and Morris 1976).

### **6.1.3 Indiana Bat Habitat**

During winter, Indiana bats are restricted to suitable underground hibernacula. The vast majority of these sites are caves located in karst areas of the east-central United States; however, Indiana bats also hibernate in other cave-like locations, including abandoned mines. These hibernacula tend to have large volumes and often have large rooms and vertical or extensive passages, often below the lowest entrance. Cave volume and complexity help buffer the cave environment against rapid and extreme changes in outside temperature, and vertical relief helps provide a range of temperatures and roost sites.<sup>2</sup>

In summer, most reproductive females occupy roost sites under the exfoliating bark of dead trees that retain large, thick slabs of peeling bark. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are typically within canopy gaps in a forest, in a fenceline, or along a wooded edge. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands, and upland communities. Indiana bats typically forage in semi-open to closed (open understory) forested habitats, forest edges, and riparian areas.

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<sup>2</sup> Pruitt and TeWinkel, 7.

#### **6.1.4 Habitat Status at Indiana Dunes National Lakeshore**

The Indiana bat was first observed within the park in the Heron Rookery parcel in 2003. Although none have been observed within the Good Fellow Club Youth Camp site, summer roosting areas of maternity colonies are rarely discovered. However, Indiana Dunes National Lakeshore provides abundant preferred habitat for Indiana bat summer roost sites, including the higher quality woodland along the slopes south of the Good Fellow Youth Camp overlooking the Little Calumet River. While Indiana bats are known to hibernate during the winter in caves and mines, they spend summers in congregations or roosts, occupying the space behind the exfoliating bark of large, often dead trees, or in crevices or openings in other trees. Primary habitat criteria include older trees, access to water sources, and woodland gaps, clearings, or edges that present few obstacles to foraging for flying insects, and the ease and safety of accessing roost sites.

Other criteria include relative proximity to winter hibernation sites, and migration corridors between summer and winter colony sites. Forest communities providing appropriate habitat for summer roosting Indiana bat populations tend to vary, but riparian and upland forests with numerous large snags and proximity to water sources and gaps or openings afford the most suitable potential habitats.<sup>3</sup> A letter from the U.S. Fish and Wildlife Service dated May 15, 2009 states that “the only bat mist net surveys conducted along the East Branch Little Calumet River in the Bailly Unit to date (2003-2004 Heather Brookhart and John O. Whitaker, Jr.) did not capture any bats of any species.”

#### **6.1.5 Threats to the Indiana Bat**

Since 1977, loss of forest cover and degradation of forested habitats have been cited as part of the decline of Indiana bats (U.S. Fish and Wildlife Service 1983, Gardner et al. 1990, Garner and Gardner 1992, Drobney and Clawson 1995, Whitaker and Black 2002). The most harmful consequence of tree clearing on summering Indiana bats is the felling of an occupied roost tree. Silviculture that involves short rotations and/or removal of dead and dying trees also threatens the integrity of roosting habitat for Indiana bats.

At the Good Fellow Club Youth Camp any changes to the higher-quality woodland along the slopes south of the camp (see map) could diminish potential bat habitat. These changes might include selected tree or underbrush removal. Management activities for the slopes south of the camp could diminish potential bat habitat by removing overly mature trees which provide a sustained supply of large snags essential to maintaining summer habitat for tree-roosting bats, specifically Indiana bats (Bat Conservation International 2001, Kurta et al., 2002, Miller et al. 2002, Schultes and Elliot 2002, Battle 2003).

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<sup>3</sup> Pruitt and TeWinkel, 66.

### **6.1.6 Effects of the Good Fellow Club Youth Camp EA Proposed Action**

The proposed action alternative contained in the EA for Good Fellow Club Youth Camp has not recommended removing any vegetation below the 645-foot elevation topographic contour. The only recommendation that would impact the woodlands between the 640 and 645-foot contours is the restoration of the trails for shared use with the Dunes Learning Center. The trail restoration will consist of locating the existing trail bed and clearing if necessary any brush or undergrowth to a maximum width of 4'-0". No new surface materials will be introduced and the path would be maintained as a small woodland trail. If any new routing of the existing trail might be necessary, the alignment will avoid all large trees and affect only small trees (less than 12" DBH) or brush vegetation. The trail will be used for interpretive and educational purposes.

The proposed action recommends the documentation, stabilization and maintenance of two historic features near the Little Calumet River and Howe Road. These features, a small stone retaining wall remnant on the edge of the river and limestone columns and gate near the edge of Howe Road are not in the delineated study area for this project. They are located south of the Good Fellow Camp site at the edge of the river. They are delineated in the *Historic Structures Report/Cultural Landscape Report (2005)* as contributing features, surviving the period of significance. The retaining wall on the edge of the river is in poor condition, but will be documented and stabilized in place without disruption or clearing of any large trees. Field observation showed no large trees near the retaining wall and only dead limbs and underbrush. This will be cleared before any stabilization procedures commenced. Future maintenance will not disrupt any significant vegetation. The limestone columns and iron gates near Howe Road mark the old River entrance. Secondary vegetative growth has changed the setting for these columns. A small rectangle 20' x 8' will be cleared around the columns for documentation and stabilization procedures to occur. No large trees would be affected by this clearing. There are dead trees and limbs on the ground near the gates that will also be removed for foot access from Howe Road. The iron gates will be removed and restored off site.

The proposed action recommends retaining the successional forest for educational, interpretive and recreational use and sharing these areas with the Dunes Learning Center. The proposed action alternative does recommend the removal of approximately 5.3 acres of existing successional woodland, and the construction of some new visitor access and special event features that could disrupt and disturb select areas of existing plant communities and their associated wildlife habitat. However, this clearing would open select areas and increase forest edges, which could also enhance roosting opportunities for the Indiana bat as well as foraging opportunities for bats and other species.

### **6.1.7 Recommendations for the Protection of Potential Indiana Bat Habitat at Good Fellow Club Youth Camp**

While the proposed action alternative contained in the EA for Good Fellow Club Youth Camp does not recommend any interventions or alterations to the environment that would impact habitat in any major adverse manner there are measures that would be taken to

protect the higher quality community on the bluffs and river terrace below the camp and above the floodplain and the wetland area, as follows.

**Avoid disruption of potential roosting areas during summer**

Reproductive Indiana bat females roost in the summer season. Both males and females return to hibernacula in late summer or early fall to mate and enter hibernation, and these would be more optimal seasons to embark on any clearing or thinning operations. Tree thinning operations in the boxes 1 to 5 as indicated on Figure 4 must adhere to the tree cutting restriction dates between April 1 and October 1. Tree thinning operations for the trails, retaining wall, and columns must also adhere to the restricted period between April 1 and October 1. If it is determined that tree clearing or thinning operations must occur during the restricted period, a biologist will conduct a mist net survey of the site to demonstrate the presence or absence of Indiana bats.

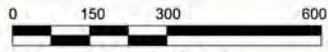
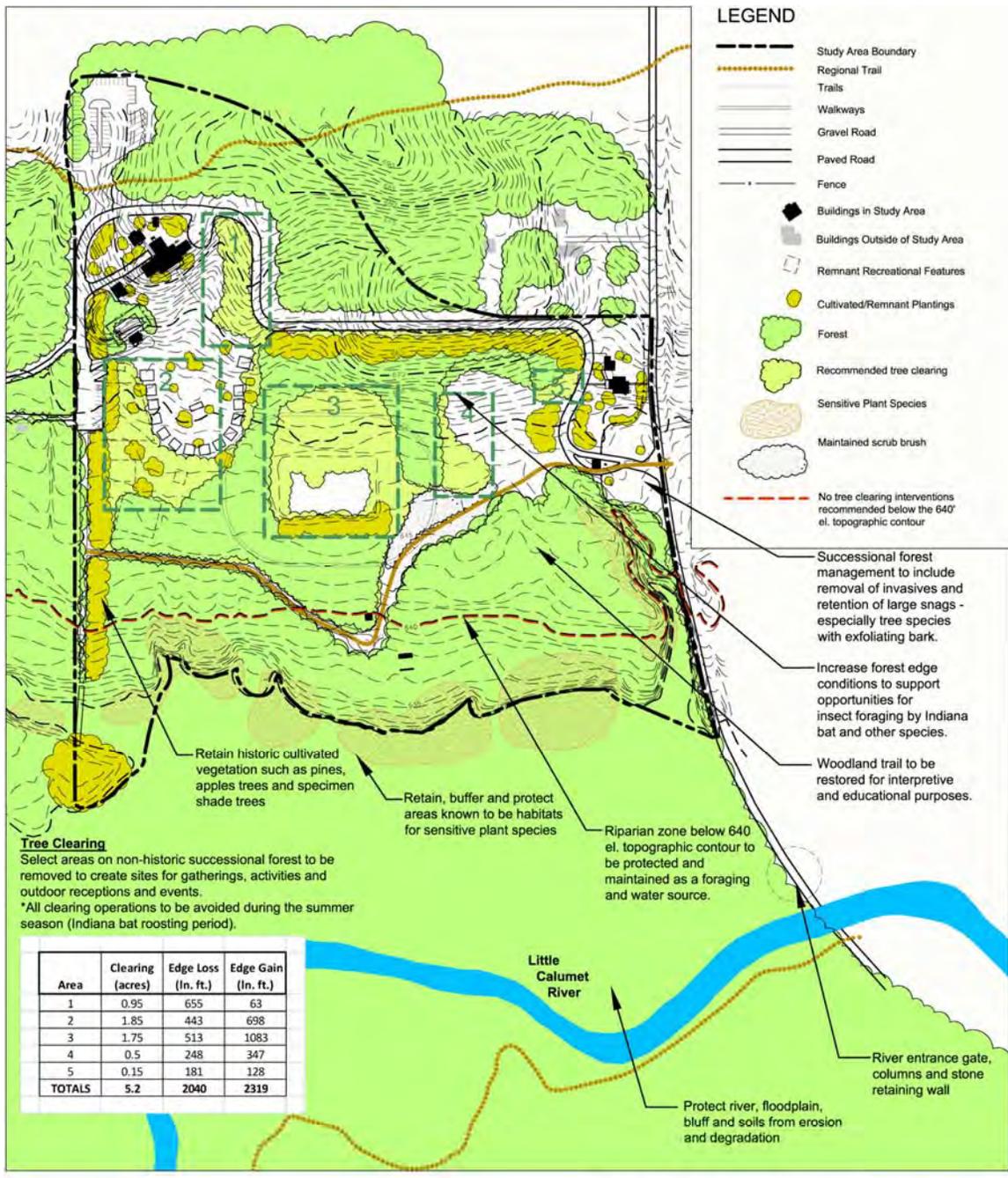
**Retain large snags with exfoliating bark**

Indiana bat females typically roost behind the exfoliating bark of large, often dead, trees. Allowing larger snags of trees with preferred bark, including ash (*Fraxinus spp.*), elm (*Ulmus spp.*), hickory (*Carya spp.*), and oak (*Quercus spp.*) to remain (unless they otherwise threaten visitors or other resources) would ensure the retention of potential roosting sites.

**Seek opportunities to provide forest edge conditions to support insect foraging**

Observations of light-tagged animals and bats marked with reflective bands indicate that Indiana bats typically forage in closed to semi-open forested habitats and forest edges (Humphrey et al. 1977, LaVal et al. 1977, Brack 1983). Indiana bats hunt primarily around, not within, the canopy of trees, but they occasionally descend to subcanopy and shrub layers. In riparian areas, Indiana bats primarily forage around and near riparian and floodplain trees, as well as solitary trees and forest edges on the floodplain (Cope et al. 1974, Humphrey et al. 1977, Belwood 1979,

Clark et al. 1987). Selected clearing efforts at Good Fellow Youth Camp should consider that pockets of smaller open areas, with many edges, are potentially more beneficial than clearing large open acreages. As conceptualized, the preferred action alternative retains hedgerows and buffers of the encroaching forest, creating small clearings only where needed for programming purposes and visual access.



Scale 1 inch = 200 feet

Map prepared by John Milner Associates, Inc.  
 Sources: AutoCAD files, 1946 Plot Plan, historic photographs, and GIS data provided by NPS in 2005.

**Figure 4. Diagram of proposed changes to forest cover at Good Fellow Club Youth Camp in the EA preferred alternative.**

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United States Department of the Interior  
Fish and Wildlife Service



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May 15, 2009

Mr. Constantine J. Dillon  
Superintendent  
Indiana Dunes National Lakeshore  
1100 North Mineral Springs Road  
Porter, Indiana 46304-1299

Dear Mr. Dillon:

This responds to your letter of May 1, 2009 requesting endangered species information from the U.S. Fish and Wildlife Service for Good Fellow Club Youth Camp Historic Structures Report/Site Management Plan at the Indiana Dunes National Lakeshore in Porter, Porter County, Indiana. The Good Fellow Club Youth Camp is located on 63 acres north of the East Branch Little Calumet River and west of Howe Road within the Bailly Unit of the Lakeshore and was a summer camp for children of U.S. Steel Company's employees. It operated from 1941 to 1976, when it was purchased by the Lakeshore. The main historic buildings are extant but are not in use.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project area is within the range of the following Federally endangered, threatened, and candidate species:

Species

Indiana bat (*Myotis sodalis*)  
endangered

Karner blue butter (*Lycaeides melissa samuelis*)  
endangered

Pitcher's thistle (*Cirsium pitcheri*)  
threatened

Piping plover (*Charadrius melodus*)  
endangered

Habitat

winter: caves and mines  
summer: forested areas typically associated  
with water resources; roost in trees with  
exfoliating bark

pine barrens and oak savanna with sandy soils  
and containing wild lupine

Great Lakes shoreline – stabilized dunes and  
blowout areas

nesting on open sandy beaches; critical habitat  
along Lake Michigan shoreline, Dune Acres and

State Park; no recent nesting records in  
Indiana

Eastern massasauga rattlesnake  
(*Sistrurus catenatus catenatus*)  
candidate

wet areas including wet prairies, marshes and  
low areas along rivers and lakes and adjacent  
uplands during part of the year

Of these species, the only one potentially present in the Good Fellow Club Youth Camp vicinity is the Indiana bat because there is no suitable habitat for the other species in that portion of the Lakeshore; the piping plover critical habitat is along the Lake Michigan shoreline and not inland at the Camp site. However, the only bat mist net surveys conducted along the East Branch Little Calumet River in the Bailly Unit to date (2003-04 Heather Brookhart and John O. Whitaker Jr.) did not capture any bats of any species.

If you have any questions, please contact Elizabeth McCloskey at (219) 983-9753 or [elizabeth\\_mccloskey@fws.gov](mailto:elizabeth_mccloskey@fws.gov).

Sincerely yours,



*for* Scott E. Pruitt  
Supervisor

# Appendix C • Finding of No Significant Impact

**Good Fellow Club Youth Camp  
Historic Structures Report and Cultural Landscape Report  
Phase II: Environmental Assessment**

Indiana Dunes National Lakeshore, Porter, Indiana

**Finding of No Significant Impact**

**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 proposed improvements to the existing Good Fellow Club Youth Camp in the Indiana Dunes National Lakeshore (INDU). The EA is Phase II of the Historic Structures Report/Cultural Landscape Report, and was required by NPS for the completion of that document. The HSR/CLR was taken to 95% completion in 2006, and it was at that time that the NPS determined that an EA was necessary to adequately assess potential impacts in alternative treatment plans.

The NPS has prepared this EA in compliance with the National Environmental Policy Act of 1969, as amended (NEPA), (CEQ) regulations implementing NEPA [40 Code of Federal Regulations (CFR) 1500-1508], the National Historic Preservation Act of 1966, as amended (NHPA), the Advisory Council on Historic Preservation's (ACHP) implementation regulations for Section 106, implementation regulations for 36 CFR Part 800 *Protection of Historic Properties* and the NPS Director's Order -12 (as reflected in the DO-12 Handbook).

**Park Information**

The National Lakeshore is located in Northwest Indiana along the shore of Lake Michigan between Gary and Michigan City, approximately fifty miles southeast of Chicago. It is loosely bounded by Lake Michigan to the north and US 20 to the south, and is separated into the East and West units with several small noncontiguous satellite areas. A variety of residential, commercial, and industrial developments abut the National Lakeshore boundaries, including several communities that are completely surrounded by National Lakeshore land.

The endeavors of local and regional constituents to protect the Indiana dunes began in 1899. However, it was not until 1966 that Congress designated Indiana Dunes National Lakeshore as a unit of the national park system. While the National Lakeshore's authorizing legislation included only 8,330 acres of land, four subsequent expansion bills increased its size to more than 15,000 acres, including the 2,182-acre Indiana Dunes State Park which is managed by the Indiana Department of Natural Resources.

**Introduction**

The Good Fellow Club Youth Camp was the site of a summer camp operated by the Good Fellow Club of U.S. Steel's Gary Works from 1941 to 1976. The camp was created to provide outdoor recreation for the children of the Gary Works employees. In addition to its recreational purpose, the camp was seen as a social, physical, and moral benefit for the children - an idea derived from the progressive labor movements and welfare capitalism of the early twentieth century. In addition to organized sports and crafts the activities of the camp emphasized an appreciation of the natural environment. Although the

NPS purchased the property in 1977 funding for extensive maintenance and repairs did not become available until the 1990s. In 1993 a survey of the site determined that it was potentially eligible for listing on the National Register of Historic Places due to its association with regional industrial history.

It is the intention of the NPS to develop the site in a manner that protects its historic character and sense of place while rehabilitating its historic buildings and landscape features. This proposed expansion is the subject of the Environmental Assessment (EA). The EA is Phase II of the previously completed Historic Structures Report/Cultural Landscape Report. The combined HSR/CLR and EA is intended to guide long term cultural resource and environmental resource management of the Good Fellow Club Youth Camp and was prepared reflecting the interconnected nature of the cultural resources and natural resources of the camp, both physically and in terms of function. The HSR/CLR details the significance of the landscape as the setting for the Good Fellow Club Youth Camp as well as the significance of the buildings and recreational features. The EA concentrates on the potential impacts to the historic and natural resources at the Good Fellow Club Youth Camp.

The EA identifies three action alternatives and determines the potential impacts and recommended mitigation measures related to their implementation. The EA also identifies a No Action Alternative and a preferred alternative as required by the Council on Environmental Quality (CEQ). The EA addresses short-term construction-related impacts and long-term effects, as well as the cumulative impacts that would result from this and other projects which have been completed recently, are currently under-development, or are proposed within the project area.

## **Selected Alternative**

### **Alternative D - Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate Conferences, Events, and Activities Rental**

This alternative assumes a partnership between the NPS and a third party interested in sensitively rehabilitating the Good Fellow Club Youth Camp site for commercial special events and activities rental such as conferences, professional and recreational retreats, and other types of events. Any commercial activity will be addressed in a commercial services plan which the park has initiated. All activities will be in keeping with the plan and appropriate for the site and the surrounding land use. In addition to offering the overall camp landscape as an attraction this alternative will require developing reception areas, kitchen facilities, and overnight lodging, and adaptations for universal accessibility so that the facility could host events for clients with disabilities. Existing historic buildings will be adaptively reused to accommodate the programmatic needs of the third party. The third party will be permitted to construct additional buildings on the existing concrete pads that mark the former cabin sites. The exterior design of the new buildings will be expected to be contemporary, yet compatible with the historic setting. The level of finish and details of the interiors of new buildings will be permitted to meet the needs and target audience of the facility. Structures currently in use by the Dunes Learning Center (DLC) could be available for the programmatic needs of the new management. Existing uses by the DLC could be relocated. The National Lakeshore remains committed to ensuring that any activities or events of a third party will not be incompatible with the DLC. As portions of the site change there will be negotiations between the NPS and the DLC for alternative uses and locations.

Rehabilitation of the landscape will accommodate the anticipated needs for outdoor activity associated with the facility, such as tented events and recreational opportunities. To that end, this alternative indicates selected clearing of existing woodland within the center of the site and establishment of open turf or meadow for outdoor activities and gatherings. Native woodland plants will be retained and protected and invasive species will be removed. Portions of the cultural landscape could be restored with particular attention to spatial organization and viewsheds from the period of significance. This alternative

retains the overall character of the landscape setting. The existing overflow parking area will be expanded, and there will be continued use of this area by the NPS for festivals and large special events as well as any program needs of the third party. To accommodate recreational needs of guests, this alternative recommends that the swimming pool and pool house be restored and interpreted. Additional recreational trails will be developed within and along the margins of the remaining wooded areas and provide a connection to the DLC, the river, and regional trail networks. Universally accessible paths will be developed between roads, parking, and key destinations.

Missing historic recreational features such as the horseshoe pits and the croquet court are recommended for reestablishment if sufficient historic documentation exists to guide their reconstruction. Historic resources in fair to poor condition will be stabilized to the extent possible, but not integrated into use of the site. Features in degraded condition that cannot be repaired will be documented and removed.

Also, this alternative recommends the documentation, stabilization, and maintenance of the historic retaining wall found along the Little Calumet River and maintenance of the historic stone columns near Howe Road.

In this alternative, to align with Park goals and objectives for all sites, maintenance and management of the Good Fellow Club Youth Camp will follow a set of best management practices developed specifically for the property to promote environmental stewardship and the protection of historic resources. The environmental processes could be interpreted and demonstrated through the use of green technologies.

This alternative will include upgrading and expansion of physical infrastructure at the camp. The existing woodland will be selectively cleared for events but large areas of the encroaching forest will remain. This alternative will provide a wide variety of visitors with both aesthetically and culturally pleasing surroundings and a wide range of beneficial uses of the environment.

### **The HSR/CLR/EA considered three other alternatives:**

Alternative A - No-Action Alternative

Alternative B – Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth

Alternative C - Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities

**Alternative A - No Action Alternative** -- Under the No Action alternative the park would continue to maintain the existing landscape patterns and features of the Good Fellow Club Youth Camp site in their current condition. The successional oak-hickory woodland that occupies much of the formerly open camp site would remain, and current mowing and vegetation management regimes would continue. Overall treatment of the landscape would focus on maintaining existing conditions. Land uses of the site would continue to include the DLC's use of historic structures and landscape features as noted in the EA.

With the No Action alternative areas of the camp that were open historically but have revegetated would remain in this state of succession. The primary actions involving vegetation management would include the removal of invasive plant species and trees that pose a hazard to buildings and the safety of visitors. Turf and field areas, where they do remain, would continue to be mown and kept clear. Surviving culturally derived plantings such as the white and scotch pines, apple trees, shade trees, and arborvitae would continue to be maintained in their current condition although continued growth of the successional woodland community may interfere with the growth habit and health of some of these plantings over time.

Other management activities that would occur under the No Action alternative include ongoing maintenance of all contributing buildings, structures, circulation, and small-scale features in their current condition. There is special concern for the current condition of the Lodge and the need for rehabilitation in order to adequately protect the historic structure and prevent further deterioration and undermining of the building from water and weather damage. Landscape features that are currently in poor condition, and which are in need of restoration, may not survive under this alternative.

### **Alternative B – Rehabilitate the Historic Good Fellow Club Youth Camp to Accommodate its Traditional Use as a Recreational Camp for Youth**

Under this alternative the NPS, potentially in concert with local partners, would rehabilitate the Good Fellow Club Youth Camp in support of reestablishment of its traditional use as a recreational camp. Rehabilitation would focus on accommodating the contemporary programmatic needs of a relatively rustic camp. Historic landscape features would be retained, maintained, repaired, and/or restored to establish a new camp. Modeled on the historic programs of the Good Fellow Club Youth Camp, the new camp would be active during both the traditional summer period as well as expanded spring and fall shoulder seasons to augment the potential revenue stream. Lost or degraded historic resources that would be desirable components of the new camp, such as cabins, lawn and playing fields, a campfire circle, picnic areas, archery and rifle ranges, a swimming pool, and trail connections to the river would be reestablished based on historic documentation.

Historic documents and records, would guide the rehabilitation and closely approximate the Good Fellow Club Youth Camp's historic operational conditions. While the lodge, former cabins, caretaker's house, and site entrance areas are currently maintained in open vegetative cover, much of the remainder of the formerly open site has been allowed to undergo secondary succession, and is now characterized by a young oak-hickory forest. Under this alternative the successional forest areas would be cleared and returned to a low-growing turf or meadow vegetation, although the forest would be retained in areas identified as important to sensitive plant communities or where there are steep slopes. The DLC would have shared use of the forested area with the NPS and any new uses developed for this alternative. The new vegetative cover type would be selected to meet sustainability criteria such as drought tolerance and low-frequency mowing requirements.

The existing overflow parking site would remain but be managed to retain an unobtrusive character that would be as open and uncluttered as the surrounding landscape. To address any potential impacts to the sensitive slopes and plant communities associated with the river bluffs to the south, a filter strip is recommended for the south edge of the open field on the restored forest edge. Maintenance, and replacement in-kind if necessary of culturally derived historic plantings, including the white and scotch pines, apple trees, shade trees, and arborvitae, is also recommended – but only if these are still considered non invasive. Missing historic plantings, such as the cedars that once flanked the lodge porch, would be replanted.

Under this alternative historic land uses and activities would be reinstated, such as lodging and recreation. Repair and adaptive reuse of historic buildings is recommended to accommodate the needs of the new camp. Every effort would be made to retain the historic character and configuration of contributing buildings and structures, including the Good Fellow Lodge, Pool House, Director's Cabin, Staff Cabin, Pump House, Caretaker's House and Garage, Gatehouse, and steel bridge.

To further support restored use of the site as a camp, new structures would be established on the concrete pads that mark the sites of the former cabins. The design of these structures would be based on either the historic tent cabin structures used by the camp in the 1940s, or the wood cabins present in the 1970s. Interior building character and use would be permitted to deviate from historic uses under this

rehabilitation strategy. Non-contributing structures (sewage pump station, underground reservoir) would be retained and maintained as long as they continued to serve a useful purpose.

Historic site circulation features would be retained, repaired, and maintained in good condition. Deteriorated features such as the flagstone walk and patio associated with the lodge would be repaired, with missing sections reestablished. Historic trails, including access to the river and a boat launch area, would be reestablished based on historic documentation. Universally accessible walks would be established to provide connections between road and parking and the primary features of the camp. Non-historic circulation would be maintained as long as it continues to serve a useful purpose. The DLC will continue to have use of trails through the historic site for programs and hiking.

Surviving historic recreation features, such as the swimming pool, riflery, tennis courts, and checkerboard, are recommended for restoration and reuse by the camp. Missing historic recreation features, such as the baseball diamond, boxing ring, archery range, horseshoe pits, croquet court, basketball court, badminton court and running track are recommended for reestablishment if sufficient historic documentation exists to guide their siting and design, and if they will be used by the camp. Other small scale features that are recommended for repair or reestablishment include the Good Fellow Club Youth Camp sign that hung next to the entrance, the sign on the roof of the gatehouse, the campfire circle south of the steel bridge, and the stone wall along the river. Given the evolution of safety standards for playgrounds since the 1970s, documentation and removal of any surviving equipment is recommended under this alternative. Replacement with contemporary equipment in the same location is recommended.

Also, this alternative recommends the documentation, stabilization and maintenance of the historic retaining wall found along the Little Calumet River and maintenance of the historic stone columns near Howe Road.

### **Alternative C – Rehabilitate the Historic Good Fellow Club Youth Camp to Enhance Environmental Learning Opportunities**

Under this alternative the NPS, engaged in a partnership with a public or private entity and in coordination with the DLC, would rehabilitate the Good Fellow Club Youth Camp site as an environmental education center for programs and activities that would not be incompatible with the adjacent DLC. Surviving historic camp features would be retained, maintained, and adaptively reused, but missing historic elements and patterns of spatial organization would not be reestablished. The successional forest, specialized vegetation communities, and other natural elements of the site would be featured in environmental education programs. Maintenance of the site would follow a set of best management practices developed specifically for the property to promote environmental stewardship and the protection of historic resources. Management strategies would be linked to the educational programs conducted at the site. For example, the successional oak-hickory forest that currently occupies the camp's formerly open grassy field would be studied to record and analyze change over time as an aid to understanding ecological principles and processes. Invasive plants that interfere with native plant communities would be removed and controlled. Native plants that are threatened or provide habitat for local wildlife species of interest would be planted and their associated vegetation communities promoted. Turf grasses would be replaced with native warm season grasses and forbs. Other environmental processes in evidence on the site would be revealed through the interpretation and demonstration of green technologies. For example, stormwater management strategies that promote collection of rainwater for reuse, infiltration of runoff into the groundwater system, and removal of sediments such as rain gardens, filter strips, cisterns, rain barrels, and detention areas would be established in association with building and circulation systems.

Existing historic buildings, such as the lodge, would be rehabilitated to accommodate classroom, meeting, training, laboratory, and family camping uses. The Director's Cabin, Staff Cabin, and Caretaker's House have already been rehabilitated and probably will remain DLC facilities. The Pump House has also been rehabilitated and houses a booster pump and chlorination system for the site's water service.

Rehabilitation of the site and the historic building would adhere to a set of guidelines developed to protect the historic integrity of the National Register-eligible property. In addition, green building principles and technologies would be applied to all aspects of the rehabilitation.

Should the existing buildings and structures prove insufficient to accommodate the needs of the facility, additional lodging, classroom, laboratory, storage, and training facilities would be established using the existing concrete pads that mark the former site of the Good Fellow Club Youth Camp cabins. The architecture and design of the new facilities would be contemporary and compatible with the historic setting, and green building principles would be applied to their construction.

Historic circulation systems would be retained and maintained, while unnecessary non-contributing circulation systems would be removed. The NPS and its partner would explore replacement of impervious pavements with permeable paving systems, and associated stormwater management systems that promote infiltration, detention, cleansing, and collection. Universally accessible trails would be developed to provide connections between roads, parking and primary site destinations. Woodland trails would be established to connect the camp with the river, the DLC, and adjacent park trail and bike trail systems. These trails would be designed to have as little environmental impact as possible.

Former recreational features in poor or unsafe condition, such as the swimming pool, riflery, and playground equipment, would be documented and removed, while other existing historic recreation features would be stabilized and maintained, but not repaired for use. The tennis court site would be adapted for use as an outdoor classroom area.

Also, this alternative recommends the documentation, stabilization and maintenance of the historic retaining wall found along the Little Calumet River and maintenance of the historic stone columns near Howe Road.

### **Alternatives Considered and Dismissed**

A fourth alternative was considered and dismissed as part of the discussions and analysis. This alternative had the NPS as sole manager of the rehabilitation of the Good Fellow Club Youth Camp as well as its operations and costs. This alternative was dismissed because its feasibility was doubtful.

A fifth alternative partnered the NPS and DLC in the rehabilitation of the camp. The surviving contributing features would be protected, maintained, and reused where appropriate to meet the programmatic needs of the DLC. Extant contributing features that would not support the educational program of the DLC would still be preserved for interpretation. This alternative was dismissed because the DLC felt it could not take on the leadership of the Good Fellow Lodge rehabilitation effort, but they would support the Park in its efforts to restore Good Fellow Lodge. With this assessment by DLC, the Park determined that viable alternatives for the EA will have to include development of the lodge through public/private partnership or through a third party.

### **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:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
- Enhance the quality of renewable resources and approach the maximum attainable recycling of delectable resources (40 CFR § 1500 et seq.).

The Council on Environmental Quality (CEQ) provides additional direction in its guidance *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations* (1981). "The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, 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."

Under **Alternative A**, the park would continue to maintain the existing landscape patterns and features of the Good Fellow Club Youth Camp site in their current condition. Also, Alternative A does not address the purpose and need of the project, including expansion of environmental learning camp facilities and rehabilitation of historic structures and landscape.

Alternative A would not provide for beneficial use of the environment, nor would it provide a sharing of amenities. This alternative would cause the least damage to the biological and physical environment, however, Alternative A would not enhance historic, cultural, and natural resources because no site restoration would occur.

**Alternative B** proposes the rehabilitation of the historic Good Fellow Club Youth Camp to accommodate its traditional use as a recreational camp for youth. This alternative would provide aesthetically and culturally pleasing surroundings, preserve important historical and cultural resources and through use of green technologies and sustainable design, enhance the quality of renewable resources. There is vegetation removal and soil disruption in this alternative, but mitigation measures would minimize impacts to the surrounding environment.

**Alternative C** proposes the rehabilitation of the historic Good Fellow Club Youth Camp to enhance environmental learning opportunities. The NPS in partnership would rehabilitate the site as an environmental education center for programs and activities that would not be incompatible with the adjacent DLC programs and activities.

This alternative would preserve the natural resources as they are and provide environmental educational programs specific to the unique vegetation communities and other natural elements of the site. This alternative would provide for beneficial use of the environment and a sharing of amenities. There is some preservation of historic resources in this alternative. The cultural landscape and many historic features of the site would further deteriorate and disappear if Alternative C were implemented. Also visitor use

would be limited to daily programs and overnight lodging for specialized environmental activities and educational uses.

**Alternative D Rehabilitation is the environmentally preferable alternative.** This alternative proposes rehabilitation of the historic Good Fellow Club Youth Camp to accommodate conferences, events and activities rental. This alternative will preserve and protect many of the historic and cultural resources on the site and allow a variety of visitors to experience the site. Portions of the cultural landscape will be restored as well as spatial organization and viewsheds from the period of significance. The character of the landscape setting will be preserved. It will have facilities and accessibility for clients with special needs and provide diversity and variety of choice. This alternative minimally disrupts some woodland vegetation, however, maintenance and management will follow a set of best management practices developed specifically for the property to promote environmental stewardship and to protect historic resources. Native woodland vegetation will be preserved and invasive plantings removed. This alternative also best meets the stated goals and objectives of the park for the Good Fellow Club Youth Camp.

Therefore, Alternative D best addresses all the criteria presented in Section 101 (b) for the Environmentally Preferable Alternative and best addresses the goals and objectives of the Park.

## **Why the Selected Alternative Will Not Have a Significant Effect on the Human Environment**

### **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 D would have a long-term, minor and beneficial impact to cultural resources following the rehabilitation of the historic lodge and other historic structures and portions of the cultural landscape. A short-term, minor and adverse impact would occur only during the construction efforts to rehabilitate these resources on the site. There would be no major adverse impacts to the cultural resources on the site. The changes would improve the overall integrity and condition of the property's contributing features.

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

Restoration and re-use of some of the recreational features on the site which are currently in a poor state of repair is recommended in Alternative D. This plan recommends the restoration of the historic stainless steel pool and the pool house. The pool is currently neglected and in a poor state of repair. Other smaller recreational features such as the horse shoe pit and croquet court are also recommended for restoration. Features that are not consistent with the programmed use and pose a threat to visitors, such as outdated play equipment are recommended for documentation and removal.

Alternative D also proposes changes to circulation to meet Uniform Federal Accessibility Standards to safely accommodate all visitors to the greatest extent possible. An accessible route is also being provided between the lodge and near-by UFAS accessible parking as well as routes to other areas of educational value. Low level lighting is recommended and achieved with bollard lights placed along strategic visitor circulation routes and parking and only the surface of the walkway or parking would be illuminated. This will not significantly increase light levels through the Good Fellow Club Youth Camp.

To enhance public safety and welfare, Alternative D includes upgrading and expansion of physical infrastructure at the camp. Also the existing woodland would be selectively cleared for events but large areas of the encroaching forest would remain. This alternative would provide a wide variety of visitors with both aesthetically and culturally pleasing and safe surroundings and a wide range of beneficial uses of the environment.

**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.**

Alternative D, the Selected Alternative, does not negatively impact any known historic or cultural resources. The Good Fellow Club Youth Camp lies in the center of Indiana Dunes National Lakeshore which is located in northern Indiana along Lake Michigan. The lakeshore is comprised of over 15,000 acres of dunes, oak savannas, swamps, bogs, marshes, prairies, rivers, and forests. It contains twenty-five miles of Lake Michigan shoreline extending from Gary to Michigan City. Lake Michigan is one of the largest freshwater lakes in the world. Four major dune systems exist within the Lakeshore and include the present lakeshore dunes, the Tolleston dunes, Calumet dunes, and Glenwood dunes. Open beaches, grass covered dune ridges, blowouts, dunes with woody shrub vegetation, pine-forested dunes, oak-forested dunes oak savannas, and prairies all come together to form the Indiana Dunes National Lakeshore. The biological diversity within Indiana Dunes National Lakeshore is amongst the highest per unit area of all the national parks. There are more than 300 species of birds, thirty-seven of mammals, thirty of reptiles, and twenty-two of amphibians. The lakeshore is an especially important feeding and resting area for migrating land and water birds.

**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.

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

Although it is highly unlikely, the rehabilitation of the Lodge and other potential construction projects including circulation paths and plantings could unearth currently unknown archeological resources. There have been two archeological surveys conducted at Good Fellow Club Youth Camp, *Archeologist Rip Report* (1996) and *An Archeological Survey of elected Areas at the Good Fellow Club Youth Camp* (1999). To date no archeological resources have been documented on this site. In the Park agreement with the Deputy State Historic Preservation Officer outlined in the letter received by the Park on June 21, 2010, it states: "It is also our understanding that archaeological investigations (including documentation of the historic features) and a Section 106 review will be completed prior to each individual project."

**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 complies with the initial guidance for the area. The GMP describes specific actions such as "the Good Fellow Club Youth Camp will be used to provide overnight environmental education programs; historic Good Fellow Club Youth Camp features that can be incorporated into the environmental education program will be preserved, and the preferred alternative will rehabilitate and adaptively use the lodge and additional existing structures associated with the lodge complex. Other planning documents include: Good Fellow Club Youth Camp *Lodge Reuse Study and Evaluation of the Capacity of the Good Fellow Lodge building*, 1989; Good Fellow Club Youth Camp, *Historic Structures Report and Cultural Landscape Report*, 2005; Indiana Dunes National Lakeshore Division of Interpretation, *The Plan*, 2008; and Indiana Dunes National Lakeshore *Strategic Plan 2007-2011*.

The intent of this combined Historic Structures Report/Cultural Landscape Report and Environmental Assessment is to guide treatment and use of the above ground resources associated with the National

Register eligible Good Fellow Club Youth Camp in Indiana Dunes National Lakeshore. Previous planning documents along with research conducted as part of this HSR/CLR/EA, have helped to guide the development of treatment alternatives and the analysis of their potential impacts. The Selected Alternative does not set a 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. Related actions were identified as: The General Management Plan 1997; the Lodge Reuse Study and Evaluation of the Capacity 1989; Good Fellow Club Youth Camp: Development Concept Plan and EA 1995; and the Historic Structures Report/Cultural Landscape Report for Good Fellow Club Youth Camp 2005. Existing and anticipated future projects at Indiana Dunes National Lakeshore and in the surrounding area were also identified in order to determine the potential cumulative impacts. These projects included: the Porter Brickyard Trail; a funding request for *An Area Study for Howe Road*; a future study HSR/CLR/EA for the Bailly Homestead; DLC future plan *Design and Construction of a new Education/Office Building*; NPS future project *Landscape Rehabilitation of the Peter Larson Site*; NPS study for *Reopening the Little Calumet River for Canoes and Kayaks*; the NPS plan for a *Municipal Water Line for Good Fellow Club Youth Camp*; and current NPS plans for *Grading Plans Around the Historic Lodge*.

Cumulatively, implementation of the Selected Alternative of the HSR/CLR/EA and any or all of the other actions is expected to enhance the cultural landscape and built resources by improving conditions and integrity, specifically those related to circulation patterns, spatial organization, historic views, historic structures and historic recreational features. Cumulatively, the implementation of the Selected Alternative does 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.**

In 1993, a reconnaissance survey of the Good Fellow Club Youth Camp site determined that it was potentially eligible for listing on the National Register of Historic Places due to its association with regional industrial history. The Camp is located in the Indiana Dunes National Lakeshore in northern Indiana along the south shore of Lake Michigan between Gary and Michigan, Indiana. This is approximately fifty miles southeast of Chicago. The camp consists of wooded and open areas, historic camp buildings, and site recreational facilities. The camp was designed by U.S. Steel engineers to provide recreational and educational opportunities for the employees' children. Built starting in 1941, the camp embodies visions of an Adirondack style summer camp, including a rural, rustic character that blends with the natural environment. Alternative D, the Selected Alternative would improve the overall integrity of the Camp by restoring missing pieces of the cultural landscape, rehabilitating the Lodge and other historic structures and recreational facilities. To date no archeological resources have been documented on this site. In the Park agreement with the Deputy State Historic Preservation Officer outlined in the letter received by the Park on June 21, 2010, it states: "It is also our understanding that archaeological investigations (including documentation of the historic features) and a Section 106 review will be completed prior to each individual project." This assures ongoing NPS consultation with the SHPO during the course of the implementation of the preferred alternative. The HSR/CLR/EA will serve the park well as it continues to assess, plan, preserve and interpret the Good Fellow Club Youth Camp and its resources.

**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.**

Endangered species information was requested from the U.S. Fish and Wildlife Service on May 1, 2009. In a letter dated May 15, 2009, the Fish And Wildlife Service provided the following information. The good Fellow club Youth Camp site is within the range of the following Federally endangered, threatened, and candidate species: Indiana bat, Karner blue butterfly, Pitcher's thistle, Piping plover and Eastern Massasauga rattlesnake. Of these species, the only one potentially present in the Good Fellow Club Youth Camp vicinity is the Indiana bat because there is no suitable habitat for the other species in that portion of the Lakeshore. The only bat mist net surveys conducted along the East Branch Little Calumet River in the Bailly Unit to date did not capture any bats of any species. A Biological assessment was submitted to the Fish and Wildlife Service and the Park requested initiation of formal consultation under Section 7 of the endangered Species Act of 1973, as amended, even though the environmental assessment concluded that the action is not likely to adversely affect the Indiana bat when all the protective measures outlined in the BA are implemented. Fish and Wildlife Service informed the Park that formal consultation is not necessary for this proposed project because they concurred with the "may affect, not likely to adversely affect" determination concerning the Indiana bat. The FWS concurrence with our determination of may affect, not likely to adversely affect the Indiana bat was stated in a letter dated January 22, 2010, signed by Elizabeth McCloskey for Supervisor Scott E. Pruitt. Section 6.1.7 of the BA lists actions that the Indiana Dunes National Lakeshore will undertake to protect and enhance potential Indiana bat habitat within the Youth camp area and will be protective of the species. The BA is included in the Environmental Assessment.

**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. Proper consultation with the Indiana Department of Natural Resources has been completed.

## **Public Involvement**

Groundwork preparation for the formal scoping process was developed by the Park staff in 2008. During that year a Planning Work Group committee was developed, opening a dialog with stakeholders. The committee met on March 31, 2008, April 15, 2008 and September 3, 2008. The following stakeholders were identified as having an interest in the Good Fellow site: U.S. Steel, former owners and operators of the camp; Friends of Camp Good Fellow, an alumni group; the DLC, residential camp currently using the site and new buildings adjacent to the site; Historic Landmarks Foundation of Indiana, historic preservation organization (now known as Indiana Landmarks); the State Historic Preservation Office, state agency which oversees compliance for historic sites; the Eppley Institute, education agency associated with Indiana University; Bradford Woods, a residential environmental education camp south of Indianapolis and connected with Indiana University; and the Friends of the Indiana Dunes, a local support group for interpretation and education.

To officially initiate the EA, a kickoff meeting was held via conference call on November 3, 2008, which included National Lakeshore staff, Midwest Regional Office staff, and planning team members. Public scoping strategy was part of the agenda and the planning team was given all the notes from the previous meetings held in 2008. A second conference call was held with Park staff and the planning team on November 18, 2008, and key issues were discussed pertaining to partners, project objectives, program requirements, and feasible alternatives. The planning team was tasked to develop the discussed alternatives, and send to the park for review. After reviews and revisions, the alternatives were approved for presentation to stakeholders. Park staff then requested that the planning team come to the park for the formal stakeholder meeting to present the environmental assessment process, schedule, goals and objectives, and the conceptual alternatives. The stakeholder meeting at the Park was held on January 22,

2009. Input from park staff and stakeholders was then incorporated into the alternatives by the planning team. 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 Indian tribes.

The scoping process continued during the public review period and the scheduled public meeting. Solicitation of comments also continued during the formal review period from agencies and Indian tribes. The Public Meeting was held on July 15, 2009, and alternative concepts were presented and comments solicited. Upon request from stakeholders the public review period was extended for 45 days, and additional comments were posted on the PEPC website. Additional comments were also sent by mail to the Superintendent's office at the Park.

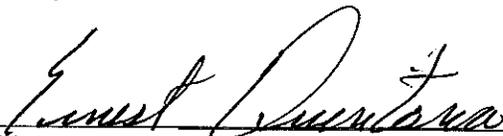
### **Impairment**

In addition to reviewing the list of significance criteria, the NPS has determined that implementation of the proposal will not constitute impairment to the critical resources and values of INDU. This conclusion is based on a thorough analysis of the environmental impacts described in the HSR/CLR/EA, public comment, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies.

### **Finding of No Significant Impact**

Finding of No Significant Impact based on my review of the facts and analysis contained in this Historic Structures Report/Cultural Landscape Report/Environmental Assessment, which is incorporated herein, I conclude that the Selected Alternative for the Good Fellow Club Youth Camp with 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:  10/18/10  
Superintendent, Indiana Dunes National Lakeshore Date

Approved:  12-7-2010  
Midwest Regional Director Date

# Appendix D • Determination of Impairment

**Good Fellow Club Youth Camp  
Historic Structures Report and Cultural Landscape Report  
Phase II: Environmental Assessment**

Indiana Dunes National Lakeshore, Porter, Indiana

**ATTACHMENT 1: DETERMINATION OF IMPAIRMENT**

A determination of impairment is made for each of the resource impact topics carried forward and analyzed in the environmental assessment for the preferred alternative. The description of park significance in Chapter One was used as a basis for determination if a resource is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- Identified in the park's general management plan or other relevant NPS planning documents as being of significance.

Impairment determinations are not necessary for visitor experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, etc. because impairment findings relate back to park resources and values. These impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired the same way that an action can impair park resources and values.

**NATURAL RESOURCE TOPICS**

**Soils and Geology**

Geologically, the Good Fellow Club Youth Camp site sits atop Lake Border Moraine rather than on dune ridge as is typical of most of the East unit of the park. Moraines are landscapes of knobby hills and kettle shaped valleys created by glacial drift. Lake Border Moraine is also associated with the high ground comprising the Tremont areas of the park. The soils that underlie the Good Fellow Club Youth Camp site include the Morley series in its northern portion and Martinsville series within its central portion. Beyond the site boundary to the south, Fluvaquents series soils occur within the river floodplain and the Del Rey series is associated with the Little Calumet River corridor.

Soil conservation and stability are necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore were established and are key to the natural integrity and enjoyment of the site and the park. The preferred alternative would result in adverse impacts from tree removal and stump grinding activities and construction activities for the development of the site. These impacts would be localized and short term with specific construction activity. The preferred alternative would not result in impairment, because the impacts are short term and moderate.

**Air Quality**

Air quality at Indiana Dunes National Lakeshore is of concern due to the park's proximity to industry and the urban centers of Gary, Indiana, as well as Chicago, Illinois, which subject the park to pollution via the prevailing winds. Industrial, commercial, and residential development, power plants, agricultural operations, and highways with heavy motor vehicle traffic in the surrounding area also impact the park's air quality. Air quality in the region of the National Lakeshore is generally poor and does not meet all standards of the Clean Air Act.

Clean air is necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore were established and is key to the natural integrity and health and enjoyment of the site and the park. The preferred alternative would result in adverse impacts from increased visitation in automobiles and mowing and maintenance of newly cleared lawn areas. Long term impacts would be mitigated by continuing maturation of existing successional woodland and management practices to enhance woodland health and promote development of a stand of higher quality vegetation to benefit the environment. The preferred alternative would not result in impairment, because there would be only negligible impacts.

### **Water Quality**

The Good Fellow Club Youth Camp site is north of the Little Calumet River floodplain. The river, and its floodplain, is approximately sixty feet wide as it meanders north to Lake Michigan. Ephemeral streams and small swales drain into the river from the undulating face of the bluff which separates the floodplain from the level of the camp. The section of the Little Calumet River south of the Good Fellow Club Youth Camp has not been listed as impaired water on the IDEM Final 2006 303d List. Although this segment is not identified as impaired, the upstream segment of the Little Calumet River is listed for a Fish Consumption Advisory (FCA) for mercury and PCBs.

Healthy and clean water quality is necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore was established and key to the natural integrity and enjoyment of the site and the park. Actions in the preferred alternative include new walks, parking, and event-related facilities as well as removal of selected vegetation that could increase runoff into the river. These impacts would be localized and long term impacts would be mitigated through sustainable design. The preferred alternative would not result in impairment, because there would be only negligible adverse impacts on water quality.

### **Wetlands**

As defined in the preferred alternative, the boundaries of the Good Fellow Club Youth Camp site are Howe Road to the east, camp roads to the north and west, and the bluff above the river to the south. Within this area there are no federally-identified wetlands. The HSR/CLR study for the Good Fellow Club Youth Camp shows a hydromesophytic forest (slough) occurring within the southeastern portion of the floodplain of the Little Calumet River below the project site. A steep bluff separates the project site from the floodplain area. This low, frequently-flooded, area contains sedges, cattails, and shrubs tolerant of flooding.

Preservation of any wetlands is necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore were established and is key to the natural integrity of the camp and the park. Actions in the preferred alternative within the stated boundaries of the camp site include some woodland removal and addition of impervious pavement associated with new universally accessible walks. These actions would cause an increase in runoff into the offsite slough and the floodplain resulting in a long-term but minor impact. These impacts would be localized and only expected to affect existing wet and frequently flooded areas outside the boundary of the camp. Long term impacts would be mitigated through sustainable design. The preferred alternative would not result in impairment, because there would be only minor adverse impacts on wetlands.

### **Vegetation**

The Good Fellow Club Youth Camp site supports several native plant communities in various stages of succession, as well as culturally-introduced species. Identification of these communities occurred as part of a 1994 plant survey conducted by Barbara Plampin. In 1996 Plampin further surveyed the site to identify significant species or species of special concern - plants potentially falling within the Good

Fellow Club Youth Camp landscape. Most of these were found beyond the site boundaries along the bluff and within the river floodplain. These investigations were useful within the context of a larger park-wide survey conducted in 1990 by Gerould Wilhelm entitled *Special Vegetation of the Indiana Dunes National Lakeshore*.

Healthy, native, vegetation is necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore were established and is key to the natural integrity and enjoyment of the site and the entire park. The preferred alternative would result in adverse impacts from removal of selected woodland and construction of new visitor access and event features. The preferred alternative would not result in impairment, because there would be only negligible impacts.

### **Wildlife and Wildlife Habitat**

The wide variety of habitats and range of vegetation found within the Indiana Dunes National Lakeshore supports many species of wildlife. Within the Lakeshore surveys have documented 37 species of mammals, 352 species of birds, 18 species of amphibians, and 27 species of reptiles. The park is an especially important feeding and resting area for migrating land and water birds. There currently do not appear to be any wildlife populations or habitats of special importance associated with the Good Fellow Club Youth Camp site. The land to the south of the site, including quality woodlands and the Little Calumet River floodplain, however, are of importance to several wildlife populations.

Maintenance of a wide variety of wildlife and wildlife habitat is necessary to fulfill the purpose for which the Good Fellow Club Youth Camp site and the park were established and are key to the natural integrity of the site and the park. The actions in the preferred alternative (removal of selected existing successional woodland and construction of new visitor access and event features) would result in adverse impacts due to changes in vegetation and the addition of new features on the site. Long term impacts would be mitigated by management practices to protect the higher quality community on the slopes above the floodplain and the wetland area, and by sustainable design. The preferred alternative would not result in impairment, because there would be only minor adverse impacts.

### **Rare, Threatened, and Endangered Species**

Endangered species information was requested from the U.S. Fish and Wildlife Service on May 1, 2009. In a letter dated May 15, 2009, the Fish and Wildlife Service provided the following information. The Good Fellow Club Youth Camp site is within the range of the following Federally endangered, threatened, and candidate species: Indiana bat, Karner blue butterfly, Pitcher's thistle, Piping plover, and Eastern massasauga rattlesnake. Of these species the only one potentially present in the Good Fellow club Youth Camp vicinity is the Indiana bat, because there is no suitable habitat for the other species in that portion of the Lakeshore. A Biological Assessment for the Indiana Bat was submitted to the Fish and Wildlife Service.

Viable populations of special status species are necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore was established and are key to the natural integrity of the site and the park. The actions in the preferred alternative would have only minor impacts because of additional protective measures required in the Biological Assessment including:

- Avoid disruption of potential roosting areas during the summer season. Tree thinning operations must adhere to the tree cutting restriction dates between April 1 and October 1. Tree thinning operations for the trails, retaining wall, and columns must also adhere to the restricted period between April 1 and October 1. If it is determined that tree clearing or thinning operations must occur during the restricted period a biologist will conduct a mist net survey of the site to demonstrate the presence or absence of Indiana bats.
- Allow larger snags of trees with preferred bark, including ash, elm, hickory, and oak to remain unless they otherwise threaten visitors or other resources.

- Consider opportunities to provide forest edge conditions nearby to support insect foraging.
- Identify suitable migration corridors between summer roosting site and winter hibernation areas, and work to protect their integrity.

The preferred alternative would not result in impairment, because there would be only minor adverse impacts.

### **Night-Sky Initiative**

Protecting the dark night sky is an important goal that takes initiative, public awareness, and concerted efforts aimed at curtailing light pollution. Portions of the Good Fellow Club Youth Camp site are currently lit. Lanterns are located in association with the entrance gates along Howe Road. Several light poles are located along the entrance drive leading to the lodge and beyond, some of which are historic. There are also light poles located elsewhere on the site that no longer function. Wall-mounted lighting is also located at the entrances to some of the buildings. The luminaries are generally not shielded.

Maintenance of the night sky is necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore were established and is key to the ecological integrity of the camp site and the park. The actions in the preferred alternative (the addition of new lighting to facilitate outdoor activities and to ensure safety of site users at night) would cause long term adverse impacts on the night sky. These impacts would be localized and the long term impacts mitigated by fixture design that diminishes light trespass. The preferred alternative would not result in impairment, because there would be only minor adverse impacts on night skies.

### **Soundscapes**

The natural soundscape of the Good Fellow Club Youth Camp site is generally composed of the natural sounds of winds, rustling vegetation, and animal populations such as frogs and birds. The soundscape is also composed of motor vehicle noise emanating from Howe Road and the entrance and parking areas, and the sounds produced by human visitors. Programmed uses of the Good Fellow Youth Camp are specifically intended to support visitor activities, education, and recreation so human-generated noise is a result of the intended and current use of the site.

Natural soundscapes as well as human generated sounds are necessary to fulfill the purpose for which the Good Fellow Club Youth Camp and Indiana Dunes National Lakeshore were established and are key to the natural integrity of the site. The actions in the preferred alternative including periodic special events and on-going use of the site would cause both short term and long term but minor adverse impacts to the existing natural soundscape. The long term impacts would be mitigated by design and management of programs and events. The preferred alternative would not result in impairment, because there would be only minor adverse impacts on the natural soundscapes.

### **Aesthetics**

Historically the camp site was maintained in open vegetative cover - primarily mown grass and meadow. Woodland species have been allowed to grow up since use of the site as a summer camp ended. The extent of vegetation affects the overall views within the area. Most views are foreshortened or enclosed by surrounding forest. The existing visual environment is defined as what is seen by the visitor during the approach to the Good Fellow Club Youth Camp as well as what is seen by the visitor within the area itself. The visual environment impacts both the anticipation of and experience at the Good Fellow Club Youth Camp.

Maintenance of the quality of the visual environment is necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore were established and is key to the natural and cultural integrity of the Good Fellow Club Youth Camp. Actions in the preferred alternative include selected woodland removal that would create distinct viewsheds into the site and open

spaces for special use activities. Invasive plants would be removed, which would enhance the aesthetic value of the site. These actions in the preferred alternative would have long term beneficial impacts on the aesthetics of the Camp site and the viewsheds both into and out of the site and the viewsheds within the site. Because there would be only beneficial impacts on aesthetics and viewsheds, the preferred alternative would not result in impairment.

## **CULTURAL RESOURCE TOPICS**

### **Cultural Landscape**

The Good Fellow Club Youth Camp has been documented and evaluated as a cultural landscape and was found to be eligible for listing on the National Register of Historic Places for its contribution to the broad patterns of American History. The surviving characteristics and components of the cultural landscape of the Good Fellow Club Youth Camp contribute greatly to the significance and integrity of the site as it relates to the identified period of significance (ca. 1941-1976). The numerous landscape resources that survive from the identified period of significance include: the landform and topography; grading for the pool and tennis courts; the main drive; access roads to the lodge and caretaker's house; the remnant lodge flagstone walks; the primary parking area; the white and scotch pine plantings; the apple trees and arborvitae trees; lawn and meadow; almost all of the surviving buildings and structures; the steel swimming pool; the steel bridge; and surviving recreational features on the site.

Cultural landscapes are necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and the Indiana Dunes National Lakeshore were established and are key to the cultural integrity of the Good Fellow Club Youth Camp. The actions in the preferred alternative would result in impacts on cultural landscapes that would be localized, long- term to permanent, and generally beneficial. The actions include selected removal of noncontributing woodland, helping to reinstate the historic patterns of spatial organization and views to and from the contributing Lodge structure. The preferred alternative also recommends the adaptive reuse of existing historic structures and recreational features to maintain the integrity of the landscape resources surviving the identified period of significance. The preferred alternative would not result in impairment, because of these beneficial effects. Consultation with the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, concurred with the NPS findings that there are no cultural landscapes within the area of potential effects that will be adversely affected by the preferred alternative.

### **Historic Resources**

The Good Fellow Club Youth Camp is a historic youth camp and recreation area that has been determined eligible for listing on the National Register of Historic Places. The Good Fellow Club Youth Camp is primarily significant for its association with broad patterns of American history. The appreciation for nature and educational aspects of the camp program also are a part of the broader movement to protect and preserve the Indiana Dunes. The rustic architectural design of the camp buildings, in particular the lodge, is a significant aspect of the site and its history. Contributing buildings include: the lodge, gatehouse, caretaker's house, caretaker's garage, pool house, staff cabin, director's cabin, pump house, and utility shed. Contributing structures include: the steel foot bridge; riflery; various structure foundations; entrance limestone wall and columns; river entrance limestone columns and iron gate; stone retaining wall along the river; and the steel swimming pool. There are also contributing site furnishings, camp amenities, and fencing.

Historic resources are necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and Indiana Dunes National Lakeshore were established and are key to the cultural integrity of the site. The actions in the preferred alternative (rehabilitated, preserved, and adaptively reused structures, buildings, site furnishings, camp amenities, and fencing) would result in impacts on historic resources that would be

localized, long-term to permanent, and generally beneficial. The preferred alternative would not result in impairment, because there would be no adverse effects on historic resources. Consultation with the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, concurred with the NPS findings that there are no historic resources within the area of potential effects that will be adversely affected by the preferred alternative.

### **Archaeology**

There have been three archeological surveys conducted at Good Fellow Club Youth Camp, *Archeologists Trip Report* (1966), *An Archeological survey of elected Areas at the Good Fellow Club South Camp* (1999), and (2009). To date no archeological resources have been documented on this site. However, to avoid endangering unknown archeological resources the preferred alternative recommends that areas which are to be disturbed for construction or other activity should be tested by an archeologist before any soil-disturbing activity occurs, and construction activity should be monitored by an archeologist at the time of soil disturbance.

Archeological resources are necessary to fulfill the purposes for which the Good Fellow Club Youth Camp and Indiana Dunes National Lakeshore were established and are key to the cultural integrity of the park. The actions in the preferred alternative would have no impact on known archeological resources. Consultation with the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, concurred with the NPS findings that there are no archaeological resources within the area of potential effects that will be adversely affected by the preferred alternative. The preferred alternative would not result in impairment, because there would be no adverse effects on archeology.