

# Indiana Dunes

National Park Service  
U.S. Department of the Interior

Indiana Dunes National Park  
Porter, Indiana



## **Marquette Greenway Trail Calumet Reroute Segment**

### **Environmental Assessment September 2023**



# EXECUTIVE SUMMARY

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The National Park Service (NPS) at Indiana Dunes National Park (Park), in coordination with Porter County, Indiana (County), proposes to enter into an agreement to build an approximately 6.3-mile paved trail segment that is Architectural Barriers Act (ABA) and Americans with Disability Act (ADA) compliant. The agreement would grant permission for the County to construct the trail through portions of the Park in Porter County, Indiana. This trail would become part of the Marquette Greenway Trail, a 60-mile regional trail stretching from Chicago, IL to New Buffalo, MI. The trail would also be part of the Park's east-west trail connecting Miller Woods to Mount Baldy. The Park began trail planning and land acquisition activities in the early 1980s and has been working on the project for 40 years.

This Environmental Assessment (EA) has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide a decision-making framework as follows: 1) Assess a reasonable range of alternatives to meet the purpose of the proposed action; 2) Evaluate potential issues and impacts to the natural and cultural resources of the park; and 3) Identify required mitigation measures designed to lessen the degree or extent of any potential adverse environmental impacts.

This EA evaluates two alternatives: Alternative A - No Action; and Alternative B – Build the trail (Preferred Alternative). Under Alternative A, the trail would not be constructed. Under Alternative B, the Park would enter into an agreement with the County and grant permission for the County to construct the trail. The County would follow all NPS compliance, design, and construction regulations and policies to minimize resource damage.

This EA identifies the categories of resources, or *Impact Topics*, found within the project area that are most likely to be affected by the actions described in each alternative. These topics have undergone a detailed analysis by agency staff to determine the most likely effects on the resources and the mitigations required to avoid resource damage. The Impact Topics are identified in section 1.4 of this document. The Preferred Alternative, Alternative B, would result in no major impacts to resources of the Park.

## Public Comment

This EA will be available for public review for 30 days. The NPS Planning, Environment and Public Comment (PEPC) site provides access to current plans and related documents that are available for public review. If you wish to comment on the EA, you may use PEPC to post comments online at: <http://parkplanning.nps.gov/indumgtcalumet> or mail (postmark) comments by October 18, 2023, to:

Indiana Dunes National Park  
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Porter, IN 46304

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# ACRONYMS

ABA	Architectural Barriers Act
ADA	Americans with Disability Act
APE	Area of Potential Effects
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CMA	Cooperative Management Agreement
County	Porter County
CSGP	Indiana Construction Stormwater General Permit
DFW	Division of Fish and Wildlife
DHPA	Division of Historic Preservation and Archaeology
EA	Environmental Assessment
EMS	Emergency Management Service
FAC	Facultative
FACW	Facultative Wet
ft	Foot/Feet
IAC	Indiana Administrative Code
IDEM	Indiana Department of Environmental Management
IDNR	Indiana Department of Natural Resources
IHSSI	Indiana Historic Sites and Structures Inventory
IN	Indiana
INDOT	Indiana Department of Transportation
INDU	Indiana Dunes National Park
IPaC	Information for Planning and Consultation
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHRP	National Register of Historic Places
NICTD	Northwest Indiana Commuter Transit District
NIPSCO	Northern Indiana Public Service Company
NIRPC	Northwestern Indiana Regional Planning Commission
NLEB	Northern Long-eared Bat
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
OBL	Obligate
Park	Indiana Dunes National Park
PEPC	Planning, Environment and Public Comment
PMIS	Project Management Information System
SHPO	State Historic Preservation Officer
SR-	State Road
UPL	Upland
US-	United States Highway
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WSOF	Wetland Statement of Findings

# 1 INTRODUCTION

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## 1.1 Background

Indiana Dunes National Park (Park) contains 15,349 acres within its established boundary and is located approximately 50 miles southeast of Chicago, IL, in the counties of Lake, Porter, and LaPorte in Northwest Indiana's industrial-urban corridor. The Park encompasses approximately 15 miles of Lake Michigan's southern shoreline and extends from the City of Gary, IN on the west to Michigan City, IN on the east. The Park is at the southernmost tip of Lake Michigan and shares its boundaries with residential, agricultural, recreational, and industrial developments. The Park currently contains over 50 miles of hiking trails and 37 miles of multi-use trails. The purpose of Indiana Dunes National Park is the following:

*Indiana Dunes National Lakeshore [now Park] was established to preserve certain portions of the Indiana dunes and other areas of scenic, scientific, and historic interest and recreational value in the state of Indiana for the educational, inspirational, and recreational use of the public.*

The Park and the broader region have long identified the need for connecting the units of the park together and for connecting neighboring communities to the Park with trails. The Park has previously expressed the need for an east-west trail connecting all units of the Park in the 1980 and 1997 Indiana Dunes National Lakeshore General Management Plans as well as the 1991 Little Calumet River Corridor Plan.

The Northwestern Indiana Regional Planning Commission (NIRPC) and several other local entities, in conjunction with the Park, have been working to close the gap separating the units of the Park and to connect communities to the Park for more than 40 years.

The trail proposed in this EA would make up approximately 6.3 miles of the Park's 20-mile east-west connector trail and be part of the 60-mile Marquette Greenway Trail connecting Chicago, IL to New Buffalo, MI.

See Figures 1-4 below for maps of the proposed trail route in relation to the park and the region.

## 1.2 Purpose and Need for the Action

The Park's proposed action is to build a 6.3-mile section of trail to connect to and further complete the broader regional trail system. This trail segment in this EA is needed to:

- Provide ABA/ADA connectivity and transportation throughout the park and to adjacent communities with an east-west trail connecting the entire length of the park.
- Connect the Park into the regional Marquette Greenway Trail, allowing for regional access to the Park from as far away as Chicago.
- Provide non-motorized methods of getting into the Park in order to reduce car and parking congestion.
- Promote green and healthy ways of getting to and enjoying the Park.

## 1.3 Relationship to Other Plans and Policies

The proposed action of building this trail segment is consistent with the following regional planning studies and master plans:

- NPS Organic Act of 1916 (Title 54 of U.S. Code, Ch. 1001)
- NPS Management Policies (2006)

- NIRPC Northwestern Indiana 2050 Plan (NIRPC 2019)
- The Marquette Plan – Phases I & II (NIRPC 2005)
- The Marquette Plan 2015: The Lake Shore Reinvestment Strategy (NIRPC and Indiana Landmarks 2015)
- The Marquette Action Plan (NIRPC 2018a)
- Marquette Greenway – National Lakeshore Connector Route Proposal (NIRPC 2009)
- Greenways and Blueways 2020 Plan (NIRPC 2018b)
- Burns Harbor Master Development & Revitalization Plan (Town of Burns Harbor 2015)
- Indiana Statewide Comprehensive Outdoor Recreation Plan 2021-2025 (IDNR – Division of Natural Resources 2019).
- Indiana Dunes National Lakeshore General Management Plans (INDU 1980 and 1997)
- Little Calumet River Corridor Plan (INDU 1991)

## 1.4 Impact Topics

Impact topics are the resources or issues of concern that could be impacted by the range of alternatives. NPS specialists used federal laws, regulations, and management policies to identify the impact topics retained for further analysis. Identification of impact topics facilitates the analysis of environmental consequences and allow for a standard comparison between alternatives based on the most relevant information. Table 1 summarizes the topics retained or dismissed and includes the rationale for dismissal.

Five (5) topics are carried forward for further analysis in this EA found in Chapter 3: Affected Environment and Environmental Consequences:

- Vegetation and Special Status Plants (including invasive species)
- Special-Status Wildlife Species
- Visitor Use and Experience
- Wetlands
- Cultural Resources

Impact Topics related to (dismissed topics) have been dismissed from detailed analysis because they are not central to the proposal or do not assist with making a reasoned choice between alternatives. Table 1 summarizes the topics retained or dismissed and includes the rationale for dismissal.

**Table 1: Impact Topics Summary**

Impact Topic	Retain	Dismiss	Rationale for Dismissal
Vegetation and Special Status Plants (including invasive species)	X		
Special-Status Wildlife Species	X		
Visitor Use and Experience	X		
Wetlands	X		
Cultural Resources	X		
Geology, Topography, and Soils		X	<p>According to the NPS's Management Policies 2006, the NPS will preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue (NPS 2006). These policies also state that the NPS will strive to understand and preserve the soil resources of Park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.</p> <p>Soils in the Calumet Reroute Segment project area include Adrian muck, Brems Sand, Maumee loamy sand, and Oakville fine sand (Soil Survey Staff, 2022). While there are significant topographic and geologic features within the Park, the proposed trail will not alter either the topography or the geology of the project area. The topography in the project area is variable and steep. The County routed the trail alignment around these topographical features to reduce the amount of cut and fill required to construct the trail. The County anticipates the trail raising the local area's grade by about one (1) foot. In addition, retaining walls would be constructed along steep slopes to minimize the amount of disturbance to the hillside and reduce erosion of the slopes. Because there would be no effects to topographic, geologic features, and soil, this topic was dismissed from further analysis in this EA.</p>
Streams		X	<p>The Park encompasses several surface-water resources. There are four surface drainages that are crossed by the Action Alternative.</p> <p>1) Replacement of two existing footbridges has been proposed over two unnamed drainages that flow into Dunes Creek.</p> <p>2) A new crossing has been proposed over Dunes Creek. The defined channel in this location is minimal and boardwalk sections are anticipated to be installed to cross the adjacent riparian habitat.</p> <p>3) A new single span bridge over Wieland Ditch has been proposed where a culvert was once located. No work will occur within the waterway.</p> <p>4) On the east side of Lake Shore County Road, a roadside ditch that drains into the Great Marsh wetland system is bisected by an existing culvert of the current Calumet Trail alignment. This culvert would be replaced to avoid stream re-grading.</p> <p>Because there would be no effect to streams, this topic was dismissed from further analysis in this EA.</p>
Floodplains		X	<p>The Action Alternative does not cross any known floodplains. County flood insurance rate maps and flood insurance studies conducted by the Federal Emergency Management Agency (FEMA) show the proposed trail alignment entirely within Zone X. Zone X are areas that have been determined to be outside the 0/2% Annual Chance Floodplain. As such, the project would not impact the floodplain, and this EA does not further analyze Floodplains.</p>

Impact Topic	Retain	Dismiss	Rationale for Dismissal
Socioeconomics		X	NPS Director's Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-making requires consideration of potential direct and indirect impacts to the local economy, including impacts to neighboring businesses in the general project vicinity (NPS 2001). The No Action Alternative and the Action Alternative will not change local and regional land use, nor will they appreciably impact local businesses or other agencies. This EA does not further analyze this topic because none of the alternatives would not have the potential to impact the socioeconomic environment of the area.
Environmental Justice		X	Presidential Executive Order 14096 "Revitalizing Our Nation's Commitment to Environmental Justice for All" builds on Presidential Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-income Populations". The Executive Order requires all federal agencies to create Environmental Justice strategic plans, directing research on Environmental Justice issues, and making clear that the obligation to consider and address Environmental Justice applies across federal agencies. It incorporates Environmental Justice into policies by identifying and addressing as appropriate the disproportionately high and/or adverse human health or environmental effects of their programs on minorities and low-income populations and communities. The proposed action under consideration in this EA would have no appreciable adverse impact on minorities or low-income populations or communities. None of the alternatives would result in identifiable adverse human health effects, nor would they adversely alter the physical and social structure of the nearby communities. This EA does not further analyze this topic because none of the alternatives would have an adverse effect on minority or low-income populations.
Indian Trust Resources		X	Native American Indians own Indian trust assets, but these assets are held in trust by the United States. Secretarial Order 3175 requires that environmental documents explicitly address any anticipated impacts to Indian Trust Resources from a proposed project or action by Department of Interior agencies. The Federal Indian trust responsibility is a legally enforceable fiduciary 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 law with respect to American Indian and Alaska Native Tribes.  There are no Indian Trust Resources within the Park. The lands comprising the Park are not held in trust by the Secretary of the Interior for the benefit of Native Americans. Therefore, this EA does not further analyze Indian Trust Resources.
Park Operations		X	Topics under Park operations could include staffing, maintenance, facilities, ability to enforce Park regulations, and protection of Park resources, and employee and visitor health and safety. All maintenance and management would meet NPS requirements such as wildlife proof trash bins, proper vegetation management, and trail surface treatment. The Park would also utilize the volunteer Trail Crew for basic maintenance activities. The Park would plan for long term maintenance and replacement using the PEPC and PMIS process. Therefore, this EA does not analyze Park operations.
Ethnographic Resources		X	Ethnographic resources are defined by the 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" (NPS 1998). There are no known Ethnographic Resources or Traditional Cultural Properties in the vicinity of the proposed action. Therefore, this EA does not analyze Ethnographic Resources.

Impact Topic	Retain	Dismiss	Rationale for Dismissal
			In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed.
Air Quality		X	<p>The Clean Air Act of 1963 (42 USC 7401 et seq.) was established to promote public health and welfare by protecting and enhancing the nation's air quality. The act establishes specific programs that provide special protection for air resources and air quality related values associated with NPS units. Section 118 of the Clean Air Act requires a park unit to meet all federal, state, and local air pollution standards. State air quality laws and regulations are available on-line at the Indiana Department of Environmental Management's website (IDEM 2021).</p> <p>Construction activities such as hauling materials and operating heavy equipment could result in temporary increases of vehicle exhaust, emissions, and fugitive dust in the general project area. Any exhaust, emissions, and fugitive dust generated from construction activities would be temporary, localized, and likely dissipate rapidly. Overall, the project could result in a negligible degradation of local air quality; however, such effects will be very short-term, lasting only while construction activities involving heavy equipment are underway. The Action Alternative is consistent with §1.4.7.1 of NPS Management Policies 2006. Because there would be no lasting effects on air quality, this topic was dismissed from further analysis in this EA.</p>
Prime and Unique Farmland		X	<p>The Farmland Protection Policy Act of 1981, as amended, requires federal agencies to consider adverse effects to prime and unique farmlands that will result in the conversion of these lands to non-agricultural uses. Prime or Unique Farmland is classified by the U.S. Department of Agriculture's NRCS and is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. Both categories require that the land be available for farming uses. The land at the Park is not available for farming and therefore does not meet these criteria. Because there would be no effects on Prime or Unique Farmlands, this topic was dismissed from further analysis in this EA.</p>

This map illustrates the Marquette Greenway Trail, which runs along the southern shore of Lake Michigan. The trail is shown as a yellow line, and the project area is highlighted in red. The map includes labels for various cities and towns, such as Chicago, Hammond, Portage, and Valparaiso. A legend in the top right corner identifies the yellow line as the Marquette Greenway Trail and the red line as the Project Area. A north arrow is also present in the top right corner.

Figure 2. Marquette Greenway Trail within Indiana Dunes National Park

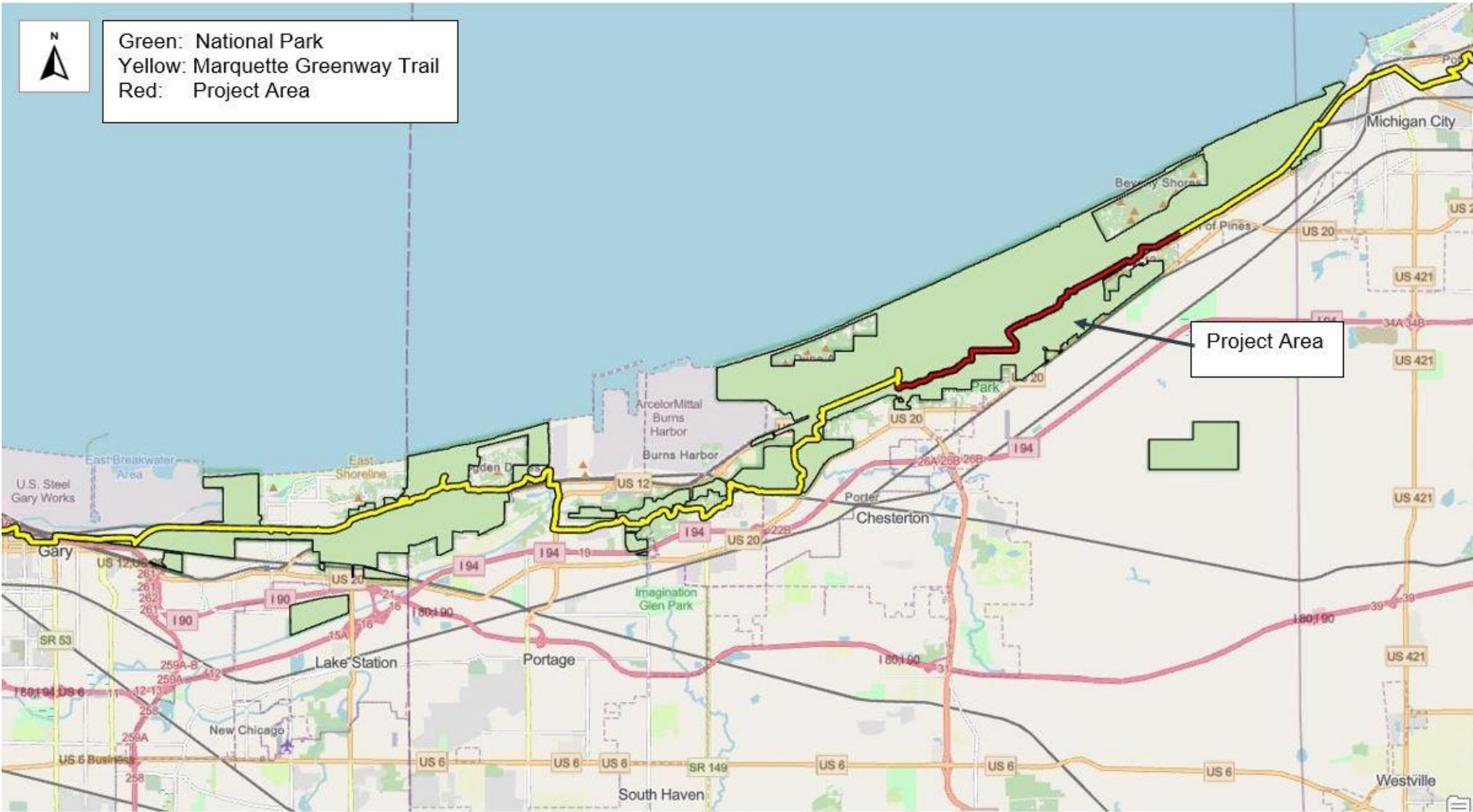
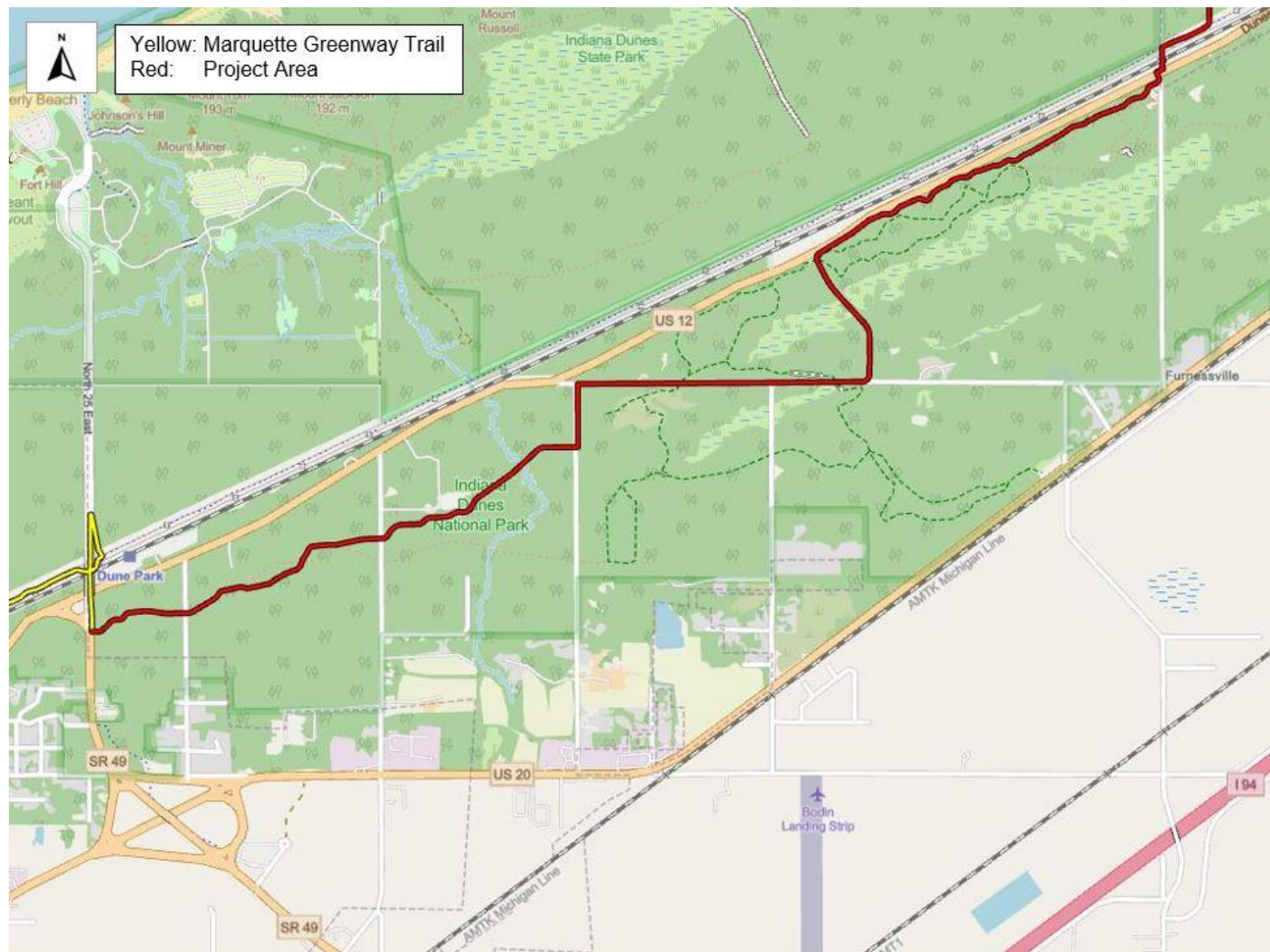


Figure 3. Project Location (Western Side)



**Figure 4. Project Location (Eastern Side)**



## 2 ALTERNATIVES

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### 2.1 Introduction

This section describes the alternatives developed for the trail segment. Two alternatives were considered and are carried forward for analysis, Alternative A: No-Action Alternative, and Alternative B: Action Alternative. A no action alternative is required by the National Environmental Policy Act (NEPA) as a baseline to compare proposed action alternatives. The action alternative presents a reasonable and feasible approach that meets the purpose of, and need for, action. This chapter describes each alternative and identifies the NPS preferred alternative.

### 2.2 Alternative A - No Action

Under Alternative A – No Action, no trail would be built in this project area of the park. Visitors would not have the opportunity to recreate on the trail and connect to other areas of the park and to/from adjacent communities.

### 2.3 Alternative B - Build the Trail (Preferred Alternative)

Under the Alternative B – Build the Trail, an approximately 6.3-mile trail segment would be built through a section of Indiana Dunes National Park, which would become part of the Marquette Greenway Trail and the Park's East-West Connector Trail. See Figures 1-4 above for the exact location of the project area. The ABA/ADA compliant trail would be a 10-foot-wide asphalt trail with 2-foot-wide aggregate shoulders on either side of the trail. See Figure 5 below for representative drawing. The trail surface would be asphalt as it provides an easily maintainable and ABA/ADA compliant surface and is consistent with the rest of the Marquette Greenway Trail. The preferred design of bridges would have timber decking with a concrete pier cap constructed on helical piles. No piers will be placed in the waterway. In addition, through wetlands, a boardwalk would be installed. See Figure 6 below for representative boardwalk drawing.

The proposed action was identified by the County, which approached the Park to partner in completing the project. Public input was important in the development of this proposal. Feedback and ideas from local government representatives, and the general public helped the planning team understand the public's values, preferences, concerns, issues, and suggestions regarding visitor experiences and recreation opportunities within the Park. A substantial amount of public involvement opportunities regarding trails is available through the NIRPC development of the Marquette Greenway Plan, the Marquette Plan, and the Greenways and Blueways Northwest Regional Plan over the past decade.

Portions of Furnessville Road, Hadenfelt Road, and Veden Road, which are all Park owned, would be permanently closed to vehicle use and utilized as railway. This would reduce trail construction disturbance by approximately one mile and would eliminate five (5) road crossings of this trail project and other Park trails.

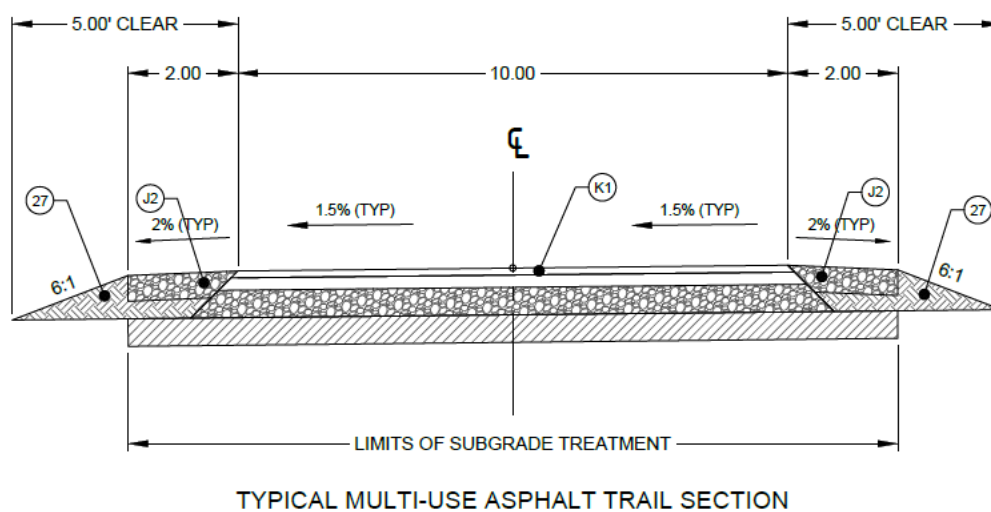
The County would undertake the funding, design, and construction of the trail. The County is not proposing the construction of any major trail amenities (such as lighting, restrooms, shelters) for this segment of the trail. Any complementary trail amenities (such as benches, picnic tables, foot brushes, trash receptacles) would be placed at logical locations at established trail heads or destinations adjacent to the route to minimize resource disturbance.

Hazard, directional, and interpretive signs may be added as needed through the corridor following NPS guidelines and approval from the Park. The limit of permanent disturbance will be approximately 25 feet wide. The construction limit width would be as narrow as possible along the route and not necessarily a uniform 25 feet. As soon as construction is completed, the County would rehabilitate disturbed areas. Rehabilitated areas would use NPS-approved, native seed mixtures.

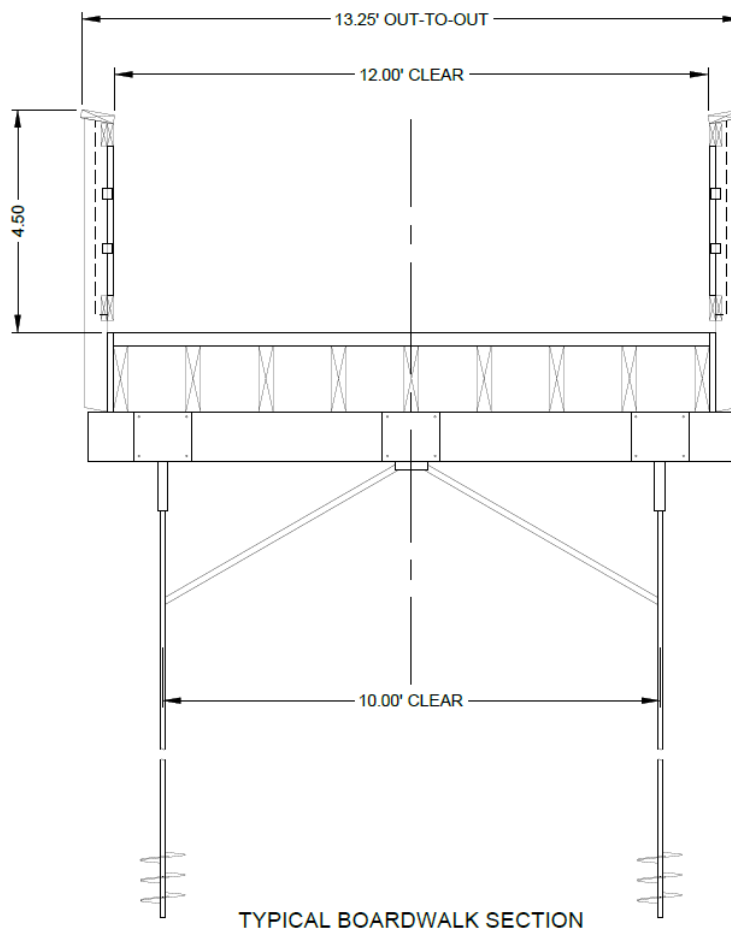
Erosion control materials would be biodegradable (all natural fibers) debris free as well as meet the United States Department of Agriculture (USDA) defined “snake-friendly” for Indiana (USDA 2013). The County would submit proposed seed mixes and source of materials to the NPS prior to the start of construction.

Prior to the design and construction of the trail, a Cooperative Management Agreement with the County would be signed outlining trail design, construction, maintenance, and management policies and objectives. In general, the Park would maintain all sections of the trail within the Park and the County would maintain trail sections outside the Park. The Park would utilize its volunteer Trail Crew for basic maintenance activities and the Park’s internal processes for larger maintenance and replacement projects.

**Figure 5. Typical Trail Section** (Sample only; design not finalized. Ignore specific drawing references)



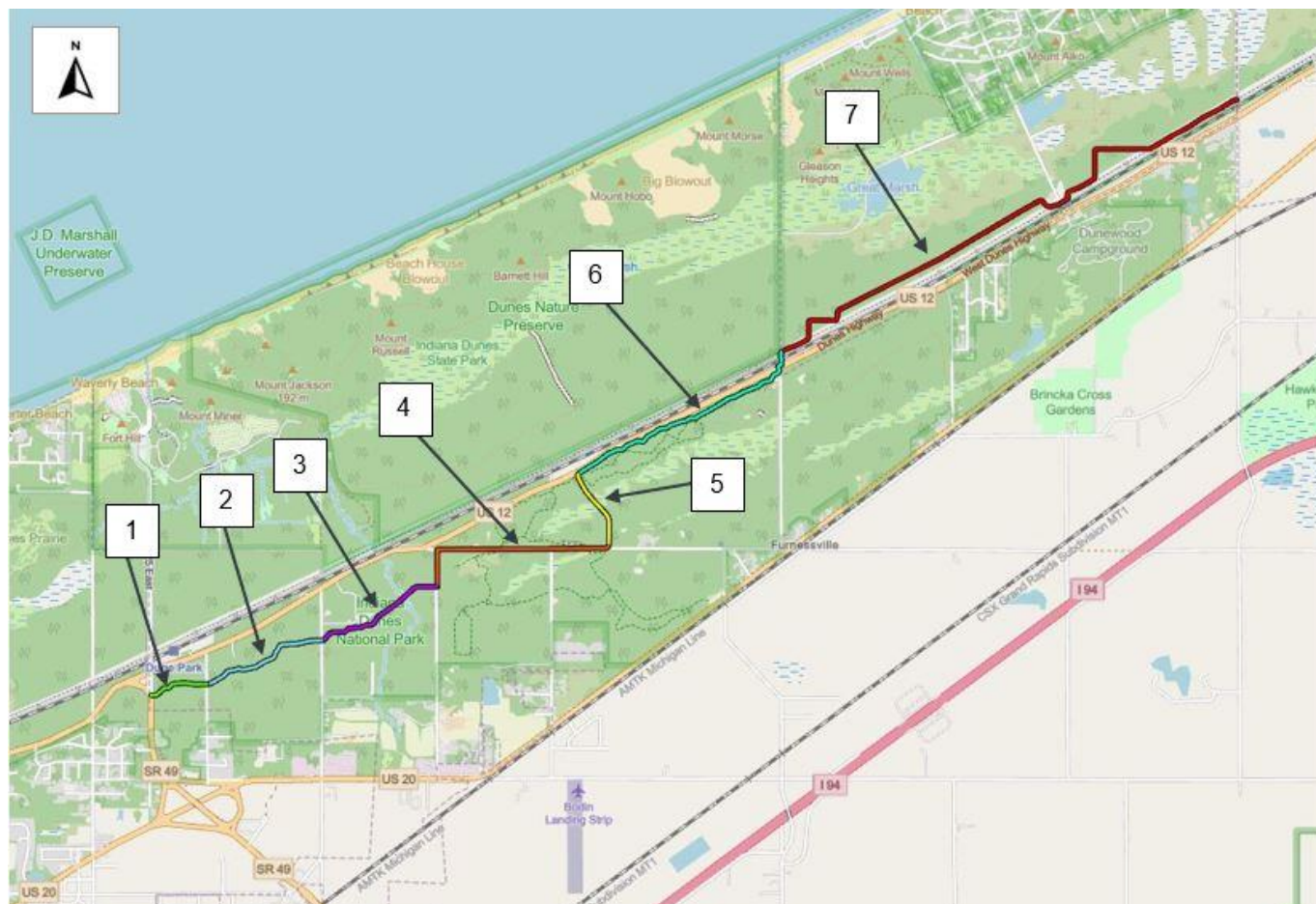
**Figure 6. Typical Boardwalk Section** (Sample only; design not finalized. Ignore specific drawing references)



The Park's proposed action is to construct a trail segment from SR-49 in Porter, IN to Lake Shore County Road in Beverly Shores, IN on Park property. The trail route would extend for approximately 6.3 miles starting just south of the intersection of SR-49 and US-12. The project area is broken up into seven sections for the purpose of discussions in this EA. See Figure 7 below for details.

- **Section 1 (0.25 miles):** Dunes Kankakee Trail at SR-49 to Main Street/County Road 50 East (CR-50E).
- **Section 2 (0.60 miles):** Main Street to Tremont Road (CR-100E).
- **Section 3 (0.60 miles):** Tremont Road to Hadenfelt Road (CR-150E).
- **Section 4 (0.85 miles):** Hadenfelt Road to Furnessville Road (CR-1500N) to Teale Drive.
- **Section 5 (0.35 miles):** Teale Drive to US-12.
- **Section 6 (1.0 mile):** US-12 to Kemil Road (CR-300E).
- **Section 7 (2.6 miles):** Kemil Road to Lake Shore County Road.

**Figure 7. Project Area Broken into Seven Sections for Discussion Purposes**



## 2.4 Stipulations and Mitigations

The Park places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the Park, in cooperation with the County and contractors, would implement the following typical measures as part of Alternative B – Build the Trail.

The items in this section have been considered during the route selection process. Specific stipulations and mitigations would be created as the final engineering plans are developed and monitored through construction of the trail. The list below is a general representation of efforts that would be implemented to minimize resource disturbance.

### 2.4.1 General

- Install erosion and sedimentation control measures during construction to minimize the transport of sediment into the waterway to protect the overall watershed. These measures will remain in place until vegetation is reestablished. Erosion control materials should be biodegradable (all natural fibers), weed, weed seed and debris free, as well as meet the USDA defined “snake-friendly” for Indiana (USDA 2013) (Internal Scoping, 2021).
- Any fill used to construct the trail will be sourced from local sand mining operations and/or limestone quarries. No unclean fill will be used on site, including air cooled blast furnace slag (Internal Scoping, 2021).

- The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions (IDNR – DFW).
- Vegetation establishment along the banks is critical for stabilization and erosion control. In addition to vegetation some other form of bank stabilization may be needed. While hard armoring alone (e.g., riprap or glacial stone) may be needed in certain instances, soft armoring and bioengineering techniques should be considered first (IDNR – DFW).
- Place the trail in or adjacent to existing rights-of-way where possible to minimize potentially significant impacts to natural resource habitat. Also, utilize previously disturbed or degraded areas. Align the trail along or near existing manmade edges or areas that have the potential to be restored or enhanced by trail construction (i.e., railroad corridors), rather than routing the trail through previously undisturbed areas (IDNR – DFW).
- Trails designed to follow a stream's course must be placed outside the stream's forested riparian (streamside habitat) buffer. Also, do not place the trail along the tops of the banks of a forested creek. Avoid perpendicular fragmentation of riparian areas. Where the stream has little or no forested riparian buffer, the trail should be no closer than 15-foot from the tops of the banks (IDNR – DFW, 2020).
- When designing or constructing a trail, as narrow an area as possible should be disturbed to help minimize negative impacts. Where significant impacts to fish, wildlife, or botanical resources are likely due to the trail's width, the trail width should be reduced to help avoid those impacts. ADA accessibility standards allow departures from the standards under certain conditions, including substantial harm to natural features, habitat, or vegetation ([U.S. Access Board \(access-board.gov\)](https://www.access-board.gov/)) (IDNR – DFW).
- Asphalt is not recommended as a trail surface in the floodway. If asphalt is used, then asphalt sealer should not be used for long-term maintenance and repair of the asphalt trail surface. In previously disturbed areas, concrete is an acceptable surface material, and porous concrete is preferred wherever it can be used (IDNR – DFW).
- Shoulders should be constructed using unconsolidated materials where possible. In some situations, solid shoulders are necessary. In those cases, shoulders should be constructed using porous concrete (IDNR – DFW).
- Clearly establish construction limits along the route to prevent unnecessary resource damage.

## 2.4.2 Vegetation

- The County will mark trees for NPS approval prior to clearing. Minimize the removal of mature high-quality trees as determined by the NPS (Internal Scoping, 2021).
- Revegetated areas adjacent to the trail will be of native plantings with an emphasis on pollinator species habitat that are not treated with neonicotinoids. The County will submit proposed seed mixes and source of materials to the NPS for approval prior to the start of construction (Internal Scoping, 2021).
- All plant material, mud, and debris shall be removed from any equipment before entering or leaving the construction site to prevent the spread of invasive species (Internal Scoping, 2022).
- A potential USACE wetland impacts mitigation plan would require the County to remove of invasive species along the corridor. The plan will incorporate target species and success criteria over a 5-year period with annual reporting to USACE and Parks Staff. The County, Park, and USACE would create a separate plan agreement. The USACE controls this process.

- We recommend a mitigation plan be developed (and submitted with the permit applications) for any unavoidable habitat impacts that will occur. The DNR's Floodway Habitat Mitigation guidelines (and plant lists) can be found online at: [IDNR Floodway Habitat Mitigation Guidelines](#) (IDNR – DFW 2019).
- Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. A native riparian forest mitigation plan should use at least five canopy trees and five understory trees or shrubs selected from a Woody Riparian Vegetation list or an approved equal. Additionally, the native herbaceous seed mixture should consist of at least ten (10) species of grasses, sedges, and wildflowers selected from the Herbaceous Riparian Vegetation list (IDNR – DFW 2019).
- Any plantings in the riparian areas should be locally native species, not exotic species, or horticultural varieties (IDNR – DFW 2019).

#### **2.4.3 Protected Species**

- Removal of woody vegetation & trees shall be done outside the local avian breeding season to prevent impacts to nesting birds protected under the Migratory Bird Treaty Act [16 USC 703] (Internal Scoping, 2021).
- Do not cut any trees suitable for Indiana bat, northern long-eared bat, or tricolored bat roosting (greater than 3 inches diameter breast height, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) during the summer nursery season, which is from April 1 through September 30 (USFWS 2022a).
- Install exclusion fencing prior to construction activities during eastern massasauga active season in areas of suitable habitat, generally April 15 through October 15.
- Utilize a herpetological monitor routinely while exclusion fencing is installed, generally April 15 through October 15.
- Fence off rare plant species near the construction limits to prevent resource damage.

#### **2.4.4 Visitor Use and Park Operations**

- Following the completion of the construction of the trail, a Cooperative Management Agreement with the County would be created outlining trail maintenance and management. The trail would also be included in the Porter County Parks and Recreation's Asset Management Plan for areas of the trail not on Park land. All maintenance and management would meet NPS requirements such as wildlife proof trash bins, proper vegetation management, and trail surface treatment.

#### **2.4.5 Cultural Resources**

- Portions of a documented site that are outside the proposed project area must either be avoided or subjected to further archeological investigations. Additionally, those areas of this site should be clearly marked so that they are avoided by all ground-disturbing project activities. If avoidance is not feasible, then a plan for subsurface archaeological investigations must be submitted to the Division of Historic Preservation and Archeology (DHPA) for review and comment. Any further archaeological investigations must be done in accordance with the "Secretary of the Interior's Standards and guidelines for Archeology and Historic Preservation" [48 F.R. (Federal Register) 44716] (IDNR – DHPA).

- If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and Indiana Code 14-21-1-29) requires that the discovery be reported to IDNR-DHPA, within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and Indiana Code 14-21-1-29 does not remove the need to adhere to applicable federal statutes and regulations, including 36 C.F.R. Part 800 (IDNR – DHPA).

## 2.5 Alternatives Considered but Dismissed from Detailed Evaluation

The following alternatives were discussed, but not carried forward for further consideration for reasons discussed below.

**Table 2. Alternatives Considered but Dismissed from Detailed Evaluation**

Alternate Considered	Reasons for Dismissal
Reconstruction of the Calumet Trail in the NIPSCO Corridor	<p>The existing trail in the utility corridor is owned and controlled by NIPSCO and is essentially an access road for NIPSCO to service its power transmission lines. The trail is extremely wet and truly unusable for most of the year. Small fish have been seen in the trail many times by park staff. The trail can have standing water that is six or more inches deep. Over the decades, much of the corridor has become a wetland. Trying to improve the trail would result in extensive wetland mitigation and have negative impacts to the flow of water and to the wildlife.</p> <p>Because this is a utility access road primarily, there are several constraints placed on the trail by NIPSCO. First, the trail must be rated to handle 60,000-pound cranes. This is prohibitively expensive for both construction and long-term maintenance. Secondly, the trail can only be raised by one foot from its current elevation so as not to impede cranes and vehicles from driving on and off the trail. One foot is not enough in many areas of the trail during the spring to ensure dryness. Lastly, NIPSCO has the right to close or tear up the trail as needed for utility maintenance and is not required to rebuild the trail. Therefore, it was decided to reroute the trail off the NIPSCO corridor wherever possible.</p>
Dune Park Train Station to Tremont (or Further East)	<p>There exists an old railbed between the NICTD tracks and US-12 that extends east from the station. A route was examined that would have kept the trail north of US-12 to at least the Tremont Picnic area. This route had two issues. The first was that it was unsafe to cross US-12 at Tremont due to site-line distance issues. The second issue that prevented the trail from running east past Tremont was a pinch point at Dunes Creek / Furnessville Road. The Park nor the County own land at this location for more than 1,000 feet. Also, the curve at Furnessville Road pinch the NICTD tracks, Dunes Creek, and US-12 together with no room to route a trail.</p>
Tremont (100E) to Hadenfelt (150E)	<p>The original proposed route called for improving the existing Glenwood Dunes Extension Trail. However, due to extensive archeology in the area and after an on-site consultation with the Pokagon Band of Potawatomi and the Miami of Oklahoma, it was decided to move the trail north in this area to avoid all potential archeological impacts. The new proposed alignment utilizes disturbed former neighborhoods and roadbeds to minimize impacts.</p>
Furnessville Road (1500N) to Kemil Road (300E)	<p>The original proposed route called for utilizing the full length of Furnessville Road to the east and then Kemil Road to the north to get to the USGS building at Kemil Road and US-12. This route had several issues. First, the park, nor the County own land to get around the cemetery, School House Shops and BNB located near Kemil Road and part of the Kemil Road right of way. Secondly, the intersection at US-20, Furnessville Road, and Kemil Road is complicated with poor sightlines. It was concluded that adding a trail to the area would only complicate the intersection. Lastly, Kemil Road has topography and wetland issues that would have made construction difficult, costly, and result in impacts to the wetlands. The current proposed route eliminates the wetland issue by using the abandoned Teale Drive which crosses the wetland. Also, there are no land ownership and intersection issues.</p>
Teale Drive at US-12 to USGS at Kemil Road	<p>There is the existing Glenwood Dunes Trail system in this area. A route was looked at which would have involved upgrading and paving the existing trail. However, this section of trail has been a shared pedestrian/equestrian trail since the 1970's. It was determined that it was not possible to pave the trail and still allow horses. Therefore, it was decided to propose a new trail that runs north of the equestrian trail and south of US-12. It should be noted that sections of the Glenwood Dunes trails that are non-equestrian near the USGS building will be improved and used for the trail to minimize impacts.</p>

Alternate Considered	Reasons for Dismissal
1997 INDU General Management Plan Route	<p>The 1997 management plan shows a route that is similar to the proposed action but deviates at two locations within this project area. At the east end, the 1997 plan calls for using Beverly Drive in Beverly Shores. The road, however, is not owned by the park and town is unwilling to give the road to the park nor make it one-way. Almost the entire road is bounded on either side by wetlands making it nearly impossible to construct the trail next to the road.</p> <p>One the west end, the 1997 plan calls for the trail to cross US-12 at Tremont road, cross the NICTD South Shore train tracks, and utilize now abandoned sections of Tremont Road and State Park Road. This alternative has several issues. The sightlines at Tremont are not conducive for a trail crossing, there is no longer a road crossing of the railroad tracks and (Tremont Road has been removed north of US-12) and State Park Road is controlled by the State Park and prohibit the use of this road.</p>

## 3 Affected Environment and Environmental Consequences

### 3.1 Introduction and Definitions

This chapter describes the affected environment and documents existing conditions. These descriptions serve as a baseline for understanding the resources potentially impacted the alternative as described would be enacted. This chapter analyzes the environmental consequences or “impacts” of the no-action alternative and the action alternative for each resource retained. The resource topics presented in this section correspond to the environmental issues and concerns identified during internal scoping.

The methods used to assess impacts vary depending on the resource considered, but generally are based on a review of pertinent literature and studies, the information provided by on-site experts and other agencies, dialogue with tribal partners, professional judgment, and NPS staff knowledge and insight.

#### 3.1.1 Affected Environment

The affected environment describes existing conditions for those elements of the natural and cultural environment (including human health and safety and the visitor experience) which could be affected by the actions proposed in the alternatives. These descriptions serve as a baseline for understanding the resources that could be impacted by implementation of the proposed action.

#### 3.1.2 Impacts

According to the 2022 Council on Environmental Quality (CEQ) revised regulations, “effects or impacts” are changes to the human environment that include reasonably foreseeable (1) direct effects, (2) indirect effects and (3) cumulative effects [40 CFR §1508.1(g)].

Agencies consider the potentially affected environment and degree of effects in order to determine the significance of an action’s impacts. The degree of effects are assessed in the context of the park’s purpose and significance and any resource-specific context that may be applicable. When assessing the degree of effects, agencies consider:

- Both short- and long-term effects.
- Both beneficial and adverse effects.
- Effects on public health and safety.
- Effects that would violate Federal, State, Tribal, or local law protecting the environment. [40 CFR § 1501.3(b)]

None of the alternatives analyzed in this EA would violate any federal, state, tribal, or local laws that protect the environment.

The methods used to assess impacts vary depending on the resource considered, but generally are based on a review of pertinent literature and park studies, the information provided by on-site experts and other agencies, professional judgment, and park staff knowledge and insight.

#### **3.1.2.1 Cumulative Impacts Methodology**

In accordance with the CEQ revised regulations, this EA also considers cumulative impacts, “which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” (§1508.1(g)(3)) Cumulative impacts have been addressed in this EA by resource and are considered for each alternative.

#### **3.1.2.2 Past, Present, Reasonably Foreseeable Planned Actions and Trends**

In accordance with the Council on Environmental Quality (CEQ) regulations, the environmental consequences analysis includes trends and reasonably foreseeable future actions [40 CFR (Code of Federal Regulations) 1502.16] of each alternative.

In assessing potential impacts of each alternative, the following past, present, and reasonably foreseeable planned actions and trends have been considered.

#### **3.1.3 Past and Present Actions**

In terms of the Park’s and region’s desire for trails, there is a clear desire and initiative for trail systems to connect together the units of the Park, to connect communities together, and to connect communities to the Park. The following are examples of adjacent Marquette Greenway sections to the proposed action area that are completed or are funded and in design/construction.

- Marquette Greenway Trail – Portage Ameriplex Drive (INDOT Des No. 1500418). This project, currently in construction and schedule to be finished in June 2023, will complete a 1.8-mile trail segment from SR-149 to SR-249.
- Marquette Greenway Trail – Phase IA Burns Harbor Next Level Trails Project (INDOT Des. No. 1601147). Burns Harbor plans to construct this 1.5-mile segment in 2023 and is currently developing the remainder of the trail through town.
- Marquette Greenway Trail – Mineral Springs Road to Dune Park Train Station. The County is scheduled to construct this funded and engineered 1.4-mile trail segment in 2023. This trail segment would connect to the Action Alternative of the proposed action at the Dune Park Trail Station and connect the towns of Porter and Chesterton to the eastern half of the National Park.
- Marquette Greenway Trail – Lake Shore County Road to the Singing Sands Trail. The County is scheduled to construct this funded and engineered 2.4-mile trail segment in 2023. This trail segment would connect to the proposed action at Lake Shore County Road and connect Michigan City to the National Park from Mount Baldy to Mnoké Prairie.

In November 2021, the U.S. Department of Transportation awarded \$18 million in funding to NIRPC to complete the remaining 20 miles of the Marquette Greenway. Three states, five counties, and nine municipal entities, including Gary, Ogden Dunes, Portage, Burns Harbor, and Michigan City will use this funding for 14 separate trail construction projects.

The State of Indiana has awarded \$10 million in Next Level Trail grants to sections of the Marquette Greenway Trail including \$4.9 million for the proposed action in this EA.

The Marquette Greenway Trail has the support of the U.S. Department of Transportation, the National Park Service, the States of Indiana, Illinois, and Michigan, the Counties of Cook, Lake, Porter, La Porte, and Berrien, the municipalities of Chicago, East Chicago, Hammond, Gary, Portage, Burns Harbor, Porter, Beverly Shores, Town of Pines, Michigan City, and New Buffalo, and the Indiana Dunes State Park. Every entity listed above has a portion of the trail running through its boundary and has provided financial support.

### Future Planned Actions

- There are some 20 active Marquette Greenway Trail projects underway region-wide to complete the 60-mile trail. The trail segments immediately east and west of the proposed action in this EA are scheduled to be completed by 2025.
- The cities of Gary, Portage, and Porter are working on Complete Streets projects that will connect north-south trails from their communities to the Marquette Greenway Trail and the Park.

### Trends

- Visitation: Increased Visitation. Annual recreational visitation at the Park has been increasing for the past decade and averaged more than 2 million visitors over the last 3 years (2019-2021). In 2021, the Park saw a record visitation of 3.17 million.
- Socioeconomic: Regional Population Growth. The population surrounding the Park continues to grow, with increased residential and commercial development. This growth is anticipated to result in increased demand for recreational opportunities and contribute to increases in annual park visitation. The COVID-19 pandemic put a spotlight on the Park and the region. People are moving to Northwest Indiana from Illinois to take advantage of the outdoor recreation opportunities.
- Climate: The recent trend in the region and the watershed associated with this project area is toward more severe storms, and not necessarily an increase in the frequency of storms. Many infrastructure projects in the region have begun to account for this trend in project design by incorporating more culverts and other features to handle larger storm events. Hydrological models completed for the Marquette Greenway indicated that Lake Michigan has a greater influence on water levels in the area than climate or the associated rivers.

## 3.2 Vegetation and Special Status Plants (including invasive species)

According to the NPS's Management Policies 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 (NPS 2006).

### 3.2.1 Affected Environment

NPS species data indicate 1,501 species of vascular plants have been identified (NPS 2023) within the Park, of which there are 1,196 species of native plants and 305 species of non-native species (Appendix B). Shaped by glacial events and changing climates, the dunes landscape contains disjunct flora representative of eastern deciduous forests, boreal forest remnants, and species with Atlantic coast affinities. In addition, the Park is part of the uppermost and easternmost limits of the tallgrass prairie peninsula and supports high-quality remnants of this ever-diminishing vegetation type. The project area is approximately 19 acres and winds its way through existing roads, old homesites, undeveloped upland forest, forested wetland, and wet prairie.

Soil Solutions, Inc. completed a wetland delineation recording vegetation within the project corridor. See Appendices A and B. Most of the ground vegetation along the trail consists of common native species and/or non-native/invasive species with areas along existing trails and roads being the most degraded. However, there are some high-quality native species that must be protected, notably in Sections 4 and 6,

where large concentrations of sensitive plant species have been found. Sixteen species of threatened endangered, and sensitive plant species were identified during field surveys in 2022. See Table 3 below. Of the species listed below in Table 3, rattlesnake fern (*Botrypus virginianum*), spotted wintergreen (*Chimaphila maculata*), American golden saxifrage (*Chrysosplenium americanum*), eastern teaberry (*Gaultheria procumbens*), partridge-berry (*Mitchella repens*), and American wintergreen and/or shinleaf (*Pyrola americana*, *P. elliptica*) were observed in multiple locations (three or more occurrences).

**Table 3. Threatened, Endangered, and Sensitive Species Observed in 2022.**

Species Name	Common Name	Status
<i>Adiantum pedatum</i> <sup>#</sup>	Northern maidenhair fern	Sensitive - NPS
<i>Aristida tuberculosa</i>	Beach three-awn	State threatened
<i>Asplenium platyneuron</i>	Ebony spleenwort	Sensitive - NPS
<i>Botrypus virginianus</i> <sup>*#</sup>	Rattlesnake fern	Sensitive - NPS
<i>Carex folliculata</i> <sup>#</sup>	Northern long sedge	State threatened
<i>Chimaphila maculate</i> <sup>#</sup>	Spotted wintergreen	Sensitive - NPS
<i>Chrysosplenium americanum</i>	American golden-saxifrage	State threatened
<i>Corallorhiza spp</i> <sup>#</sup>	Coral root orchid	Sensitive - NPS
<i>Gaultheria procumbens</i> <sup>*#</sup>	Eastern teaberry	Sensitive - NPS
<i>Hesperostipa spartea</i>	Porcupine grass	Sensitive - NPS
<i>Hypopitys monotropa</i> <sup>#</sup>	Pinesap	Sensitive - NPS
<i>Mitchella repens</i> <sup>*#</sup>	Partridge-berry	Sensitive - NPS
<i>Pyrola americana</i> <sup>#</sup>	American wintergreen	State threatened
<i>Pyrola elliptica</i> <sup>#</sup>	Shinleaf	Sensitive - NPS
<i>Monotropa uniflora</i> <sup>#</sup>	Indian Pipe	Sensitive - NPS
<i>Tradescantia subaspera</i> <sup>*</sup>	Broad-leaf spiderwort	Sensitive - NPS

\* Species are within the construction footprint

# Species are within 15 feet of the construction footprint

Six vegetation communities were mapped within the project corridor: dry prairie, roadbed, forested wetland, wet prairie, swamp forest and dune forest. Dry prairie was mapped in Sections 2, 3, and 7. In areas mapped as dry prairie, there were few tree species present. Dominant shrub and vine species included Allegheny blackberry (*Rubus allegheniensis*) and Asian bittersweet (*Celastrus orbiculatus*) (non-native); and Canadian goldenrod (*Solidago canadensis*) was dominant in the herbaceous layer. Within areas mapped as dry prairie, beach three-awn (*Aristida tuberculosa*) a state threatened species was identified.

Roadbeds were mapped in all sections. This community type includes vegetated and abandoned roadbeds and is generally considered low quality habitat. Dominant shrub and vine species include Asian bittersweet (non-native), autumn olive (*Elaeagnus umbellata*) (non-native), European privet (*Ligustrum vulgare*) (non-native), northern spicebush (*Lindera benzoin*), honeysuckle (*Lonicera sp.*) (non-native), young black cherry (*Prunus serotina*), and rambler rose (*Rosa multiflora*) (non-native).

Forested wetlands were mapped in all Sections, but only in small portions of each section. This community was the most degraded in Section 1. Dominant tree species in these areas include red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), and pin oak (*Quercus palustris*). Dominant shrub and vine species include Japanese barberry (*Berberis thunbergia*) (non-native) and common buttonbush (*Cephalanthus occidentalis*), with cinnamon fern (*Osmunda cinnamomeum*) and royal fern (*Osmunda*

*spectabilis*) dominant in the herbaceous layer. Within areas mapped as forested wetlands, northern maidenhair fern (*Adiantum pedatum*), a sensitive plant species was identified.

Wet prairies were mapped in Section 7. Few species were documented in the tree and shrub layer, and none were considered dominant. In the herbaceous layer spotted touch-me-not (*Impatiens capensis*), purple loosestrife (*Lythrum salicaria*) (non-native), common reed (*Phragmites australis* ssp. *australis*) (non-native), and cattails (*Typha* sp.) were dominant.

Swamp forests were mapped in Section 7. Dominant tree species include red maple and black tupelo (*Nyssa sylvatica*), with northern spicebush dominant in the shrub layer. In the herbaceous layer lakebank sedge (*Carex lacustris*), cinnamon fern, royal fern, and lizard's-tail (*Saururus cernuus*) are dominant. Within areas mapped as swamp forests northern long sedge (*Carex folliculata*) and American golden-saxifrage (*Chrysosplenium americanum*) both state threatened species, were identified.

Dune forest covers the majority of the project area and is found within all sections. Dominant tree species include red maple, northern white oak (*Quercus alba*), and northern red oak (*Quercus rubra*). In the shrub and vine layer Asian bittersweet (non-native), northern spicebush, Chinaroot (*Smilax hispida*), horsebrier (*Smilax rotundifolia*), late lowbush blueberry (*Vaccinium angustifolium*), low-bush blueberry (*Vaccinium pallidum*), and maple-leaf arrow-wood (*Viburnum acerifolium*) are dominant. Northern bracken fern (*Pteridium aquilinum* var. *latiusculum*) was dominant in the herbaceous layer. Within areas mapped as dune forest, American wintergreen (*Pyrola americana*), a state threatened species, was found. Ebony spleenwort (*Asplenium platyneuron*), rattlesnake fern (*Botrypus virginianus*), spotted wintergreen (*Chimaphila maculata*), eastern teaberry (*Gaultheria procumbens*), partridge-berry, porcupine grass (*Hesperostipa spatea*), shinleaf (*Pyrola elliptica*), and broad-leaf spiderwort (*Tradescantia subaspera*), all state sensitive species, were identified.

Invasive species occur throughout the Park. There are over 300 non-native species, many of which are invasive, that occur within the Park, and over 100 non-native species occurring outside Park lands but in the general vicinity. Approximately 70 invasive plant species are being actively managed (NPS 2012), and 71 non-native species were recorded during the wetland delineation conducted by Soil Solutions, Inc. Control of invasive species is critical to the conservation of every plant community, both common and rare, within the Park, and the wildlife that depend upon them. Minimizing the spread of invasive species and/or new ones is crucial to long-term floristic and wildlife diversity and ecosystem health in the region.

### **3.2.2 Environmental Consequences**

This section describes the potential impacts on vegetation from the proposed action of constructing the trail through the Park, including Alternative A - No Action and Alternative B – Build the Trail. Soil Solutions, Inc. completed numerous vegetation surveys over the growing season to determine the type of vegetation within the project area. Impacts are quantitatively analyzed by calculating the amount of vegetation within the project area and assuming the entire width of the corridor will be cleared to construct the trail. The following discussion describes the impacts that are reasonably foreseeable and have a reasonably close causal relationship to the project alternatives.

#### **3.2.2.1 Alternative A - No Action**

Alternative A - No Action would have no impacts on vegetation and existing site conditions would likely be unchanged. There would be no tree clearing or control of invasive species. If the public has created social trails, these areas of matted vegetation would continue to occur. No invasive species removal would occur. Under Alternative A - No Action, vegetation would not be cleared, and there would be no positive or negative effects on vegetation.

### **Cumulative Impacts**

The impacts of the Alternative A - No Action, when combined with recent trends and reasonable future actions, would not result in additional impacts to vegetation in a measurable way.

### **3.2.2.2 Alternative B – Build the Trail**

Under Alternative B - Build the Trail, the limits of disturbance during construction would be approximately 25-foot-wide along the 6.3-mile trail segment which would impact approximately 19 acres. Over 11 acres will occur on existing roads or trail portions, whereas approximately 3.5 acres of permanent impacts and 3.8 acres of temporary impacts will occur in relatively undisturbed areas. A component of Alternative B includes the removal of non-native vegetation outside the construction area as a buffer to the trail as part of wetland mitigation. The County worked with Park staff to select an alignment to minimize impacts to unique and sensitive native vegetation, however, the proposed trail alignment will have impacts to plant species of concern.

As soon as construction is complete, the County would rehabilitate disturbed areas. Rehabilitated areas would use NPS-approved native plantings, neonicotinoid (neuro-active insecticides) free, weed, weed seed and debris free, and no-mow native seed mixtures with an emphasis on pollinator species habitat to minimize the resources required for mowing (bi-annually). The County would submit proposed seed mixes and source of materials to the NPS prior to the start of construction. The County would place trash receptacles at regular intervals along the trail.

After the trail's construction, a Cooperative Management Agreement with the County would be created outlining trail maintenance and management. The trail would also be included in the Porter County Parks and Recreation's Asset Management Plan for trail sections outside of Park land. All maintenance and management would meet NPS requirements such as wildlife proof trash bins, proper vegetation management, and trail surface treatment. Visitor foot traffic facilitates the movement of invasive vegetation seed and disturbs the soil allowing for the establishment of new invasive vegetation. The Park will monitor the trail for intrusion of invasive species.

There would be minor adverse impacts to vegetation. The community most impacted by the project is dune forest (about 50 percent of the project area) which includes intact dune forest dominated by oak (*Quercus*) species with a native understory, disturbed upland forest with a canopy of native tree species but a disturbed understory, as well as upland forest that has little native integrity left and is almost completely dominated by non-native species. Approximately 0.5 miles of the trail will run through high quality dune forest between Kemil Road and Teale Road in Section 6. However, these impacts would be minimized through best management practices described in section 3.5.2. In Section 4, the trail would be on existing roadbeds thus avoiding any vegetation disturbance. In the long-term, there would be little measurable impacts to vegetation given the relatively small size of the Action Alternative in the context of the entire Park and limiting the trail primarily to already disturbed areas with up to two-thirds of the trail being constructed on existing/former roadbeds, and the impacts would be small in scale and limited in duration.

In Section 4, there are areas of high-quality plants. The Park worked with the County to reroute the trail in several areas to avoid all known plants of concern, and the trail has been designed to be located on existing roadbeds. In Section 6, there are areas of high-quality plants. The Park worked with the County to reroute the trail in several areas to avoid as many plants of concern as possible by rerouting the trail in many areas. In this area, however, some of the plants would have to be relocated to minimize disturbance. Specifically, eastern teaberry (*Gaultheria procumbens*) is a common species in Section 6, and it was not possible to completely avoid impacts to this sensitive species.

### **Cumulative Impacts**

The impacts of Alternative B - Build the Trail, when combined with recent trends and reasonably future actions, would result in little additional impacts to the vegetation in a measurable way.

### 3.3 Special-Status Wildlife Species

The Endangered Species Act of 1973, as amended, requires in section 7(a)(2) that each federal agency, in consultation with the Secretary of the Interior, ensure that any action the agency authorizes, funds, or carries out will not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. In addition, the Management Policies 2006 and Director's Order-77 Natural Resources Management Guidelines require the NPS to examine the effects on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species (NPS 2006).

#### 3.3.1 Affected Environment

Indiana passed the Non-game and Endangered Species Conservation Act in 1973, the same year as the Federal Endangered Species Act. The law permits the IDNR to develop and manage a state list of endangered species and to engage in protection efforts. This act defines a non-game species as "any wild animal that is not hunted for sport or commercial use." The law defines a State-listed endangered species as any species whose populations are "in immediate jeopardy and are in danger of disappearing from the State." A species of special concern is defined as any species that needs to be monitored because of declining populations or recent changes to its habitat (special concern species do not receive legal protection).

Stantec obtained a species list from the U.S. Fish and Wildlife Service's (USFWS's) Information for Planning and Consultation (IPaC) website. The federally listed threatened and endangered species potentially present in the project area include Indiana bat, Northern long-eared bat, and eastern massasauga. Soil Solutions, Inc. evaluated the project area for protected species habitat in the spring of 2022 and summer roosting habitat for protected bat species. In addition, the County contacted the USFWS and the Indiana Department of Natural Resources (IDNR) Division of Fish and Wildlife (DFW) to determine the species which could potentially occur in or near the project area and potential effects of the project. Following the field surveys in the spring and summer of 2022, the tricolored bat was proposed for listing in September 2022. Brief descriptions for the Indiana bat, Northern long-eared bat, tricolored bat, eastern massasauga, and migratory birds are provided below.

#### Indiana Bat

The Indiana bat is a migratory bat species that hibernates in caves in winter and uses areas around them for swarming (mating) in the fall and staging in the spring, prior to returning to summer habitat. During the summer, Indiana bats roost under the exfoliating bark of dead snags and living trees in mature forests with an open understory and a nearby source of water (Pruitt and TeWinkel 2007). Indiana bats may change roost trees frequently throughout the season, while still maintaining site fidelity, returning to the same summer roosting areas in subsequent years (Pruitt and TeWinkel 2007). This species forages over forest canopies, along forest edges and tree lines, and occasionally over bodies of water (Pruitt and TeWinkel 2007). Indiana bats roost in trees throughout northern Indiana, including the Park, during the summer.

Assessment of the project area for presence of summer roosting habitat for Indiana bat followed federal guidance (USFWS 2019). Field surveys resulted in the identification of approximately 9.8 acres of suitable summer roosting habitat, of which approximately 2.7 acres are considered high quality for Indiana bat in the forested habitat in the construction footprint.

#### Northern Long-Eared Bat

The Northern long-eared bat (NLEB) predominantly overwinters in large hibernacula (shelter for hibernating animals) such as caves, abandoned mines, and cave-like structures. During fall and spring, they use entrances of caves and the surrounding forested areas for swarming and staging. In the summer, NLEBs roost individually or in colonies beneath exfoliating bark or in crevices of both live and dead trees (typically greater than three inches in diameter). Roost selection by the NLEB is similar to that

of Indiana bat; however, NLEBs may select roosts more opportunistically. This species also roosts in abandoned buildings and under bridges. NLEBs emerge at dusk to forage below the canopy of mature forests on hillsides and roads, and occasionally over forest clearings and along riparian areas (USFWS 2014). There are no documented caves within the project area.

Assessment of the project area for presence of summer roosting habitat for NLEB followed federal guidance (USFWS 2019). Field surveys resulted in the identification of approximately 9.8 acres of suitable summer roosting habitat, of which approximately 2.7 acres are considered high quality for NLEB in the forested habitat in the construction footprint.

### **Tricolored Bat**

The tricolored bat, named for its unique tricolored fur, overwinters in caves and abandoned mines in the southern United States, and have been found roosting in road-associated culverts when caves or mines are sparse (USFWS 2022b). During fall, spring, and summer, they are found in forested habitats. Tricolored bats roost primarily among the leaves of either live or recently dead deciduous hardwood trees but have also been known to roost in pine trees, human structures, or in southern portions of its range - Spanish moss (*Tillandsia usneoides*). Tricolored bats roost in a variety of tree species but seem to use oaks (*Quercus* spp.) more often (USFWS 2023). Summer roosting or maternity areas occur in a variety of different forest types, but generally have closed canopies in trees that have a larger diameter, where either snags with loose bark or live trees with shaggy bark are important (UNH 2022). Tricolored bats tend to roost by themselves rather than in large clusters and are known to tuck themselves into cracks and crevices (BCI 2018).

With the proposed listing of tricolored bat occurring after the spring and summer field surveys for Indiana bat and NLEB, the habitat assessment didn't include this species. Based on habitat needs approximately 9.8 acres of suitable summer roosting habitat, of which approximately 2.7 acres are considered high quality identified for Indiana bats and NLEB in the construction footprint, is considered suitable for tricolored bats and is the area used to determine impacts.

### **Eastern Massasauga**

Eastern massasauga rattlesnakes typically inhabit damp lowland habitats, including bottomland forests, swamps, bogs, fens, marshes, sedge meadows, and wet prairies. They are also associated with forest edge near rivers and shrubby old fields (Johnson and Menzies 1993). During the spring and summer months this species often moves into drier, more upland habitats, such as grasslands and farm fields. In most areas, eastern massasaugas are usually active from April or May through October; they are inactive in cold weather. Births occur mainly from late July through early September. Stantec did not document habitat for this species within the project area and the NPS has no records of this species within the project area. The USFWS responded to scoping that there are known occurrences of eastern massasauga within the project area, notably within Beverly Shores and near the South Shore station in Section 7.

### **Migratory Birds**

The project area is comprised of early successional habitat, prairie, and fragmented forest. These communities provide habitat to a variety of migratory bird species. Review of the USFWS's IPaC website resulted in the identification of 22 migratory bird species of conservation concern with the potential to occur in the project area. Following early coordination with the IDNR the Cerulean warbler (*Setophaga cerulea*) and golden-winged warbler (*Vermivora chrysoptera*) both birds of conservation concern, as well as IDNR sensitive species including king rail (*Rallus elegans*), least bittern (*Ixobrychus exilis*), Virginia rail (*Rallus limicola*) have been documented within 0.5 miles of the project area. Suitable nesting habitat for the least bittern and rail species does not exist in the project area. For the other species listed, IDNR provided recommendations to minimize impacts to protected bird species by avoiding removal of large

trees and removing trees outside of the spring migratory and breeding seasons (early April and late August).

### **3.3.2 Environmental Consequences**

This section describes the potential impacts on special-status species from the proposed action of constructing the trail through the Park, including Alternative A - No Action and Alternative B - Build the Trail. Stantec and biologists from the Park have completed numerous pedestrian surveys over the growing season to evaluate potential habitat for special-status species within the project area. Impacts are quantitatively analyzed by calculating the amount of habitat within the project area and assuming the entire width of the corridor will be cleared to construct the trail. The following discussion describes the impacts that are reasonably foreseeable and have a reasonably close causal relationship to the project alternatives.

#### **3.3.2.1 Alternative A - No Action**

Under Alternative A - No Action, the proposed disturbances would not occur, and there would be no impacts to special-status species.

### **Cumulative Impacts**

The impacts of Alternative A - No Action, when combined with recent trends and reasonably future actions, would not result in additional impacts to special-status species in a measurable way.

#### **3.3.2.2 Alternative B – Build the Trail**

No known Indiana bat, NLEB, or tricolored bat maternity roost trees were documented in the project area. With the exception of Section 5, suitable habitat for bats is located all Sections. The construction of the trail will require the removal of trees along the entire trail. To avoid potential adverse impacts, tree removal would not occur between April 1 and October 15 (active bat season). Although some trees that may be used for summer roosting by these bats may be cleared, similar habitat is widely available adjacent to the project area. Noise levels would increase during construction for an estimated duration of six months as a result of construction activities such as excavation and grading. These activities would take place during the day and would not disrupt foraging bats.

There is habitat for the eastern massasauga within the project area, with occurrences known around Beverly Shores. To avoid potential adverse impacts to eastern massasauga during construction, and consultation for impacts would need to occur with the USFWS. It is anticipated that following consultation, appropriate exclusion fencing may need to be installed along suitable habitat during active construction, and regular surveys would be done by a qualified herpetologist. The trail may attract snakes and other reptiles for thermoregulation or nesting along the edges and are at greater risk for mortality by trail users.

Should any migratory bird species be present in the project area during the proposed construction activities, mobile individuals would likely flush into adjacent suitable habitats. Suitable nesting habitat for many of the special-status species noted by USFWS and IDNR does not occur within the project area. Due to the relative abundance of similarly suitable habitat nearby, and the project plan to clear vegetation prior to April 1 (to meet protected bat species requirements), adverse impacts to populations of migratory birds are not anticipated.

Overall, Alternative B - Build the Trail would result in minor adverse impacts to the Indiana, NLEB, and tricolored bat species, eastern massasauga, as well as migratory birds. However, these impacts would be minimized with the implementation of tree clearing restrictions and minimization measures. Impacts to sensitive wildlife species are also expected to be minimized along Section 4 due to the road closure and therefore less traffic. The habitat along most of the reroute is also degraded in the woodlands and savannas mostly due to the presence of non-native species.

## Cumulative Impacts

The impacts of the Alternative B - Build the Trail, when combined with recent trends and reasonably future actions, would not result in additional impacts to special-status species in a measurable way.

### 3.4 Visitor Use and Experience

#### 3.4.1 Affected Environment

The mission of NPS is to preserve unimpaired natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. It is a fundamental purpose of all parks that NPS is committed to providing appropriate, high-quality opportunities for visitors to enjoy the parks (NPS 2006). Over one million people have visited the Park each year since 1979. When the Park was re-designated from a National Lakeshore to a national park in February 2019, visitation jumped to 2,134,285 and has continued to increase. In 2021, the Park recorded 3,177,234 visitors and ranked 9<sup>th</sup> out of all national parks for number of visitors (NPS 2021). There are currently over 50 miles of hiking trails and 37 miles of multi-use trails within the Park that lead visitors along shorelines, and through dunes, wetlands, prairies, river systems, oak savannas, and cultural sites. The Action Alternative of the proposed action would enhance the visitor experience by bringing visitors into these varied habitats along the trail.

The annual NPS survey evaluates visitor experience, and these figures are high for satisfaction and overall experience, but the NPS does not ask specific questions about the need for additional amenities or types of activities. Public meeting input and general observations by staff regarding use patterns and visitor contacts provides information concerning visitor activities and desires for certain experiences. The population of the surrounding area has steadily increased over the last several years. The increase in population has led to an increase in Park visitation and demand for additional recreation opportunities within the Park.

The 60-mile Marquette Greenway Trail will link communities, major parks, and a wide variety of cultural, natural, and economic assets. Roughly 20 individual trail segments will be unified under this route, and many are existing, recently constructed, or recently funded. Along with other projects already completed, or engineered and funded, the Action Alternative of the proposed action would connect Mnoké Prairie to Mount Blady by the end of 2024 with a paved ABA/ADA compliant trail. It is anticipated that the completed trail would have high usage based on other trails in the park and region.

#### 3.4.2 Environmental Consequences

This section describes the potential impacts on visitor use from the proposed action of constructing the trail through the Park, including Alternative A - No Action and Alternative B - Build the Trail. The analysis qualitatively focuses on public access and visitor experience. The following discussion describes the impacts that are reasonably foreseeable and have a reasonably close causal relationship to the project alternatives.

##### 3.4.2.1 Alternative A - No Action

Under Alternative A - No Action, visitor use would be diminished. The trail would not be built resulting in a gap in the Marquette Greenway Trail and the Park's east-west trail.

## Cumulative Impacts

The impacts of Alternative A - No Action, when combined with recent trends and reasonably future actions, could result in additional short- and long-term minor adverse impacts to the visitor experience as an opportunity for increased recreation is not implemented and a continued dependency on a car with limited parking availability to enjoy the park. Visitors would be forced to use the very busy U.S. Highway 12 to bridge this trail gap resulting in a dangerous condition.

### 3.4.2.2 Alternative B – Build the Trail

Alternative B - Build the Trail would add approximately 6.3 miles of multi-use trail to complement and enhance existing recreation and transportation opportunities. There would be a beneficial impact with an increased safety to equestrian, multi-use, and hiking visitors with the closure of Hadenfelt Road. Several trail crossings occur in this area of Section 4. Overall, Alternative B - Build the Trail would have long-term beneficial impacts on the visitor experience.

### Cumulative Impacts

The impacts of the Alternative B - Build the Trail, when combined with recent trends and reasonably future actions, would result in additional beneficial impacts to the visitor experience.

## 3.5 Wetlands

### 3.5.1 Affected Environment

Soil Solutions, Inc. conducted a wetland delineation on April 8 and 15; May 2, 4, 13, 24, and 27; and June 9, 17, and 23; 2022. Thirty wetlands were identified during this investigation which included 32.41 acres of forested wetland (wetlands dominated by woody vegetation generally all over 20 feet) and 8.89 acres of emergent wetlands (wetlands dominated by erect, rooted herbaceous vegetation such as cattails, reeds, and rushes) for a total of 41.30 acres within the Project Area. The following table (Table 4) summarizes the features identified during the delineation with the overall acreage. Eight of the wetlands are bisected by the trail, the remaining 22 wetlands are located adjacent to the trail route. The locations of these features in relation to the trail are shown on and are summarized below and in more detail in Appendix A.

**Table 4: Calumet Reroute Segment Identified Wetlands Summary**

Feature Name	Acres in Study Area	Class	Trail Section	Bisected by Trail Y/N?
Wetland 1	21.25	Forested (FO)	7	Y
Wetland 2	8.23	Emergent (EM)	7	N
Wetland 3	0.46	EM	7	N
Wetland 4	15.45	FO	7	Y
Wetland 5	12.40	FO	7	N
Wetland 6	0.64	FO	7	N
Wetland 7	11.17	FO	7	N
Wetland 8	6.23	FO	7	N
Wetland 9	4.07	FO/EM	7	N
Wetland 10	1.84	EM	7	N
Wetland 11	0.06	FO	6	N
Wetland 12	0.01	EM	6	N
Wetland 13	0.23	FO	6	N
Wetland 14	1.61	FO	5	N
Wetland 15	1.11	FO	5	N
Wetland 16	0.16	FO	5	N
Wetland 17	1.18	FO	4	Y
Wetland 18	0.42	FO	4/5	N
Wetland 19	0.11	FO	4	N

Feature Name	Acres in Study Area	Class	Trail Section	Bisected by Trail Y/N?
Wetland 20	0.68	FO	4	N
Wetland 21	0.07	FO	4	Y
Wetland 22	0.68	FO	4	N
Wetland 23	0.08	FO/EM	4	N
Wetland 24	0.30	FO	4	Y
Wetland 25	0.03	FO	4	N
Wetland 26	0.22	FO	4	N
Wetland 27	1.00	FO	3	Y
Wetland 28	0.01	FO	3	N
Wetland 29	1.06	FO	2	Y
Wetland 30	0.96	FO	1	Y
<b>Total</b>	<b>41.30</b>			

### 3.5.2 Environmental Consequences

This section describes the potential impacts on wetlands from the proposed action of constructing the trail through the Park, including Alternative A - No Action and Alternative B - Build the Trail. The following discussion describes the impacts that are reasonably foreseeable and have a reasonably close causal relationship to the project alternatives.

#### 3.5.2.1 Alternative A - No Action

Under Alternative A - No Action, the proposed wetland impacts would not occur.

#### Cumulative Impacts

The impacts of Alternative A - No Action, when combined with recent trends and reasonably future actions, would not result in additional impacts to wetlands in a measurable way.

#### 3.5.2.2 Alternative B – Build the Trail

Alternative B - Build the Trail would add approximately 6.3 miles of trail to the Park trail system. The project would consist of both new trail as well as improvements and realignments of existing trails with permanent existing wetland impacts totaling approximately 0.8 acres in the project area (0.4 acres in the national park) as a result of fill or the installation of boardwalks. Alternative B - Build the Trail has the potential to adversely affect wetlands. Introduction of fill will permanently impact wetlands, whereas the boardwalks will result in a temporary impact. Any interruptions to the wetlands may result in a short-term interference with their natural processes but there would be no change to their overall functions and values. For full scope of impacts see the delineation report in Appendix A. A Wetland Statement of Findings (WSOF) has been prepared and will be released for public review concurrently with the EA.

#### Cumulative Impacts

The impacts of Alternative B - Build the Trail, when combined with recent trends and reasonably future actions, would not result in additional impacts to wetlands in a measurable way.

## **3.6 Cultural Resources**

### **3.6.1 Affected Environment**

The area of potential effect (APE) has been inventoried for archaeology. Records on file at IDNR - DHPA indicate that four previous cultural resource investigations have been conducted within the 1.6 km (1-mile) buffer study area; two of which overlap with the APE (Altizer and Sturdevant 2010; Stadler 2002).

In 2009, the NPS conducted a Phase I archaeological survey in Lake and Porter counties, Indiana. The survey was initiated in response to the NPS's ROU (Reservation-of-use) program, which proposes to purchase land from private landowners to incorporate into parks. No precise descriptions of the survey area are provided (Altizer and Sturdevant 2010). In 2002, the NPS conducted a Phase I archaeological survey in Porter County, Indiana. The survey was conducted to examine the site content, integrity, boundaries, and age of sites 12PR603 and 12PR608. Both sites had been previously identified in 1932. Both sites were determined potentially eligible for the NRHP (Stadler 2002).

In response to a request from Short Elliott Hendrickson, Inc., Stantec conducted a Phase IA archaeological records review and reconnaissance (Phase IA) in the County for the proposed action (Marquette Greenway Trail, Calumet Segment Project).

#### **Identified Sites**

As a result of the Phase IA investigation, seven new archaeological sites were identified, and one previously identified site was investigated. In addition, one area containing post-contact fill was located and documented in the field. This area is in Section 7 of the proposed action. This section runs parallel to the north of Service Avenue (abandoned gravel road), stopping before turning north along Manning Road (abandoned gravel road). The shovel-tested post-contact fill area is on a berm at the margin of a forested area, between sections of delineated wetland. The soil profile in this area was disrupted by a historic fill layer, likely a result of secondary deposition associated with disturbance from the original installation of the nearby railroad and extant Service Avenue. Due to the secondary deposition, dearth of artifacts, surrounding wetland, and disturbance, this area was not given a formal trinomial designation and no artifacts were collected.

#### **Known Sites not Reidentified**

Seven additional previously identified archaeological sites lie within or adjacent to the APE but were unable to be relocated during reconnaissance efforts.

### **3.6.2 Environmental Consequences**

This section describes the potential impacts on cultural resources from the proposed action of constructing the trail through the Park, including Alternative A - No Action and Alternative B - Build the Trail.

Stantec conducted a Phase I archaeological records review and reconnaissance for the proposed Marquette Greenway Trail, Calumet Segment Project in Westchester and Pine Townships, Porter County, Indiana, in May and July of 2022.

Potential impacts to Cultural Resources including archeology, historic structures, and cultural landscapes 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.
- 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.

The following discussion describes the impacts that are reasonably foreseeable and have a reasonably close causal relationship to the Action Alternative (Preferred Alternative) of the proposed action.

### **3.6.2.1 Alternative A - No Action**

Alternative A - No Action would have no impacts on cultural resources and existing site conditions would likely be unchanged.

#### **Cumulative Impacts**

The impacts of Alternative A - No Action, when combined with recent trends and reasonably future actions, would not result in additional impacts to cultural resources in a measurable way.

### **3.6.2.2 Alternative B – Build the Trail**

Under Alternative B - Build the Trail, construction activities and equipment would disturb the ground surface and subsurface. The ABA/ADA compliant trail would be a 10-foot-wide asphalt trail with 2-foot-wide aggregate shoulders on each side and would be approximately 6.3 miles in length. Typical trail construction disturbance would be approximately 8 inches in depth. In addition, Alternative B - Build the Trail would include areas of temporary disturbance. A 25-foot-wide envelope of disturbance is anticipated during the construction of the trail.

Alternative B - Build the Trail has the potential to adversely impact unknown archeological sites and artifacts in the APE. Adverse impacts could be permanent if damage ensues but would not result in additional impacts to cultural resources in a measurable way.

#### **Cumulative Impacts**

The impacts of the Alternative B - Build the Trail, when combined with recent trends and reasonably future actions, would not result in additional impacts to cultural resources in a measurable way.

## **4 Consultation and Coordination**

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### **4.1 Introduction**

This section describes the public involvement and agency consultation during the preparation of the EA. NPS places a high priority on public involvement in the NEPA process and on giving the public an opportunity to comment on the alternatives. Consultation and coordination with federal, tribal, state, and local agencies were conducted to identify issues and concerns related to park and tribal resources.

## **4.2 Internal Scoping and Public Involvement**

### **4.2.1 Internal Scoping**

Under NEPA regulations, scoping is an “early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action” (40 CFR 1501.7). The scoping process is focused on determining the extent and nature of issues and alternatives that should be considered during a NEPA review. Internal scoping refers to the use of NPS staff to accomplish the outcomes described above. An interdisciplinary team familiar with the issues and affected resources is essential to a successful internal scoping process. Internal scoping associated with this EA has included internal interdisciplinary team meetings and reviews of the issues, alternatives, and impacts on park resources.

### **4.2.2 Public Involvement**

Public involvement refers to the engagement of the interested and affected public on matters related to the project. The Marquette Greenway Trail concept has been actively pursued by several governmental and not-for profit entities for more than a decade. As part of the Marquette Greenway Plan’s development, NIRPC hosted several public forums along the trail corridor collecting comments from both private and public stakeholders (JJR LLC et al. 2005) and The Greenways and Blueways Northwest Indiana Regional Plan (NIRPC 2018). NIRPC conducted a series of meetings with all stakeholders along the route to gauge interest in moving forward with the Marquette Greenway Trail project.

## **4.3 Tribal Consultation**

On March 21, 2022, formal consultation was initiated with the Miami of Oklahoma and seven (7) Bands of the Potawatomi, all of whom are traditionally associated with the area now known as the Indiana Dunes National Park, regarding the granting of the right-of-way easement to the County to reroute the trail from its current location to the proposed location. On April 14, 2022, the Winnebago Tribe contacted the Park and also be included in formal consultation. The Park invited the Tribes and the SHPO staff to participate in a site visit on Monday, May 2, 2022, to discuss known Archeological resources within the Area of Potential Effect (APE). The Miami of Oklahoma and the Pokagon Band of Potawatomi participated in the walkthrough. The result of the visit was the moving of the proposed trail location around the archeological resource.

On June 13, 2023, an internal draft of the EA was sent by email to nine tribes. The Nottawaseppi Huron Band of Potawatomi’s Tribal Historic Preservation Officer responded on June 13, 2023. They have no objection to the project. The Winnebago Tribe’s Cultural Preservation Director on June 16, 2023. "The location is land our ancestors have lived on or passed through. Please include the Winnebago Tribe of Nebraska in any consultation going forward."

## **4.4 Federal Agencies**

The County contacted other Federal and State agencies during the planning process. Appendix C contains copies of written correspondence with those agencies.

### **4.4.1 U.S. Fish and Wildlife Service**

#### **Endangered Species Act (1973), Executive Order 11990 (1977)**

Stantec, on behalf of the NPS and the County, contacted the USFWS in a letter dated July 7, 2022. The letter requested comments about potential impacts and concurrence with a determination that the proposed project may but is not likely to adversely affect the Federally endangered Indiana Bat and the threatened northern Long-eared Bat. The USFWS responded in an informal Section 7 letter dated August 5, 2022, requested additional information, and consultation is ongoing. USFWS also stated that there are known occurrences of eastern massasauga within the project area the project.

#### **4.4.2 U.S. Army Corps of Engineers**

##### **Section 404 Clean Water Act**

The County sent a scoping letter to the U.S Army Corps of Engineers (USACE, Chicago District on July 7, 2022). The USACE responded on July 19, 2022, stating that temporary/conversion impacts to waters of the U.S. may require mitigation if they total more than 1.0 acre.

#### **4.4.3 U.S. Department of Agriculture**

##### **Farmland Protection Act**

The County sent a scoping letter to the USDA's NRCS on July 7, 2022. The NRCS has not responded.

#### **4.5 State Agencies**

##### **4.5.1 Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology**

###### **State Historic Preservation Officer (SHPO), Section 106 Consultation**

Agencies which have direct, or indirect oversight of historic properties are required by Section 106 of the National Historic Preservation Act, as amended (NHPA) (16 USC 470, et seq.), to take into account the effect of any undertaking on properties listed on or eligible for listing on the National Register of Historic Places. On July 7, 2022, the NPS sent a letter to the IDNR Division of Historic Preservation and Archeology requesting concurrence on the determination of *No Adverse Effect*. On September 15, 2022, the Indiana SHPO concurred with the NPS's *No Adverse Effect* determination and provided recommended mitigation measures. Chapter 3.5 includes a summary of recommended mitigation measures provided by the Indiana SHPO.

###### **Archeological Resources**

Based upon the submitted information and the documentation available to the staff of the Indiana SHPO, there is insufficient information regarding archeological site 12-Pr-0840 (which was identified during these investigations) to determine whether it is eligible for inclusion in the National Register of Historic Places (NRHP). However, the SHPO concurred with the opinion of the archeologist, as expressed in the Phase IA archeological records check and field reconnaissance survey report, that the portions of this site that lie within the proposed project area do not appear to contain significant archeological deposits, and that no further archeological investigations appear necessary at the proposed project area.

The Indiana SHPO concurred with the NPS's August 8, 2022, determination that the proposed project would have No Adverse Effect on historic buildings, structures, districts, objects, or archaeological resources within the area of potential effects.

##### **4.5.2 Indiana Department of Natural Resources – Division of Fish & Wildlife**

###### **The Fish and Wildlife Coordination Act of 1936, Flood Control Act (1995), Executive Order 11990 (1977)**

The County sent a scoping letter to the Indiana Department of Natural Resources (IDNR), Division of Fish & Wildlife (DFW) on January 28, 2019, as part of their grant proposal, and then reintiated consultation as part of this EA on July 7, 2022. The IDNR DFW responded on February 27, 2019, with standard mitigation measures for stream crossings, bank stabilization and wildlife passage, and trail construction. Chapter 3.5 includes a summary of mitigation measures that are applicable to the Action Alternative (Preferred Alternative) of the proposed action.

###### **Coastal Zone Consistency Determination**

Federal agency activities in or affecting Indiana's Coastal Zone must comply with Section 307 of the Coastal Zone Management Act and implementing regulations, which require that such Federal activities be conducted in a manner consistent, to the extent practical, with Indiana's Coastal Management Program. The Park is included within Indiana's coastal zone. The NPS has determined that the Action Alternative (Preferred Alternative) is consistent with Indiana's Coastal Management Program, including the State's goals and policies for this area.

#### **4.6 Permits**

If the Action Alternative (Preferred Alternative) of the proposed action is implemented, the County will obtain and/or submit the following permits and notices to construct the project:

##### **Endangered Species Act Section 7 Consultation, Biological Opinion**

The Endangered Species Act section 7 (a)(1) charges Federal Agencies to aid in the conservation of listed species, and section 7(a)(2) ensures that their activities are not likely to jeopardize the continued existence of federally listed species or adversely affect critical habitat. Federal agencies must consult with the USFWS when any project or action they authorize, fund, or carry out may affect a listed species or designated critical habitat. If formal consultation is applicable, this process may last up to 90 days, after which the USFWS has 45 days to write the biological opinion.

##### **USACE 404/IDEM 401 Dredge and Fill Permit**

The USACE has jurisdiction over navigable Waters of the United States (WOUS) and regulates the placement of dredge or fill materials into WOUS under Section 404 of the Clean Water Act. IDEM is responsible for maintaining, protecting, and improving the physical, chemical, and biological integrity of Indiana's waters. IDEM administers Section 401 of the Clean Water Act. Any person who wishes to place fill materials, excavate, or dredge, or mechanically clear (use heavy equipment) within a wetland, lake, river, stream, or other Water of the State must first apply to the USACE for a Clean Water Act Section 404 permit. If the USACE determines that a permit is necessary, then the person must also apply for, and obtain, a Section 401 Water Quality Certification from IDEM. The review process may take between 60 to 120 days.

##### **Construction in a Floodway (CIF) Permit.**

The Flood Control Act (IC 14-28-1) regulates development activities within the 100-year floodway of any Indiana waterway. The State defines the floodplain as, "the area adjoining a river or stream that has been or may be covered by flood water (312 IAC [Indiana Administrative Code] 1-1-15)." The floodway is the channel of a river or stream and those portions of the flood plain adjoining the channel which are reasonably required to efficiently carry and discharge the peak flow of the regulatory flood of any river or stream (312 IAC 1-1-16). Development activities include bank protection, structure work (bridges/culverts), excavation, fill, outfalls, and certain utility work. The IDNR requires a permit for any non-exempt work within the floodway. The review period is typically eight months, depending on the complexity of the project.

##### **Indiana Construction Stormwater General Permit (CSGP)**

The U.S. Environmental Protection Agency administers the National Pollution Discharge Elimination System. This agency delegates authority to the states to administer the program. In Indiana, the Indiana Department of Environment is the regulatory authority over the CSGP. The CSGP is a performance-based regulation designed to reduce pollutants that are associated with construction and/or land-disturbing activities. The requirements of the Construction CSGP applies to all persons who are involved in construction activity (which includes clearing, grading, excavation, and other land-disturbing activities) that results in the disturbance of one (1) acre or more of total land area. The review period is typically 30 days for compliance review.

## **National Park Service Special Use Permit for Short-Term Construction**

The NPS issues a Special Use Permit to impose conditions to manage the activity and prevent impairment or derogation of resources, values, and purposes for which the park was established. This includes issuing a permit for short-term construction, such as tree and vegetation removal. The review period is typically 30 days, dependent on the project complexity.

## **5 List of Preparers and Reviewers**

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The following individuals contributed to the development of this document:

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## APPENDIX A: REGULATED WATERS DELINEATION REPORT

Please see the standalone document:

*Appendix A - Marquette Greenway Trail - Calumet Section - Wetland Delineation Report.pdf*

## APPENDIX B: FLORISTIC QUALITY ASSESSMENT

Please see the standalone document:

*Appendix B - Marquette Greenway Trail - Calumet Section - Floristic Quality Assessment*

## APPENDIX C: AGENCY CORRESPONDENCE

Please see the standalone document:

*Appendix C - Marquette Greenway Trail - Calumet Section - Agency Coordination*