SEP 22 2016

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act (NEPA), an environmental review has been performed on the following action.

TITLE: Environmental Assessment for Hika Park Pedestrian Bridge

LOCATION: Village of Cleveland, Wisconsin

SUMMARY: Under Section 306A of the Coastal Zone Management Act (CZMA), NOAA's Office for Coastal Management proposes to provide financial assistance to the Wisconsin Coastal Management Program, which would provide the funds to the Village of Cleveland to construct a pedestrian bridge at a coastal park known as Hika Park. The funds in question would cover one-third of the cost of installing a prefabricated bridge that is 72 feet long and 8 feet wide over Centerville Creek, which bisects the park. The Village of Cleveland secured the rest of the funding that would be needed for the bridge. NOAA's evaluation of potential impacts of installing the bridge indicates it would have minimal adverse environmental impacts over the short term and long term, as well as a number of minor beneficial impacts over the long term, primarily to public safety and accessibility. Neither the installation process, nor the long-term presence of the bridge, would have significant adverse impacts on resources in their vicinity. Further, none of the cumulative effects in the vicinity would be significant.

RESPONSIBLE OFFICIAL: Jeffrey L. Payne, Ph.D.
Office for Coastal Management
2234 South Hobson Avenue
Charleston, SC 29405
Tel: 301-713-3155

The environmental review process led us to conclude that this action will not have a significant effect on the human environment. Therefore, an environmental impact statement will not be prepared. A copy of the finding of no significant impact (FONSI) and the supporting environmental assessment (EA) is enclosed for your information.

Although NOAA is not soliciting comments on this completed EA/FONSI, we will consider any comments submitted that would assist us in preparing future NEPA documents. Please submit any written comments to the responsible official named above.

Enclosures

FINDING OF NO SIGNIFICANT IMPACT
Hika Park Pedestrian Bridge
Village of Cleveland, Wisconsin

The National Oceanic and Atmospheric Administration (NOAA), through the Wisconsin Coastal Management Program (WCMP), proposes to partially fund a pedestrian bridge at Hika Park in the Village of Cleveland, Wisconsin, that would span Centerville Creek approximately 100 feet from Lake Michigan. The bridge would allow pedestrians to safely move between the northeastern portion of the park (known as Hika Shores and acquired within the last 12 years with support from NOAA and other sources) and the southeastern portion of the park, where most of the existing public access infrastructure is located. The proposed bridge would be 72 feet long and installed on abutments on both sides of Centerville Creek; no supports would need to be driven into the creek. NOAA also considered a No Action alternative; this scenario would require the Village to identify other sources to cover the $36,000 it has requested from NOAA and WCMP, delaying installation of the pedestrian bridge.

The analysis in the attached Environmental Assessment concludes that significant individual and/or cumulative environmental effects would not result from implementation of the preferred alternative. Thus, preparation of a Finding of No Significant Impact (FONSI) is warranted. NOAA uses eleven criteria for determining the significance of the impacts of a proposed action. These criteria are discussed below as they relate to the proposal. Each criterion is discussed below with respect to the proposed action and considered individually, as well as in combination with the others.

a. Has the agency considered both beneficial and adverse effects? (A significant effect may exist even if the federal agency believes on balance the effect will be beneficial.)

The agency has considered both beneficial and adverse effects, and no significant effects are anticipated. Contributing federal funding towards the pedestrian bridge would expedite improvements to accessibility and visitor safety at Hika Park, particularly for those visiting the northeastern portion of the park, sometimes known as Hika Shores. (The Hika Shores parcel, which offers 535 linear feet of sandy beach and a recently-restored ridge and swale ecosystem, was added to the park within the last fifteen years, with support from NOAA, through WCMP.) Erecting a pedestrian bridge has long been under consideration, in part because there is no sidewalk along the side of Lakeshore Drive where both Hika Shores and the original part of Hika Park (where the parking lot and restrooms are located), and it is also unsafe to cross the creek on foot. Under the preferred alternative, NOAA would contribute $36,000 to help bring that vision to fruition. (Under the No Action alternative, the Village would have to find another source of the $36,000 requested from NOAA and WCMP, which would delay the effects of installing a bridge.) Along with some beneficial consequences to visitor use, the accessibility of Hika Shores, and public safety, installing a bridge would have a few minor adverse effects. For example, there would be minor soil compaction in the areas (which collectively have a footprint of 370 square feet) where the pilings are driven in to support the bridge, stone rip rap is installed, and gravel is laid down to create smooth approaches to the bridge. Any animal species that currently use these habitats might shift to other areas. Minor adverse impacts could be associated with shading beneath the 8-foot wide bridge (which could have *de minimus* effects on

plants, mitigated somewhat by elevating the bridge well above the creek, allowing light to reach much of the stream at different times of day). There would also be temporary noise and disturbance during bridge installation, projected to take less than 6 weeks. Over the long term, there could be new opportunities for animals to feed, shelter, travel, or rest on or under the bridge, which could have very minor positive or negative consequences to some species, but no impacts to threatened or endangered species. When it issued the permit to construct the bridge, the Wisconsin Department of Natural Resources found there would be no impacts to habitats. Finally, there could be some effects to aesthetics, which on balance would be fairly neutral. The pedestrian bridge would create new vantage points from which to view Hika Park. The proposed location for the bridge is 100 feet upstream from Lake Michigan (and 250 feet downstream from the highway bridge), so the new bridge could be visible to those looking towards the lake from some locations. The materials for the pedestrian bridge (steel and wood) would be compatible with other infrastructure in the park, including its picnic area, allowing the bridge to fit in better with other nearby infrastructure (including the public works facilities, restrooms, seasonal pier, etc.). Thus, the proposed bridge would be compatible with its surroundings. There are no sensitive human populations in the immediate vicinity of the park that could be adversely affected, and there would be no effect to any threatened or endangered species or critical habitat identified under the Endangered Species Act. Further, there would be no adverse impacts to historic properties. For these reasons, none of the anticipated effects of bridge installation are considered significant. Prior to bridge installation, a few adverse socioeconomic consequences of not having a pedestrian bridge at Hika Park would continue to affect park visitors.

b. To what degree would the proposed action affect public health and safety?

The proposed project would have a minor beneficial effect on public health and safety by enabling pedestrians to safely move between the southeastern and northeastern portions of Hika Park, without walking along Lakeshore Drive (which does not have a sidewalk on its eastern side, nearest these portions of the park). Erecting a bridge would also make it less likely that people would try to cross the creek on foot, which is unsafe because of the lack of secure footing. The bridge would connect (among other amenities) the area with the boat ramp, seasonal pier, restrooms, picnic tables, and designated parking area to the Hika Shores portion of the property, where there is one-tenth of a mile of sandy beach and a restored ecosystem with ridge and swale topography. Installing a bridge might encourage swimmers to use the Hika Shores area, which would reduce use conflicts between swimmers, boaters, and fishers in the southeastern part of Hika Park and improve swimmer safety, if swimmers use the Hika Shores area (away from the boating and fishing areas) instead.

c. To what degree would the proposed action affect unique characteristics of the geographic area in which the proposed action is to take place?

Hika Park is the only lake-level site where the public can access Lake Michigan between Manitowoc and Sheboygan. The ridge and swale topography recently restored on the Hika Shores property is also unusual; few ridge and swale wetlands exist in the area. However, installing a pedestrian bridge would not adversely affect the characteristics that make the geographic area unique. Aesthetically, the proposed bridge would fit in well with its surroundings. The pedestrian bridge would be 250 feet downstream from the existing highway

bridge (on Lakeshore Drive). The pedestrian bridge would not detract from the unique characteristics of the park or the lower portion of Centerville Creek. In addition, none of the Village of Cleveland's unique historic resources would be affected by the proposed action.

d. To what degree would the proposed action have effects on the human environment that are likely to be highly controversial?

None. There is no significant scientific disagreement about the nature of the environmental consequences of the proposed bridge. NOAA heard from a nearby resident who did not think the pedestrian bridge should be the highest priority for funding at Hika Park, but disagreements about priorities happen everywhere. The idea of installing a pedestrian bridge over Centerville Creek is not new; it is supported by specific recommendations in a 1985 *Waterfront Plan* for the Village and a 1996 *Park Site Master Plan* for Hika Park. Installing a bridge is also consistent with objectives articulated in the Village's current *20-Year Comprehensive Plan*. If there were scientific debate about the respects in which installing a pedestrian bridge would affect the human environment, associated questions would have come to light in the last 20 years. All the meetings of the Village bodies making decisions about the bridge have been open to the public, and for the most part members of the public have not attended these meetings to communicate their views. The Village received input about the bridge from approximately six individuals and families in connection with the possibility of a sign being erected in the northeastern portion of Hika Park marking the park boundary, to discourage trespassing on adjacent properties. In response, the Village erected a small sign, and the Village plans to both landscape a natural border at the edge of the park and post new maps showing the boundaries of the park (S. Grunwald, Village of Cleveland, personal communication, June 11, 2016). Also, the Village received a few letters of support when it applied to the Wisconsin Coastal Management Program for funding, including letters from the Lakeshore Natural Resources Partnership and a member of Friends of Hika Bay.

e. What is the degree to which effects are highly uncertain or involve unique or unknown risks?

None. The possibility of installing a pedestrian bridge at Hika Park has been discussed publicly in the Village of Cleveland over the course of many years. The proposed design for the bridge was informed by input from the Village of Cleveland and proposals from engineering firms that would be qualified to design and arrange for the installation of a prefabricated bridge. At other sites, there are similar truss-style pedestrian bridges supported by abutments at both ends (such as one depicted in the Request for Proposals issued by the Village for the engineering design work). The State of Wisconsin issued a permit for constructing the bridge after thoroughly reviewing the proposal. In short, installing the bridge would not involve unique, unknown, or highly uncertain risks; all available data indicate that any adverse impacts would be minimal.

f. What is the degree to which the action establishes a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

None. Approval of funding for this proposed project would not establish a precedent. NOAA approves funding for small construction projects consistent with Section 306A of the CZMA

every year. In many instances, NOAA funding has supported projects involving constructing and improving bridges, boardwalks, piers, and viewing platforms that enhance public access opportunities in coastal settings. Each project that WCMP proposes to fund is reviewed individually by the Wisconsin Coastal Management Council, Wisconsin Department of Administration, and NOAA.

g. Does the proposed action have individually insignificant but cumulatively significant impacts?

No, the proposed action would not contribute to individually insignificant but cumulatively significant impacts. Erecting a bridge would have minor adverse effects to soil beneath the supports for the bridge (abutments and pilings) on either side of Centerville Creek and could cause some shading of plants beneath the bridge. Other effects are summarized above, such as potential short-term disturbance during bridge installation and long-term impacts related to recreational uses, public safety, and aesthetics. Besides considering further public access enhancements at Hika Park (see, e.g., Figure 9 of the EA), the Village is considering moving its adjacent Public Works facilities to an inland location, which would make the land available for recreational users (and potentially for additional parking). NOAA evaluated past, present, and potential future projects at Hika Park and determined that they would not collectively result in significant cumulative impacts because of the types of improvements being considered, the relatively small area affected, and the fact that projects must comply with federal and state requirements designed to protect threatened and endangered species, wetlands, water bodies, and other natural and historic resources.

Past projects NOAA considered included the recent restoration of 2,500 linear feet of the Centerville Creek channel, upstream (west) of Lakeshore Drive, including the transport of excess sediment (which had accumulated behind a former dam) to the Hika Shores area to recreate ridge and swale topography. Also, there have been and will continue to be efforts to plant native species of vegetation and remove invasive plants within the park. Concepts for future changes to Hika Park include those shown in Figure 9 (boardwalks and trails, seating areas, educational signs, and potentially a parking area north of the creek). No funding for those proposals has been identified, and it is uncertain whether, when, and how projects along those lines would be implemented. The proposed additional infrastructure would be in areas that have already been disturbed, for the most part. If built, the trails and boardwalks would cover less than 5% of the Hika Shores property and less than 1% of Hika Park as a whole.

Net long-term effects of any potential future park enhancement projects, in combination with past projects and the current proposal, would likely be beneficial, but minor, as supported by the analysis in a NOAA Restoration Center Programmatic Environmental Impact Statement in 2015. That evaluation concluded that trail restoration efforts could have short-term adverse effects, but the only possible long-term adverse effects would be to cultural and historic resources, if affected by a particular project. The other types of long-term effects identified in the 2015 evaluation included possible beneficial effects to geology, soil, water, air, living resources, habitat, and land use/recreation. At Hika Park, the most likely impacts of future installation of public access infrastructure would be to photosynthetic activity of plants and to small portions of habitat areas directly under the infrastructure. Potential adverse effects would be mostly

temporary and, on the scale of Hika Park as a whole, *de minimus*. Beneficial impacts to the recreational and educational experiences available to the public would derive from providing additional trails, boardwalks, seating, and signage, if created. Also, if trails or boardwalks were installed, they could limit the areas where visitors walk, reducing the risk of trampling or infringing on the habitat used by some species. All available data indicate that individual and cumulative impacts would be minor, including consideration of the relatively small area that potential future public access infrastructure would cover and the fact that installation would be expected to be carried out consistent with applicable state and federal requirements. None of the anticipated effects would be considered significant individually or cumulatively, and the effects would not exceed the ability of human or natural communities to withstand stress.

h. What is the degree to which the action adversely affects entities listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources?

None. NOAA determined that the proposed action would have no adverse effect on historic properties and submitted this finding to the Wisconsin Historical Society (see Appendix D), which did not comment. A Wisconsin Department of Natural Resources archaeologist also evaluated the project's potential to impact historic properties before issuing the permit for the bridge.

i. What is the degree to which endangered or threatened species, or their critical habitat, as defined under the Endangered Species Act of 1973, are adversely affected?

The only threatened or endangered species that has been observed in Hika Park is the rufa red knot. This bird species could stop in Hika Park on its migratory journey, but does not nest or breed at Hika Park. There is no federally-designated critical habitat within or adjacent to Hika Park. After consulting with the U.S. Fish and Wildlife Service, NOAA concluded that the proposed project would have no effect on any federally-listed threatened or endangered species or on federally-designated critical habitat. See Appendices B and C for the associated correspondence.

j. Does the proposed action have a potential to violate federal, state, or local law for environmental protection?

No. The Village of Cleveland would carry out the project, and it indicates that no local permits are needed. The U.S. Army Corps of Engineers indicated to the Village that no permits under its jurisdiction (e.g., under the Clean Water Act) would be required. A State of Wisconsin permit was issued to construct the bridge and is valid through June 11, 2018. As part of that review, the state assessed the information submitted with the permit application from the standpoint of state requirements to manage historic resources, threatened and endangered species, fisheries, stormwater, safety and other factors. A few conditions to avoid impacts to resources (e.g., fish) were specified in the permit. The EA documents compliance with federal requirements and the agencies consulted as part of its preparation. Given project review at the local, state, and federal level, no violation of environmental protection laws is threatened.

k. Will the proposed action result in the introduction or spread of a non-indigenous species?

No. No additional plants or animals would be introduced as part of the proposed project. The bridge permit issued by the State of Wisconsin requires that all the equipment used to install the bridge be decontaminated (to remove invasive species and viruses) before and after it is moved or used. Specifically, every time the equipment is moved, it is either to be allowed to dry thoroughly for 5 days, or it is to be washed after any mud, aquatic plants, and animals are removed.

Finding of No Significant Impact
Environmental Assessment
Hika Park Pedestrian Bridge

NOAA prepared the attached Environmental Assessment evaluating consequences related to a proposal to provide, under Section 306A of the Coastal Zone Management Act, some of the funding needed to enable construction of a pedestrian bridge at Hika Park. Installing the bridge would have beneficial effects for recreational users by improving safety and accessibility. All potential adverse impacts of installing the bridge would be minor, and most would be short-term, but there could be minor, long-term, adverse impacts (e.g., to soil and vegetation) in small areas. In view of the information and analyses contained herein, it is hereby determined that providing federal funding to support installing the bridge would not significantly affect the quality of the human environment. In addition, all beneficial and adverse impacts of the proposed action have been evaluated to reach this conclusion. Accordingly, preparation of an Environmental Impact Statement for this action is not necessary.

W. Russell Callender, Ph.D.
Assistant Administrator
for Ocean Services and Coastal Zone Management

9/22/16
Date

ENVIRONMENTAL ASSESSMENT **August 2016**

Hika Park Pedestrian Bridge

Village of Cleveland, Wisconsin

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service
Office for Coastal Management
1305 East West Hwy, N/OCM1
Silver Spring, MD 20910
301-713-3155

TABLE OF CONTENTS

APPENDICES

TABLES

FIGURES

Cover photograph of Centerville Creek and Hika Park, East of Lakeshore Drive, courtesy of Michael Friis, Wisconsin Coastal Management Program (2015)

ACRONYMS

CFU/100 mL	Colony Forming Units per 100 milliliters
CZMA	Coastal Zone Management Act
EA	Environmental Assessment
E. coli	Escherichia Coli
LNRP	Lakeshore Natural Resource Partnership
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NTU	Nephelometric Turbidity Unit
OCM	Office for Coastal Management
RPC	Regional Planning Commission
USACE	U.S. Army Corps of Engineers
USUSFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WCMP	Wisconsin Coastal Management Program
WDNR	Wisconsin Department of Natural Resources
WHS	Wisconsin Historical Society

1.0 INTRODUCTION

The National Coastal Zone Management Program works to preserve, protect, develop, and, where possible, restore and enhance coastal zone resources. The Wisconsin Coastal Management Program (WCMP) is a federal-state partnership between the Wisconsin Department of Administration and the National Oceanic and Atmospheric Administration (NOAA), Office for Coastal Management (OCM). WCMP was approved by NOAA under the Coastal Zone Management Act (CZMA) in 1978. In accordance with the CZMA, NOAA provides approved state coastal zone management programs with funding that can be used for a number of purposes, including program administration (under Section 306 of the CZMA) and low-cost construction projects (under Section 306A of the CZMA) to facilitate public access to coastal areas, among other purposes. WCMP coordinates with state, local and tribal government agencies and non-profit organizations to help manage the ecological, economic, and aesthetic assets of Wisconsin's coastal areas, along Lakes Michigan and Superior. WCMP also works to preserve and improve access to the natural and historic resources of Wisconsin's Great Lakes coasts. WCMP provides some of the funding it is awarded under the CZMA to local government agencies, academia, and others (through a competitive sub-grant program) for projects in five categories, including public access and historic preservation projects. The Village of Cleveland submitted a proposal for funding that was selected through this competitive process. Thus, WCMP proposes allocating $36,000 in federal funding from NOAA through a CZMA cooperative agreement to the Village of Cleveland to improve public access opportunities at Hika Park by enabling installation of the pedestrian bridge.

The Village of Cleveland is in Manitowoc County, Wisconsin, roughly halfway between Manitowoc and Sheboygan. NOAA proposes to provide $36,000, through WCMP, to enable construction of a pedestrian bridge at Hika Park, in the Village of Cleveland. The remainder of the funding required to install the bridge ($68,000, plus staff time) would come from the Village of Cleveland ($20,500), other grants, and donations that have already been secured (Kettler and Grunwald 2016). The location of Hika Park is shown in Figure 1 (Appendix A). The proposed bridge would improve accessibility by bridging the sections of Hika Park to the northeast and southeast of Centerville Creek without requiring people to walk along Lakeshore Drive. The Village's proposal to build the bridge is consistent with a 1985 Village *Waterfront Plan*, a 1996 *Park Site Master Plan* and the current *20-Year Comprehensive Plan* for the Village.

NOAA evaluates each project coastal states propose to carry out with CZMA funding individually to ensure it meets applicable federal requirements. Low-cost construction projects are subject to guidelines under Section 306A of the CZMA, among other requirements. After fully evaluating each proposed low-cost construction project, NOAA determines whether or not to fund it. Thus, NOAA must evaluate and make a decision in response to WCMP's request to support the proposed project through the NOAA-WCMP cooperative agreement.

This Environmental Assessment (EA) analyzes the impacts of providing federal funding for the proposed public access improvements at Hika Park. If NOAA does not contribute funding towards the bridge (a scenario referred to herein as the No Action alternative), the Village would likely secure $36,000 from another funding source, delaying the installation of the bridge. The EA conforms to requirements for implementation of the National Environmental Policy Act

(NEPA) and NOAA Administrative Order 216-6A, "Compliance with the National Environmental Policy Act, Executive Orders 12114, Environmental Effects Abroad of Major Federal Actions; 11988 and 13690, Floodplain Management; and 11990, Protection of Wetlands." The EA analyzes the potential for significant environmental impacts to the human environment from the proposed action, along with the No Action alternative.

1.1 Setting

Cleveland is almost 45 miles south of Green Bay and approximately 12 miles south of Manitowoc. The Village is surrounded by the Town of Centerville to its north, west, and south. The eastern border of Cleveland is Lake Michigan. Hika Park is along Lake Michigan, off Lakeshore Drive (also known as County Highway LS); near its intersection with Lincoln Avenue (see Figure 1). Hika Park is the only publicly-owned waterfront property with shoreline in its natural condition between Manitowoc and Sheboygan that provides easy public access, at lake level, to Lake Michigan. Other coastal public access sites in the area contain bluffs, requiring visitors to go down steep trails to reach the coast (Village of Cleveland 2003, 2012). The shoreline along the current boundaries of Hika Park makes up approximately one-tenth of the 1.1 mile of shoreline in all of Cleveland (Bay-Lake Regional Planning Commission [RPC] 1985). Hika Park's sandy shoreline is considered a public beach. The area has been used as a Lake Michigan access point since the 1850s, as discussed in section 4.3.3.

The range of recreational opportunities available in Hika Park includes picnicking, boating, fishing, bird watching, observing the natural environment, swimming, and environmental education. In addition, people bicycling on Lakeshore Drive can visit the park. Most of these activities have historically occurred in the southern portion of Hika Park, south of Centerville Creek, in the 2.2-acre area that originally comprised the park (M. Friis, personal communication, September 10, 2014). This area includes a boat ramp. There is also a parcel of Village-owned land with two buildings and a parking area north of Centerville Creek, which is used by the Village Department of Public Works. In 2004, pursuant to the CZMA, NOAA, through WCMP, provided 40% of the funding needed for the Village to acquire an additional 3.5 acres of undeveloped land, immediately to the north of the Village Department of Public Works facility. The 3.5-acre area acquired, east of Lakeshore Drive, is also known as Hika Shores and has been added to Hika Park. Hika Shores includes 535 feet of sandy beach, an inviting area for swimming, especially because it is separate from the sometimes-crowded boating and fishing areas south of Centerville Creek. As a result, it is generally safer to swim off the lakeshore of the Hika Shores area than it is to swim along the southern part of Hika Park (Village of Cleveland 2003). When it was acquired in 2004, Hika Shores contained some forested land, a meadow on the western side, sandy areas near the shoreline, and a remnant ridge and swale wetland along its eastern edge (Village of Cleveland 2003; Perlman 2004). Currently, pedestrians travel between the northeastern and southeastern portions of the park along Lakeshore Drive. While it is possible to cross Centerville Creek on foot, it is not safe to do so because the banks are steep and have riprap (large stones) along them, which do not offer secure footing. A new pedestrian bridge over Centerville Creek would allow pedestrians to safely move between the southeastern portion of the park and Hika Shores.

Figure 2 is an aerial photograph of the eastern portion of Hika Park. Most of the existing recreational infrastructure, including a boat ramp, covered picnic area and restrooms, is in the southeastern portion of the park. A non-governmental organization called Cleveland Fish and Game, Inc., installs an approximately 100-foot seasonal pier during the summer, at the southern end of the park (M. Friis, Wisconsin Coastal Management Program, personal communication, September 10, 2014). People can fish off the pier or tie up small boats to it. Also, Cleveland Fish and Game hosts a fish derby at Hika Park each year (Lakeshore Natural Resource Partnership [LNRP] 2015a). There are parking spaces at Hika Park, south of Centerville Creek; nearby parking spaces to the north of the creek are currently for Village Public Works Department employees only (S. Grunwald, Village of Cleveland, personal communication, July 22, 2016). As early as the 1980s, it was reported that the park and boat ramp sometimes became overcrowded from May through September, during the Lake Michigan fishing season. Further, on some weekends, there were considerably more vehicles and boat trailers people wanted to park in the vicinity than there were parking spaces at Hika Park (Bay-Lake RPC 1985). The boat ramp continues to be popular, particularly on weekends in the spring and summer, perhaps because it is the only lake-level boat landing between Manitowoc and Sheboygan (LNRP 2015a).

Within the past several years, a restoration project was carried out along Centerville Creek, upstream (west) of Lakeshore Drive, in the vicinity of a pond that was formerly associated with a mill. The Village refers to this area as the Centerville Creek Corridor. The restoration project aimed to remove a large volume of eroding sediment (much of which had accumulated behind a former mill dam), restore the channel of the creek, improve habitat for fish and other species, and create a riparian forest habitat along the creek for native species (LNRP 2009). For more information about the restoration project, see section 4.1.4. In 2012, the Village of Cleveland added land along the Centerville Creek Corridor to Hika Park, bringing the total size of the park to almost 14 acres. Some of the sediment that was removed as part of the restoration project was used between 2013 and 2015 to re-contour Hika Shores to try to restore ridge and swale wetland topography (S. Grunwald, Village of Cleveland, personal communication, July 25, 2015). The Village and others, including non-profit organizations and academic partners, have been coordinating efforts to remove invasive species and replant native vegetation in the Hika Shores area, including wildflowers, trees, and sedges (LNRP 2015b).

1.2 Summary of Proposed Action and Alternatives

NOAA proposes to provide $36,000 in CZMA funding to WCMP, which would transfer the funds to the Village of Cleveland to support the installation of a pedestrian bridge over Centerville Creek. The total cost of the bridge would be $104,000, plus staff time associated with planning and overseeing bridge construction. The Village would invest $20,500 towards the bridge project, and the rest of the costs will be covered by grants and donations that have already been secured (Kettler and Grunwald 2016). The bridge would be installed a little more than 100 feet upstream of Lake Michigan and approximately 250 feet downstream of the Lakeshore Drive bridge over Centerville Creek (which has a sidewalk along only one side of it). Centerville Creek runs through a ravine that is 20 to 40 feet wide (Village of Cleveland 2012). The bridge will provide a safe way for pedestrians to move between the northern and southern parts of Hika Park, without walking along Lakeshore Drive or trying to cross the creek. The proposed design for the bridge (see Figure 3) calls for an 8-foot wide arched bridge that is 72 feet

long, approximately 10 feet above the lowest point of the creek bed. It would be supported on abutments on either end; no supports would need to be driven into the creek (Cedar Corporation 2015a).

The proposed project would build on other efforts to restore the Hika Shores parcel. First, the ridge and swale topography was re-established on the Hika Shores parcel, using sediment removed from the banks of the creek near the former dam. After the sediment was moved, considerable work on the natural landscape was carried out, including native vegetation planting and invasive species removal projects, primarily by volunteers organized by the non-profit Friends of Hika Bay (M. Friis, WCMP, personal communication, September 10, 2014; LNRP 2015c). The bridge would promote use of the Hika Shores area by providing easy access to it, including its sandy beach, which could draw swimmers to use it instead of the boat launch area in the southern portion of Hika Park, which has been used as a public beach in the past (Village of Cleveland 2012). A pedestrian bridge would also fulfill a long-time goal of the Village, mentioned in various Village planning documents, ranging from a 1985 *Waterfront Plan*, to a 2007 *20-Year Comprehensive Plan* (Bay-Lake RPC 1985, 2007).

The preferred alternative is to contribute funding via WCMP for installation of the proposed bridge. NOAA has also considered and analyzed a "No Action" alternative, under which NOAA would not contribute CZMA funding for installation of the bridge at Hika Park. Under the No Action scenario, the Village would likely arrange for the bridge to be installed at a later date, after an alternative source of funding is secured. NOAA has not analyzed in detail any alternate configurations for the bridge for a few reasons. Coastal management programs that receive CZMA funds submit to OCM a request to carry out projects in a fashion that best suits local conditions, from their perspective (or in the fashion requested by the potential subrecipient of state coastal management program funds). After fully evaluating each proposal, OCM typically determines whether or not to fund it, as proposed. There can be exceptions, such as when OCM is notified of mitigation measures, time of year restrictions, or other best management practices recommended by other agencies that OCM consults (e.g., pursuant to the mandates identified in section 6.0 of this document).[1] Minor changes to the proposed design would not be functionally different or have measurably different impacts. This is because other configurations that still meet the objectives of the project partners would require a very similar design, footprint, and location, considering the small size of the park, particularly the width of the portion east of Lakeshore Drive.

1.3 Findings

All the anticipated impacts to the human environment of either constructing or not constructing the bridge are minimal, and none would be significant. The proposed bridge would have primarily beneficial impacts, including to accessibility and visitor safety. Installing a pedestrian bridge would improve connectivity between the parts of Hika Park north and south of Centerville Creek by allowing recreational users to cross Centerville Creek without needing to walk along the sidewalk or shoulder on Lakeshore Drive (or needing to cross the creek on foot). The proposed project is compatible with all applicable laws and regulations. For example, no historic

[1] In this case, the only best management practices applicable to the proposed bridge were identified by the State of Wisconsin and incorporated into the permit it issued for installation of the bridge (WDNR 2015a).

properties would be affected, and there would be no anticipated effects to threatened or endangered species or critical habitat from the proposed project.

The proposed bridge design, which does not require pilings to be sunk into the creek, will have minimal impacts to the habitats, plants, and animals in Centerville Creek. Nonetheless, a few *de minimus* adverse impacts to the physical and biological environments could result from implementing the proposed project. There could be minor soil compaction from driving in the pilings to support the bridge, but this work will affect only a very small area. Although the bridge will be installed with a crane, there could be some sediment produced at the construction site. Best management practices will be used to reduce the potential for sediment to be transported outside the construction site (Cedar Corporation 2015e). As a precaution, the Village will not carry out construction between March 15 and May 15 of any year to reduce the potential for adverse impacts to the creek during this period of considerable fish movement, spawning, egg incubation, and high stream flows (WDNR 2015a). The bridge would cause some long-term shading of areas beneath it, comprising a very small area. The effects on plants in this very small portion of the park would be *de minimus*. The minor shading of a very small portion of Centerville Creek will not cause significant effects. Further, while the project would not significantly negatively affect any animals, there could be minor, short-term impacts to wildlife during construction. (The brief periods of construction activity might disturb certain birds, mammals, or other wildlife in localized areas, but most affected species could move elsewhere.) Over the long term, new opportunities for animals to feed, shelter, travel, or rest on or adjacent to the new bridge could be created, which could result in minor positive or negative impacts that would not be significant and that are hard to predict due to predator-prey interactions and other factors. For these reasons, any adverse environmental impacts of installing the bridge would not be significant. Because of the anticipated beneficial impacts described above and because significant individual and cumulative adverse environmental effects would not result from implementing the proposed action, the preferred alternative is to contribute funding toward the project so that the bridge can be constructed in the near term.

The No Action alternative would have similar impacts over the long term. However, in the short term, to move between Hika Shores and the southeastern part of Hika Park, pedestrians would continue to use the existing bridge over Centerville Creek, on Lakeshore Drive. This can be unsafe, especially to visitors walking along the eastern side of the bridge, where there is no sidewalk. Alternatively, visitors could stay in the southeastern portion of the park, the area that contains most of the recreational infrastructure, because there would be no pedestrian bridge to promote the flow of visitors between this area and Hika Shores. This could contribute to continued use conflicts between swimmers, boaters, and fishers in the southeastern part of Hika Park. A third possibility is that, in the near term, the lack of a pedestrian bridge near the shoreline would make it more likely that some visitors would try crossing the creek on foot, which is not safe. For these reasons, the No Action alternative would allow minor adverse impacts to public safety to continue in the short term. Under the No Action alternative, the pedestrian bridge would be installed after the Village of Cleveland identifies an alternate source for the $36,000 in bridge-related costs that it requested WCMP and NOAA provide. Thus, it would have the same consequences as the preferred alternative over the long term.

2.0 PURPOSE AND NEED

In accordance with NOAA Administrative Order 216-6A, NEPA, and other statutory and legal requirements, NOAA obtained and reviewed documentation related to the proposed project, including information related to compliance with environmental and administrative review requirements, then prepared this EA to facilitate its decision-making.

2.1 Purpose

The purpose of constructing the proposed bridge would be to improve public access opportunities and public safety at a unique park in the Village of Cleveland that is used for boating, fishing, swimming, and other recreational and educational purposes. In particular, the objective for installing a pedestrian bridge at Hika Park would be to provide a safe way for visitors who come to the park to boat, fish, swim, and engage in other recreational and educational activities to move between the northern and southern portions of the park (which is bisected by Centerville Creek). The objective of installing a bridge is to improve public access to the public beach or coastal waters of Hika Park by providing funding to WCMP for a Village of Cleveland infrastructure improvement project.

2.2 Need

In the twelve years since the Hika Shores parcel was acquired, there has been no safe way to reach that portion of Hika Park from the designated parking area. This has concentrated some of the visitor use of the park, including boating, fishing, and swimming, in the 2-acre, southeastern portion of the park. Visitors to Hika Shores have had to walk along Lakeshore Drive from the parking area in the portion of Hika Park south of Centerville Creek or park in spaces at the Public Works facility that are supposed to be for the exclusive use of Village employees. The proposed bridge would enable pedestrians to cross from the southeastern portion of Hika Park to the northeastern portion of the park without walking Lakeshore Drive or trying to cross the creek. This would allow the public to take greater advantage of educational and recreational opportunities in the Hika Shores area, a public access site that NOAA and WCMP previously invested in. At this time, NOAA needs to respond to a request from WCMP to partially support, through a cooperative agreement under the CZMA, installation of the bridge over Centerville Creek at Hika Park.

3.0 ALTERNATIVES

3.1 Preferred Alternative – Contribute Federal Funding

Contributing $36,000 in federal CZMA funds to support the proposed project is NOAA's preferred alternative. Hika Park provides the only lake-level, handicap-accessible access point to Lake Michigan between Manitowoc and Sheboygan. NOAA proposes to provide $36,000 in federal funding to WCMP, which would provide the funds to the Village of Cleveland to install a 72-foot long, arched pedestrian bridge over Centerville Creek. The total cost of the bridge would

be $104,000, plus staff time associated with planning and overseeing the bridge project. The Village would cover $20,500 of the remaining costs, and the rest of the funding needed has been pledged to the Village from other sources (Kettler and Grunwald 2016).

See Figure 3 for diagrams showing the proposed bridge design and the modifications to the areas adjacent to the creek needed to accommodate bridge installation. The proposed bridge would be built at an elevation of at least 587 feet above sea level, which is at least 2 feet above the 100-year flood elevation of Centerville Creek in the location where the bridge is proposed. The clear-span bridge would be supported by abutments on either side of the creek; it would not require any supports to be installed within Centerville Creek (Cedar Corporation 2015a). The bridge would be a metal truss style, made primarily of steel, with treated wooden decking. There would not be any gaps between planks. The bridge would be 8 feet wide, with railings at least 3.5 feet higher than the deck of the bridge. The specific truss style is called a Pratt pony truss, with steel members coming to the top chord (i.e., the safety railing) from the deck at a diagonal and perpendicular to the deck. The bridge would be supported by 4 concrete-filled steel pilings approximately 20 feet long and 10.75 inches in diameter; their length will be adjusted so that they can bear 15 tons per piling (Cedar Corporation 2015d).

The bridge would be installed a little more than 100 feet upstream of Lake Michigan and approximately 250 feet downstream of the Lakeshore Drive bridge over Centerville Creek (which has a sidewalk along only the western side of it). The proposed project would improve accessibility by allowing people to walk between the northeastern and southeastern portions of Hika Park without having to walk along the Lakeshore Drive bridge (or cross the ravine that Centerville Creek runs through). Linking the northern portion of Hika Park to the area with restrooms on the southern side of the creek via a pedestrian bridge might encourage swimmers to use the Hika Shores area, which is a safer place to swim than swimming near the boat launch and pier on the southeastern side of the park. The proposed project would not improve connectivity between the northeastern and northwestern part of Hika Park; pedestrians would still have to cross Lakeshore Drive. At the entrance to Hika Park, cars come to a 4-way stop, which slows traffic at that location, where the speed limit is 25 miles per hour.

While the Village is not required to obtain a permit from the U.S. Army Corps of Engineers (USACE), it applied for a Wisconsin bridge permit from the Wisconsin Department of Natural Resources (WDNR) (USACE 2015). The state permit, issued June 11, 2015, indicates that the bridge cannot be installed between March 15 and May 15 of any year. The intent of that restriction is to ensure that bridge placement does not adversely affect fish movement, fish spawning, fish egg incubation periods, and high stream flows. The permit, which is valid through June 11, 2018, states that the bridge shall not be supported by pilings in Centerville Creek. It requires bridge installation to be carried out in a way that minimizes erosion and siltation into surface waters, as well as removal of trees and shoreline vegetation. It also requires that equipment used for the project be decontaminated to remove invasive species and viruses before and after it is moved or used (WDNR 2015a). Photographs of the site submitted as part of the application to WDNR are included as Figures 4, 5, and 6.

Geotechnical surveys to provide data for designing the bridge foundation were carried out in November 2014 (Village of Cleveland Public Works and Utilities Committee 2014). The

proposed bridge project has been discussed multiple times at regular meetings held by the Village Public Works and Utilities Committee and some of the regular meetings held by the Village Plan Commission and the Village Board, respectively. These meetings are open to the public, but members of the public have rarely attended. However, when questions about the proposed bridge project have been raised, they have been discussed at some of these meetings. The Executive Director of the Lakeshore Natural Resource Partnership (LNRP), with which Friends of Hika Bay is affiliated and a key partner in restoration efforts in the region, has attended some of the meetings in order to participate in the discussions (Village of Cleveland Public Works and Utilities Committee 2015a, b; Village Board of Cleveland 2015).

The bridge is fabricated off site, and contractors project that all the work to prepare the site for bridge installation (e.g., build the abutments), install the bridge using a crane, distribute stone (e.g., for the gravel bridge approaches), and restore the site would take approximately 5 weeks (Cedar Corporation 2015b). The significant heavy work associated with installing the bridge would be completed from the north side of the creek only, east of the Village Department of Public Works building that serves as a sewage lift station. The pilings would be installed with an air hammer, and concrete trucks would supply the concrete portions of the abutments (S. Grunwald, Village of Cleveland, personal communication, July 25, 2105).

3.2 No Action Alternative

Under the No Action alternative, NOAA would not provide funding for the proposed project. This alternative assumes the Village of Cleveland could not immediately identify an alternate source of funding to construct a bridge. In the short term, visitors who want to move between the portion of Hika Park northeast of Centerville Creek and the portion southeast of Centerville Creek would have to do so by walking along the shoulder on the east side of the Lakeshore Drive bridge, or the sidewalk on the western side of the bridge. (Also, some people might try to cross the creek on foot, particularly at times of year when the creek is low.) However, over the long term, NOAA anticipates that the Village would be able to secure, at some point, the $36,000 it needs (approximately one-third of the total cost of constructing the bridge) from other sources and arrange for the bridge to be constructed as proposed. Once the new bridge is constructed, the environmental consequences would be the same as under the preferred alternative. In any event, visitors who wanted to move between the northeastern and northwestern portion of Hika Park would continue to need to cross Lakeshore Drive, a two-lane road with a four-way stop sign where it intersects with Lincoln Avenue.

3.3 Alternatives Considered but Eliminated by the Project Partners

Before adopting a final recommendation for the design of the bridge, the Village Public Works and Utilities Committee did consider a few possible modifications to the bridge design. The Committee initially considered installing a flat bridge rather than a slightly curved one, but Committee Members voted for the curved design. The Committee initially considered a shorter bridge that would have been approximately 60 feet long rather than 72 feet long. The longer length was selected to improve access, address WDNR clearance requirements, and so that the supports would not have to be built in an area that already contains some stone rip rap. Finally, the Committee also considered using wood pilings instead of steel pilings, but selected steel

because it would last longer (Village of Cleveland Public Works and Utilities Committee 2015b, c). Also, it should be noted that possible designs for the bridge that would have required pilings to be installed within Centerville Creek would have had additional impacts on the habitats and species within the creek, beyond the impacts of the proposed project.

There also have been some discussions between the Village, Friends of Hika Bay, and other partners related to building a trail and boardwalks on the Hika Shores parcel, educational signage, additional seating, and/or a viewing platform, but none of these additional improvements are definite. It is unknown whether and when construction of these types of additional amenities would occur, for a variety of reasons (S. Grunwald, Village of Cleveland, personal communication, March 18, 2016). The original project proposed to NOAA would have included additional recreation infrastructure as part of the non-federal match, but these portions of the proposal were deleted due to the fact that the cost of the bridge was higher than originally estimated and to give local partners more time to consider priority needs at the park.

NOAA did not fully explore additional potential configurations for the bridge in this EA for a few reasons. The primary reason is that state coastal management programs typically submit a single proposal for a project, which reflects the recommendations of the project proponents based on their site-specific knowledge. NOAA is then asked to decide whether or not to approve the project, as proposed. In this case, only one alternative (reflecting the final design recommended by the Village of Cleveland) was presented to NOAA to consider supporting. OCM carried out all required environmental compliance activities (see section 6.0) and was not notified of recommendations to modify the project in any way or incorporate mitigation measures beyond those already required under the State of Wisconsin bridge permit issued to the Village. In addition, alternative configurations, especially given the relatively small size of Hika Park, would require a very similar design and footprint, leading to impacts that would not differ measurably from those of the preferred alternative. Minor changes to the proposed design that still meet the objectives of the project partners would not be functionally different from the proposed project or have measurably different impacts.

4.0 AFFECTED ENVIRONMENT

This section presents a description of the environment at the proposed project site, including some of its physical, biological, cultural, and socioeconomic characteristics.

4.1 Physical Environment

4.1.1 Climate

Climate conditions in the Village of Cleveland are influenced by Lake Michigan, which moderates winter and summer temperatures because of the lake's ability to store heat (University of Wisconsin Madison Water Resources Management Program 1998). Between 1981 and 2010, the average temperature during the month of January (the coldest month) was 20° F in Manitowoc and 22° F in Sheboygan. Over the same period, and the average temperature during the month of July (the warmest month) was 69° F in Manitowoc and 72° F in Sheboygan

(NOAA 2011a, b). On average, the Village of Cleveland gets 30.5 inches of precipitation per year, of which 18.6 inches falls between May and October (U.S. Army Corps of Engineers 2004). The western side of Lake Michigan receives considerably less snowfall than the southern and eastern sides of Lake Michigan because the prevailing wind direction over Lake Michigan is westerly.

4.1.2 Hydrology

Centerville Creek is a small creek in Manitowoc County's Sevenmile-Silver Creek watershed, which empties into Lake Michigan (University of Wisconsin Madison Water Resources Management Program 1998). As described in subsection 4.3.2 (devoted to the history of the Village of Cleveland), there was once a millpond that impounded approximately 12 acres upstream of Lakeshore Drive (Headwaters Group Philanthropic Services, Edward W. Wilson Consulting, and Coastal Restoration Consultants 2013; USACE 2004). To the west of the former millpond, one-third of a mile west of Lake Michigan, the two branches of the Centerville Creek that flow through parts of Cleveland and Centerville come together. The northern branch, which is longer, extends a little west of Interstate 43 (Village of Cleveland, 2012). The total length of the creek is 4 miles, and its watershed is on the order of 10 square miles (University of Wisconsin Madison Water Resources Management Program 1998; LNRP 2009; USACE 2004). Most of the watershed consists of agricultural lands, along with some residential development (LNRP 2009).

The creek bottom is composed predominantly of gravel, muck and sand (Epstein, Spencer, and Feldkirchner 2002). Within Hika Park, the creek runs through a ravine that is approximately 20 to 40 feet wide (Village of Cleveland 2012). The amount of water in the creek varies, but the drawing of the proposed bridge suggests that, at the location the bridge would be erected, the creek is approximately 35 feet wide (Cedar Corporation 2015d). A 2001 WDNR report described Centerville Creek as subject to "extremely low flows for the majority of the year" (WDNR 2001). Historically, the creek has been quite shallow near its mouth (WDNR 2011a), too shallow to permit navigation. The creek has only a moderate gradient (Epstein, Spencer, and Feldkirchner 2002), and there are small springs that feed into it (Inter-Fluve 2001). The proposed engineering plans for the bridge indicate that the ordinary high water mark is a little more than 2 feet above the central (lowest) part of the creek bed. The 100-year flood level is another 4 feet above the ordinary high water mark, but more than 2.5 feet below the proposed level for the bridge within Hika Park (Cedar Corporation 2015a).

4.1.3 Physiography

Geologically, the area is underlain with Niagara Dolomite, which consists of sedimentary deposits (Bay-Lake RPC 2007). The natural beach at Hika Park is primarily sandy, with some rocks and cobbles interspersed. There is a 2 to 4-inch line of cobble and rocks at the beach-water interface (Larson 2007). Topographically, most of Hika Park is close to level, with slopes under 4%. Outside the Park, by contrast, there are bluffs surrounding parts of the former valley cut by Centerville Creek (Inter-Fluve 2001). Cleveland's topography is varied, as it features a mix of hills, ravines, and bluffs. West of Centerville Creek, there are some areas with grades of more

than 15% (Bay-Lake RPC 1985). In the part of Hika Park along Lake Michigan, the elevation is approximately 580 feet above sea level.

In the southeast corner of Hika Park, near the parking lot for the boat launch, the soils are Tedrow Loamy fine sand. At the mouth of Centerville Creek, and approximately 60 feet to its south, as well as in a larger area to the north of the creek, the soils are typical of the Oakville-Granby complex, often found on beach ridges and along drainage features. Thus, the proposed bridge would be installed in Oakville-Granby complex soils. While Oakville soils are moderately well drained, Granby soils are very poorly drained. Tedrow soils are somewhat poorly drained. The water storage capacity of all the types of soils present is low, and they are highly permeable. Throughout the eastern portion of the park, surface soil is a mix of fine sand and loam, underlain by sand. The Centerville Creek Corridor, west of Lakeshore Drive, also contains floodplain soils known as Fluvaquents. South of the creek, in the vicinity of the home at 220 Lincoln Avenue, there is a small area of Manawa silt loam soil (Bay-Lake RPC 1996; Cedar Corporation 2015c). For more information about the soils present at Hika Park, see the *Soil Survey of Calumet and Manitowoc Counties, Wisconsin* (Otter 1980).

Centerville Creek has an adjacent 100-year floodplain (zone AE) (Federal Emergency Management Agency 2011). The Village's Floodplain Zoning Ordinance states that structures are not allowed in floodplains if they will "adversely affect the loss of valley storage of the floodplain or affect the efficiency or capacity of the floodway or increase flood heights," but there are exceptions for bridges that apply under certain circumstances (Bay-Lake RPC 1996). The deck of the bridge will be above base flood elevation. The 1985 Waterfront Plan for Cleveland notes that there has been "a significant change in the Creek's size and direction" over time, along with erosion along Lake Michigan and in the vicinity of the former millpond. That document also referenced erosion near where the creek enters Lake Michigan due to creek currents, runoff, and wave action from waves in Lake Michigan (Bay-Lake RPC 1985).

The Hika Shores area, in northern Hika Park, includes a remnant of a ridge and swale wetland, a type of wetland that is rare in Wisconsin. These habitats contain narrow sandy ridges alternating with low swales, typically parallel to the shoreline. This type of wetland can be found only near the shores of the Great Lakes. (For example, in Manitowoc County, ridge and swale wetlands are also found at Point Beach Ridges State Natural Area and Woodland Dunes State Natural Area.) Often, the ridges (best developed where streams provide a source of sand) are forested. Swales can receive water from groundwater seepage or springs, as well as precipitation and occasional flooding from adjacent water bodies (Epstein, Judziewicz, and Spencer. 2002; Village of Cleveland 2012; LNRP 2015a). Sediment removed from along Centerville Creek within the last few years was transported to the northern part of Hika Park and used to restore the ridge and swale topography, but not hydrology (Headwaters Group Philanthropic Services, Edward W. Wilson Consulting, and Coastal Restoration Consultants 2013).

4.1.4 Past Restoration and Enhancement Projects

As a result of the sediment that had built up behind the Centerville Dam over time, until recently, the banks of Centerville Creek were from 7.5 to 10 feet high and eroding severely. One estimate indicated that, without restoration efforts, erosion would occur for another 100 years and could

allow 30,000 cubic yards of sediment to be washed into Lake Michigan over time. The creek had also become separated from its natural floodplain. WDNR awarded a River Planning Grant to investigate possible restoration alternatives in 1999. That first project, completed in 2001, resulted in concept plans based on a geomorphic and topographic assessment, as well as preliminary cost estimates for restoration of the creek channel. The USACE funded a restoration investigation in 2002. After an alternatives analysis completed in 2003, a *Preliminary Restoration Plan* was published by the USACE in 2004, with an estimated project cost of $1.1 million. Restoration objectives identified included removing eroding sediments that were ultimately being washed into Lake Michigan, ensuring fish passage, restoring natural habitats, establishing a functioning riparian forest habitat along the creek, and providing connections between different habitats (USACE 2004). Plans for the restoration were subsequently scaled down to reduce total project costs (Headwaters Group Philanthropic Services, Edward W. Wilson Consulting, and Coastal Restoration Consultants 2013).

In 2010, a local non-profit organization in Cleveland, the Lakeshore Natural Resource Partnership, was awarded a habitat restoration grant for $150,000 from the Sustain Our Great Lakes program, which distributes funding from the Great Lakes Restoration Initiative, multiple federal agencies (including the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Forest Service, NOAA, and Natural Resources Conservation Service), and other entities. The restoration project, completed by 2014, removed sediments that had built up in the former millpond and dense areas of invasive vegetation that had made accessing the shoreline difficult. The new stream channel that was created, which is an average of 20 feet wide, included in-stream habitat structures (such as riffles and pools, as well as large woody debris). The natural floodplain along the new channel was designed to be stable and allow the system to better absorb the impacts of major precipitation events. Biodegradable erosion control fabric was installed and native species (e.g., grasses) were planted to stabilize the shoreline (and enhance habitat for fish), while trees planted along the shoreline take root (see Figure 7). The banks of the stream were designed to withstand scour and to prevent undercutting. The trees planted included species typical of a maple/basswood-dominated floodplain forest, adjacent to a white cedar/black willow riparian forest community. In all, 18 acres along the creek were restored, including 1,500 feet of stream bank. The project was designed to restore natural ecosystem functions, improve water quality, enhance habitat for fish and wildlife, reduce erosion, increase infiltration, replace invasive species with native species, and improve opportunities for public use and enjoyment, including by improving the area's natural beauty. In addition, a workshop about stream restoration was held to educate and engage local citizens interested in stewardship activities, such as habitat monitoring and removal of any invasive species that recolonize the restored area (Inter-Fluve 2009; LNRP 2009, 2015c; Sustain Our Great Lakes n.d.; University of Wisconsin Aquatic Sciences Center 2013).

The portion of Centerville Creek where work was completed by 2014 ended approximately 250 feet west of Lakeshore Drive, in an area called the Centerville Creek Corridor, which was recently added to Hika Park. Figure 8 shows the areas restored. Much of the sediment removed from Centerville Creek was placed, in 2013, on the northeastern portion of Hika Park (i.e., Hika Shores) to dewater it and facilitate efforts to recreate the topography of a ridge and swale wetland (M. Friis, WCMP, personal communication, April 28, 2014). The clayey, fine-grained material excavated is different from the sandy substrate that would typically be found in a ridge-

and-swale ecosystem, which ordinarily would contain sand particles found in dunes. An evaluation of the Save Our Great Lakes-funded work notes that the sediment used at Hika Shores will prevent future dune habitat restoration where the fill was placed. The ridge and swale ecosystem is being re-created, using a constructed berm, to stabilize sediment and slow down the rate at which sediment and pollutants are carried into Lake Michigan. Once the native species that have been planted, including trees, sedges, and wildflowers, take root on the new ridge and swale, project partners hope the new ecosystem will functionally approximate a natural ridge and swale ecosystem (Headwaters Group Philanthropic Services, Edward W. Wilson Consulting, and Coastal Restoration Consultants 2013; LNRP 2014a).

The Friends of Hika Bay group has coordinated restoration in Hika Park over the last few years. The Friends group has organized multiple events to plant trees and other native plant species, map and remove invasive species, monitor streams, clean up the beach, erect bird houses, organize student projects that contribute to understanding the area's ecology, etc. (LNRP 2014a, b, c, 2015b, c, d). Additional financial support has also been available through grants from a variety of entities, including WDNR. Friends of Hika Bay has also received a variety of other grants from WDNR and others (e.g., the U.S. Fish and Wildlife Service). Those awards will facilitate stream and species monitoring, mapping and controlling invasive species, habitat monitoring and restoration at Centerville Creek and Hika Shores, watershed planning, and citizen outreach activities. For example, a WDNR River Protection grant awarded in 2015 also provided $10,000 in state funds (with a $3,500 local match) to support implementation of the Friends of Hika Bay's 5-Year Action Plan (WDNR n.d.a.).

4.2 Biological Environment

4.2.1 Water Quality

As noted above, Hika Park Bay is used by swimmers. However, the water at Hika Park Bay Beach is considered impaired due to pathogens, due to elevated levels of *Escherichia Coli (E. coli)*. It was listed as impaired in 2008, and it has not yet been removed from the Wisconsin list of impaired waters (WDNR 2016). The designated use for the portion of Centerville Creek running through Hika Park assigned by the State of Wisconsin is fish and aquatic life, and NOAA did not identify any reports of Centerville Creek being used by swimmers within the Village of Cleveland. Evaluated against water quality criteria for fish and aquatic life, the portion of the creek that runs through Hika Park is not considered impaired (WDNR 2014a). Nonetheless, Centerville Creek's water quality has been impacted by current and historical land use in the vicinity. For example, non-point sources of pollution have contaminated runoff entering the creek from upstream areas. Some of the upstream areas are used for grazing or farming, which can result in runoff polluted with nutrients. On the Hika Bay website, the map showing land in the vicinity of the park suggests that nearby riparian areas are primarily woodlands, agricultural lands, or developed with buildings (Seilheimer 2015). Silt enters the creek from erosion, increasing the turbidity of the water (Bay-Lake RPC 1985). The recently-completed restoration project was designed, among other things, to decrease the turbidity of the water flowing from Centerville Creek into Lake Michigan by decreasing the amount of sediment being carried into and through the area of the former millpond. In addition, some of the efforts to plant vegetation in the vicinity of the creek could also decrease erosion.

To better quantify water quality, the LNRP has been working with volunteers and interns to collect water quality data from Centerville Creek for five years. Sampling results linked to the Hika Bay Creek Monitoring web page at http://www.hika-bay.org/mon.html are incorporated by reference. The summary provided herein focuses on a single sampling location on Centerville Creek closest to where it enters Lake Michigan, known as the Centerville 01 sampling location. A limited number of turbidity measurements were collected at that location during the summer before the restoration project (2011). Samples were collected approximately once per week for 11 weeks, during the summer. The average turbidity across six samples not collected within 24 or 48 hours of a rain event was approximately 14 Nephelometric Turbidity Units (NTU). The average turbidity across all 12 samples collected in 2011 was approximately 28 NTU, but that average is heavily influenced by a single reading of 197 NTU 24 hours after a rain event. On average, turbidity measurements across 10 samples collected from the same location in 2012 were lower (both the overall average and the average across samples not collected 24 or 48 hours after a rain event). A number of factors could have influenced that, including the fact that it was a dry summer (Poling and Abler 2013). In the summer of 2013, the average turbidity across 13 samples was almost 17 NTU. The data table for 2013 does not show that any samples were collected 24 or 48 hours after a rain storm, but the maximum measured turbidity was 103 NTU. The average across weekly samples not collected after rain events was under 8 NTU in 2014 and 4 NTU in 2015, and the average turbidity across all the 2014 samples was 13 NTU and across all the 2015 samples was 8 NTU. These data suggest that the restoration project has indeed decreased turbidity downstream of the former dam (Friends of Hika Bay 2016).

Another parameter of interest measured in surface water samples is *E. coli*, which provides some information about bacteria levels. Wisconsin requires a beach advisory be put into effect if *E. coli* levels in water collected at beaches exceed 235 colony forming units per 100 milliliters (CFU/100 mL), and beaches must be closed if *E. coli* levels exceed 1000 CFU/100 mL. In both the 2014 and 2015 samples collected near the former dam reported on the Friends of Hika Bay web page, there were levels of *E. coli* above the 1000 CFU/100 mL standard in 11 samples, slightly more than half the samples collected each year (Friends of Hika Bay 2016). It should be noted that Centerville Creek is not used for swimming; measured levels of *E. coli* are compared to beach standards solely because there are no other state *E. coli* standards for surface waters not used for swimming at this time.

As noted above, Hika Park Bay is designated as impaired, based on mean *E. coli* concentrations measured in surface water samples (WDNR 2014b). *E. coli* bacteria levels are routinely measured in surface water samples from the Hika Park area because of requirements to close the beach when bacteria levels reach a certain threshold. Data associated with a total of 231 samples collected between 2003 and 2015 are stored in a U.S. Geological Survey (USGS) database, along with a determination of whether the beach would be open for swimming and whether an advisory would be needed, based on levels of *E. coli* measured in water samples. In short, there was much variability in the data from year to year, and only a few samples are available for some years. In 2015, three samples were collected, and the beach was closed due to elevated *E. coli* levels on one occasion (USGS 2015). Also, according to one local news outlet, Hika Park's beach was closed for more than a week in mid-June 2015 due to bacterial contamination (Peterson 2015). In 2014, 12 samples were reported in the USGS database, and the beach was closed on three of

those occasions (USGS 2015). For another dataset summarizing *E. coli* measurements exceeding water quality standards (covering 2003 through 2011), see also http://www.baylakerpc.org/media/63392/manitowoc%203.22.12.pdf (Kleinheinz, Busse, and Sheth 2012). Non-point source pollution from agricultural lands upstream of Hika Bay could be among the contributors to elevated nutrient levels (e.g., nitrogen and phosphorous).

4.2.2 Sediment

Prior to the restoration project, rain events washed large amounts of fine-grained sediment into Lake Michigan that had previously accumulated along the banks of the Centerville Creek behind the former dam. The walls of the creek bed were prone to collapse, and suspended sediment was degrading fish habitat to the point that most fish could not survive (Cleveland Chamber of Commerce 2016). Deep sediment along the creek also posed a safety hazard to visitors (LNRP 2009). Before the restoration project commenced, samples of the sediment to be removed were analyzed for contaminants. Results indicated that no restrictions on sediment placement after removal would be necessary (WDNR 2012).

Project partners were nonetheless concerned that the phosphorus-rich sediment was contributing to the excess growth of *Cladophora*, a type of green algae that had been periodically appearing on the beach at Hika Park (Headwaters Group Philanthropic Services, Edward W. Wilson Consulting, and Coastal Restoration Consultants 2013). After growing on a hard substrate, *Cladophora* detaches from it (typically in the summer or fall) and floats to the surface, typically washing up alongshore. It then decays, giving off a foul odor that, along with its unpleasant appearance, tends to drive people from the beach. Once it starts to decay, *Cladophora* is difficult to remove, but it is not toxic. Elevated phosphorous levels seem to promote *Cladophora* growth, as do increased water temperature and water clarity (Great Lakes WATER Institute 2005; University of Wisconsin Milwaukee n.d.). One of the goals of the restoration of Centerville Creek was to reduce the potential for sediment with elevated levels of phosphorous along its banks to contribute to *Cladophora* blooms near its mouth. For more information about other parameters (e.g., nutrients and dissolved oxygen) measured in samples collected in partnership with Friends of Hika Bay, see the data posted at the Hika Bay Creek Monitoring web site (www.hika-bay.org/mon.html).

4.2.3 Plants

According to the 1985 *Village of Cleveland Waterfront Plan*, the wooded area surrounding much of the millpond contains a variety of hardwood species, conifers, white cedar trees, dogwood trees, and poplar trees (Bay-Lake RPC 1985). There were some red osier dogwoods in Hika Park as of the mid-1990s (Bay-Lake RPC 1996). A 2007 report indicated that, in the area near the beach at Hika Park, there are cottonwood trees, mixed with invasive species such as Knapweed and tansy, along with crown vetch and red barberry. Consultants recommended planting native dune species once invasive species are removed (Larson 2007). Ground story vegetation had been sparse, and invasive honeysuckle was prevalent. As noted previously, there have been extensive efforts to remove invasive species since. Other recommendations offered by consultants included restoring species common to mesic wooded areas in uplands areas. White

and red cedar trees have been planted east of Lakeshore Drive, not far from where there were already white ash trees (LNRP 2009).

In the Hika Shores area, the predominant tree species in wooded areas along the Creek has been white ash. Native trees, sedges, and wildflowers have recently been planted. Specifically, in the spring of 2014, Friends of Hika Bay arranged for the constructed berm to be planted with clover, rye grass, and cedar trees. Also, the swale was planted with at least four different types of native sedges, and wildflowers were planted in 2015 (LNRP 2009, 2015a, b). Invasive species targeted for removal included common tansy, crown vetch, honeysuckle, red barberry, phragmites, and Japanese knotweed, along with white ash where it is inhibiting other native trees. LNRP organized a group of volunteers committed to removing invasive species in Hika Park and along Centerville Creek for 3 years after completion of grant-funded work in the creek (LNRP 2009).

Documentation associated with the grant the LNRP received to restore Centerville Creek notes that, upstream of Lakeshore Drive, the riparian community is dominated by white cedar and black willow. Species planted in the area near the former dam as part of the restoration included annual oats and winter as cover crops, a variety of grasses and sedges (including prairie cord grass), willow and dogwood along the stream bank, and a floodplain forest with species such as basswood. A total of 50 white cedar trees were also to be planted (Inter-Fluve 2012). See Figure 7 for a map of where trees were planted.

4.2.4 Fish

The WDNR reported that Centerville Creek supports, at a minimum, forage fish and rough fish (i.e., species not commonly sought by anglers) (WDNR 2001). According to the *Village of Cleveland Waterfront Plan*, east of the former dam on Centerville Creek, fish species that could be present, as of the 1980s, included brown trout, rainbow trout, coho salmon, brook trout, smelt, sucker, and carp. Some of these species were only present seasonally (Bay-Lake RPC 1985). Prior to the restoration project, in the area of the former dam, Centerville Creek provided very poor habitat for most stream fish due to excess sediment, no bank cover or shade, and few pools. It only supported those fish species "most tolerant of heavy fine sediment bedload" (USACE 2004). In 2001, sampling results from 3 locations along the length of Centerville Creek revealed limited diversity of species and low flow, along with poor water quality due to sediments and nutrients. A 2001 evaluation, based on three samples from Centerville Creek, indicated that the Index of Biological Integrity (which assesses the ecological complexity of an aquatic community) was fair to poor and that the water quality was poor (Hogler 2010). As of 2004, the USACE reported that Centerville Creek provided habitat for common warm water species such as cyprinid minnows, sculpin, catastomids, bullhead catfish, darter, sunfish, etc. (USACE 2004). Documents related to the recent Centerville Creek restoration project mention the creek will be used by migratory salmonids and indicate that the project was designed to provide adequate cover for salmonids, smallmouth bass, and northern pike (Inter-Fluve 2001). The restoration project was expected to make Centerville Creek a viable habitat for fish species intolerant of pollution and disturbance, potentially enhancing fishing opportunities for the public (LNRP 2009).

Anecdotal reports of fish caught by boaters in Lake Michigan, near Hika Park, include lake trout, brown trout, Chinook salmon (also known as king salmon), coho salmon, and perch (Lake-Link 2015). In addition, nearby streams with similar characteristics support migratory Lake Michigan salmonids (e.g., salmon, trout, and whitefish). Chinook and coho salmon were introduced into the Great Lakes in the 1960s (after an attempt to introduce them in the 1870s) to improve sport fishing opportunities and to control exploding populations of invasive alewife that were so large that many were dying and washing up on beaches (Paetz 2014). In general, the bays and estuaries of western Lake Michigan are important habitat for yellow perch (USACE Preliminary Restoration Plan 2004). Reportedly, after the former millpond on Centerville Creek was drained around 1970, the creek was stocked with largemouth bass and pan fish, but most of the fish died off due to the high load of sediment in the creek, and only a "stunted" pan fish population remained, as of 1985 (Bay-Lake RPC, 1985). The recent stream restoration project was designed to provide habitat for smallmouth bass, northern pike, and migratory salmonids, among other species (Inter-Fluve 2001). No essential fish habitat designated pursuant to the Magnuson-Stevens Fishery Conservation and Management Act is present, as there is no essential fish habitat in tributaries to the Great Lakes.

4.2.5 Wildlife

An exhaustive inventory of all the wildlife present at Hika Park is not available. The 1985 *Waterfront Plan* stated that the undeveloped areas surrounding Centerville Creek provide cover and food to support "almost the entire spectrum of mid-Wisconsin wildlife" (Bay-Lake RPC 1985). During a site visit in 1996, the following animals were observed: field mice, rabbits, garter snakes, robins, crows, and wood ducks (Bay-Lake RPC 1996). There could be many other small mammals and birds that use the site, as well. The restored ridge and swale ecosystem at Hika Shores is intended to provide high-quality habitat for birds and other animals that seek out shoreline areas and other features of these habitats. The *20-Year Comprehensive Plan* for Cleveland mentions that some of the most well-known species found in Cleveland include white-tailed deer, turkey, grouse, beaver, muskrat, squirrel, and chipmunk (Bay-Lake RPC 2007).

Local residents have collected data while birdwatching at Hika Park, which offers birds places to rest, feed, nest, and take shelter. The Friends of Hika Bay group has been involved with regular avian monitoring every year since 2009 (Kirsh and Kettler 2015). The data have been reported to the eBird.org website and other repositories. According to eBird.org, the more than 100 species that have been reported at Hika Park include waterfowl, loons, grebes, cormorants, herons, bald eagles, other raptors, shorebirds, gulls, a few gamebirds, and many different songbirds. For more information about bird observations at Hika Park, see http://ebird.org/ebird/hotspot/L506440?yr=all&m=&rank=hc (Cornell Lab of Ornithology and National Audubon Society n.d.).

As discussed further in sections 5.2 and 6.0, NOAA consulted with the U.S. Fish and Wildlife Service (USFWS) about the potential for there to be threatened and endangered species at Hika Park that could potentially be affected by the proposed project. NOAA considered the possibility of Pitcher's thistle, northern long-eared bats, piping plover, and rufa red knot to be present at Hika Park. These are the four species listed as threatened or endangered in Manitowoc County. There is no critical habitat for any of these species at Hika Park. NOAA concluded that

Pitcher's thistle, northern long-eared bats, and piping plover would not be present at Hika Park because the habitat characteristics at Hika Park do not match the types of habitat suitable for these species (for additional detail, see the consultation letter in Appendix B).

The only species listed as threatened or endangered by the federal government that sometimes occurs in Hika Park is the rufa red knot. Migrating rufa red knots can stop at or near Hika Park to rest or feed. Migrating rufa red knots prefer coastal and estuarine habitats with sediments exposed during part of the tidal cycle, including sandy, gravel, or cobble beaches, tidal mudflats, salt marshes, shallow coastal impoundments, and inlets. Red knots were reported at Hika Park in August of 2011 (Cornell Lab of Ornithology and National Audubon Society n.d.; Domagalski 2011). Also, in the town of Manitowoc, 12 miles north of Hika Park, the species was reported in October of 2013 (Sontag 2013), August of 2011 (Murkowski 2011), and July of 2009 (Domagalski 2009). This is consistent with a USFWS report on the ecology and abundance of the species, which indicates that rufa red knots are seen in small numbers in the interior United States during their spring and fall migration, primarily along the Great Lakes. During their migratory seasons, small numbers of these birds ("typically fewer than 10," according to USFWS) can stop in every inland state over which the rufa red knot flies, including Wisconsin (USFWS 2013).

4.3 Cultural and Socioeconomic Environment

The Village of Cleveland is located approximately 11 miles north of Sheboygan and 12 miles south of Manitowoc. Currently, its area is just slightly less than 2 square miles. It has approximately 1.5 miles of shoreline along Lake Michigan (Village of Cleveland 2003). The Town of Centerville was created in 1850, at a time when the most economically important industries were farming and timber production (Ertel, ed. 1976). The Village of Cleveland was created in 1958 from three unincorporated hamlets within Centerville, as discussed in section 4.3.2. Hika Park is one of three parks in the Village, as described below.

4.3.1 Cleveland Community Characteristics

The Village of Cleveland covers 1,270 acres, almost half of which is already developed. Residential development (primarily single-family homes) extends across 19 percent of the Village, and 5 percent of the Village is commercial or industrial. Approximately 12 percent is governmental or institutional, 21 percent is agricultural, and 2 percent is recreational. There are also woodlands covering 11 percent of the Village, and other natural areas extend across another 21 percent of Village. (Other natural areas are defined as wetlands, grassland, prairies, and woodlands not set aside for conservation and not specifically used in ways that take advantage of their natural functions.) The other land uses found in the Village are those used for transportation, communications and utilities (together making up 9 percent of the Village) (Bay-Lake RPC 2007).

In 2010, the Village population was 1,485. Approximately 94% of residents identified themselves as White, 0.7% of residents were Asian, 0.5% of residents were Native American, 0.3% of residents were African-American, and another 4% represented other racial or ethnic minorities or were of more than one race. At the same time, almost 9% of the population

indicated they were of Hispanic or Latino origin. By comparison, in Manitowoc County as a whole, the population was 94% White and 97% not of Hispanic or Latino origin, as of 2010 (U.S. Census Bureau 2011). The median household income in Cleveland averaged over the 2010-2014 period was a little more than $55,500, and the mean household income was more than $72,400. The Village's per capita income was approximately $26,500. Approximately 4.7% of Village residents lived below the poverty line during the 2010-2014 period. The poverty rate for Manitowoc County as a whole was slightly greater, 10% (U.S. Census Bureau 2015).

The largest employment sectors for residents of Cleveland during 2010-2014 were the management, business, science, and arts sector (32% of those employed); sales and office occupations (19%); and production, transportation, and material moving occupations (18%). In addition, the service industry employed 16% of Village workers and sales and natural resources, construction, and maintenance occupations employed 15% of Village workers (U.S. Census Bureau 2015). The largest employer in the Village of Cleveland is Lakeshore Technical College. There are also a number of small businesses in the Village, and numerous residents commute to Manitowoc, Sheboygan, and other nearby communities (Buckman 2003). During the 2010-2014 period, on average, more than two-thirds (69%) of the approximately 1,150 residents of Cleveland over age 16 were in the labor force, and 4.4% of the labor force reported being unemployed (U.S. Census Bureau 2015).

During its comprehensive planning process, the Village of Cleveland's Smart Growth Commission adopted a "20-Year Vision Statement" that begins: "The vision for the Village of Cleveland is to maintain its small town charm with a sustainable economy and premium quality of life for its residents in a healthy and thriving environment." In addition to commenting on promoting balanced development, the vision statement says, "Lake Michigan and the surrounding natural resources provide numerous recreational and economic opportunities to support a strong tourism industry" (Bay-Lake RPC 2007). In 2005, the Village of Cleveland's Smart Growth Commission participated in an exercise to identify the top issues related to future development in the Village. The top-rated issue was preservation of natural resources.

4.3.2 History of Cleveland

Arrowheads and the presence of a Native American burial mound on a farm in Centerville indicate that Native Americans were the original inhabitants of what is now the Village of Cleveland. In 1831, Native Americans sold the land that is now Cleveland to the U.S. government. Settlers, recipients of government land grants, arrived by 1847. Wisconsin became a state in 1848. In 1850, the 29-square mile Town of Centerville was established, which also had a Village named Centerville. The first settlers received land grants from the U.S. government. Many were of German (or other European) descent. The early settlers engaged primarily in lumbering and farming; lumbering was initially the basis of the majority of economic activity, but farming became predominant in the latter half of the Nineteenth Century. A brewery opened in the 1840s, and a brickyard opened in the 1850s and produced "Cream City Bricks" (bricks from eastern Wisconsin that are cream-colored). St. Wendel Church was built in 1854 through contributions from local families, mostly of German origin (and it was later rebuilt twice). In 1856, the Village known as Centerville, located approximately 2 miles away from the settlement named St. Wendel, was renamed Hika. The first mill, a sawmill, was built in 1856. A grist and

planing mill opened in 1868, coupled with a lumber yard. Around that time, there were also several cheese factories and stores in Centerville. The railroad line completed in 1873 allowed goods produced in the town to reach a broader market. The railroad also transported passengers until the 1960s, when it started only carrying freight. A few hotels were in operation by the late 1800s. In 1880, the area between St. Wendel and Hika was named Cleveland (Ertel, ed. 1976; Manitowoc County Historical Organization 2014; Bay-Lake RPC 1985).

By the early part of the Twentieth Century, the businesses in the Centerville area included mills, a lumber company, a cannery, a lumber, coal, and building supply company, general stores, a hardware store, blacksmith shop, a stockyard, livery service, grain trading company, butcher shop, meat market, saloons, a hotel, print shop, photo studio, etc. (Bay-Lake RPC 1985; Ertel, ed. 1976). The Village of Cleveland was created in 1958 by combining three unincorporated hamlets (Hika, St. Wendel, and Cleveland), in part in response to the need to manage their sewage. The new Village constituted what had been the most densely populated part of Centerville. A water and sewage treatment system began operating on the land owned by the Village Public Works Department along Lake Michigan in 1967. It was made possible, in part, by grants under the Federal Water Pollution Control Act and from the Farmers Home Administration. This wastewater treatment plant operated until the 1990s. Additional growth in the Village followed, leading to construction of a new bank, post office, telephone company building, elementary school, etc. (Ertel, ed. 1976). Lakeshore Technical Institute (later renamed Lakeshore Technical College) was built in Cleveland in 1972 (Ertel, ed. 1976; Village of Cleveland 2003).

A wooden dam was built on Centerville Creek in 1864, in Hika. Around 1904 or 1906, it was replaced with a concrete dam, the ends of which washed away (along with the adjacent sawmill) in 1924. A new, larger concrete dam was built in 1935, creating an impoundment of approximately 12 acres (LNRP 2009). The water supplied the volunteer fire department (Cleveland Chamber of Commerce 2016). A storm in 1942 washed away part of a grist mill along the lake, upstream of the dam, as well as the wings of the dam. However, most of the remainder of the dam from the mid-1930s survived. In 1970, the millpond was reportedly drained and stocked with largemouth bass and panfish, but attempts to use the basin for fishing were reportedly not very successful; pollutant loading was detrimental to fish populations, sediment continued to build up; and there was no ongoing fishery management plan (Bay-Lake RPC 1985). Nonetheless, the pond continued to offer recreational opportunities. The WDNR ordered Centerville Dam be removed or repaired due to structural deterioration in the mid-1990s. The dam was also considered a danger to the downstream bridge along Lakeshore Drive. The dam was removed in the mid-1990s (Inter-Fluve 2001; Cleveland Chamber of Commerce 2016).

4.3.3 History of Hika Park

Hika Park falls within the Village's Historical Overlay District, established "to identify special areas of historic interest in order to preserve them." The primary areas within the Village that fall into this district are in the Hika area and along Union Road (Bay-Lake RPC 1985, 2007). The first pier in Hika Bay was reportedly built in 1854 (Ertel, ed. 1976). There were formerly two piers in Hika Bay. One pier was just south of the existing, seasonal pier. The other was approximately two blocks to the south, a little north of Jefferson Avenue. At one time, that

southern pier was able to support horse-drawn wagons. The pier no longer exists, but remnants of pilings remained as of the mid-1980s, according to the Town of Cleveland. At the site of the Village's wastewater treatment plant built in the 1960s, a tannery was established around 1860, but it was destroyed during a fire in 1875. A variety of historic structures still exist along Lincoln Avenue, primarily west of Lakeshore Drive. These include Hika Bay Tavern (built at the end of the Nineteenth Century), a Cream-City brick home built around 1880 that once housed a butcher shop in its basement, and three other Cream-City brick structures on the northwest, southwest, and southeast corners of Lincoln Avenue and Lakeshore Drive. For more information about historic structures near Hika Park, see the 1985 *Waterfront Plan* for the Village of Cleveland. Lincoln Avenue is lined with an arcade of maple and birch trees planted around 1900 (Bay-Lake RPC 1985; Ertel, ed. 1976).

In 2004, NOAA and other entities, including WDNR, the Sheboygan Area Land Conservancy, and the West Foundation contributed funding that enabled the Village to acquire the 3.5-acre Hika Shores property. Prior to the acquisition, developers had proposed building 36 condominiums on the property, then suggested changing the zoning to allow townhouse condominiums, then downsized their proposal to include five or six single-family homes (Perlman 2004). Some members of the public favored keeping this undeveloped parcel in public hands, and a coalition came together to raise the funds that would be needed for the Village to acquire the land, including a 535-foot long sandy beach that provides an inviting area for swimming, separate from the sometimes-crowded boating and fishing areas south of Centerville Creek and therefore a safer place to swim (Village of Cleveland 2003). In September 2012, the Village Board in Cleveland voted to add the Centerville Creek corridor, upstream of Lakeshore Drive, to Hika Park. That brought the total size of the park to 13.9 acres (M. Friis, WCMP, personal communication, September 10, 2014).

A non-profit group, called "Friends of Hika Bay," was created around 2009 by the LNRP and others to advise on efforts to restore Centerville Creek upstream of Hika Park and to support restoration efforts at Hika Park. Its catch phrase is "Linking restoration of Centerville Creek and an enhanced Hika Park to better water quality in Lake Michigan." (For more information, see http://www.hika-bay.org.) Friends of Hika Bay officially adopted Hika Park as part of Cleveland's new Adopt-A-Park program in 2015. The Friends group and other volunteers have expressed interest in helping with such activities as planting native vegetation, identification and removal of invasive vegetation, web site design, and/or landscape architecture (LNRP 2014b; Village of Cleveland 2012).

As noted previously, the LNRP received a grant through Sustain Our Great Lakes to restore a former millpond on Centerville Creek and the channel of the creek upstream of Hika Park. Some of the sediment removed from the Creek upstream of Hika Park, in the area of the former dam, was given to the Village to be used to recreate the topography of a ridge and swale wetland in the northern portion of Hika Park. Restoration of ridge and swale topography began in 2013, with additional shaping in 2015 (S. Grunwald, Village of Cleveland, personal communication, July 25, 2015). Trees, grasses, and wildflowers were planted on the landform that was created; the result is a community similar to a ridge and swale ecosystem. Support for the reconstruction of the wetland was also provided by the WDNR (LNRP 2015d).

Prior to its removal in the 1990s by WDNR, Centerville Dam was approximately 600 feet upstream from where Centerville Creek empties into Lake Michigan, and the impoundment was approximately 1,500 feet long, an average of 120 feet wide, and approximately 7 acres in area (Inter-Fluve 2001). Fine sediment was deposited behind the dam over its more than 100-year history, in layers up to 10 feet deep. Little of the sediment that had accumulated was excavated at the time the dam was removed, and the sediment was subsequently gradually washing downstream into Lake Michigan. Although sediment impeded the flow of the creek, the channel cut through the sediment to the original valley floor. Invasive species infested the area after the dam was removed (Inter-Fluve 2001; LNRP 2009). The grant awarded to LNRP enabled the restoration of approximately 18 acres and 1,500 feet of stream bank along the Centerville Creek Corridor, the removal of 20,000 cubic yards of sediment, replacement of invasive vegetation with native plants, and regrading the creek in some areas. The project was expected to improve water quality, as well as fish and wildlife habitat (Sustain Our Great Lakes n.d.; LNRP 2009).

4.3.4 Visitor Use of Hika Park

Hika Park is a popular with visitors, including the people of Cleveland and those hailing from other areas. It is listed as a stop along the Lake Michigan Water Trail (WDNR 2011). Existing recreational facilities are located primarily in the southeastern portion of the park and include a parking area and adjacent boat ramp, sheltered picnic tables, grills, and restrooms. The proposed pedestrian bridge over Centerville Creek would be east of the bridge over the creek on Lakeshore Drive. There is no continuous sidewalk along Lakeshore Drive, but there is a sidewalk on the western side of its bridge over Centerville Creek. Pedestrians who want to move between the northwestern portion (Centerville Creek Corridor) and northeastern portion (Hika Shores) of the park would have to cross Lakeshore Drive even if the proposed bridge is installed; there is a stop sign where they can do so at the intersection of Lakeshore Drive and Lincoln Avenue. A viewing deck (called the Bouda platform), overlooking the Centerville Creek corridor near the site of the former dam, was completed in late 1999. There was also formerly a boardwalk leading to it, expanded around the same time (Cleveland Chamber of Commerce 2000).

The Bay-Lake Regional Planning Commission (RPC) reported that the parking area and boat ramp have been used extensively during the spring and summer, especially on weekends, in part due to interest in fishing in Lake Michigan (Bay-Lake RPC 1985). There is a small fee to launch a boat at Hika Park. A 2007 project carried out by Wisconsin Sea Grant to educate watercraft operators about aquatic invasive species reported that, across the six days the project was carried out (four of which were weekdays), there were 3-12 boats launched per day at Hika Park (WDNR 2007). Seasonally, a metal pier is installed near the end of Lincoln Avenue. The pier is used for fishing and by pedestrians. In addition to visiting Hika Park to go boating, fishing, and swimming, people also come to Hika Park to observe nature and birds.

As noted previously, the Village Public Works Department has a sewage lift station and garage/storage facility near the Hika Shores area. If the pedestrian bridge is constructed, the abutment on its northern side would be near the lift station, which was formerly a wastewater treatment plant (Cedar Corporation 2015c). The Public Works parking area can also be used by visitors to Hika Park.

4.3.5 Hika Park Planning Efforts

The Village has been considering possible enhancements to Hika Park for more than 30 years. In the early 1980s, NOAA, through WCMP, provided funding to support the development of a *Waterfront Plan* for the Village of Cleveland, formally adopted in 1985 after a public information meeting. The objectives of the project "were to establish priorities for improvement to existing and future private and public development in the Hika area of Cleveland." At that time, Hika Park was only comprised of a couple of acres, south of Centerville Creek. A need was identified to further "examine the Lake Michigan waterfront and Centerville Creek area as a unique area that exists in the Village and to promote existing and future development to be consistent with the area's historical and aesthetic characteristics." Several options were identified, including increasing the area available for recreation (e.g., in the area that later became known as Hika Shores); installing a pedestrian bridge over Centerville Creek; installing breakwaters on Lake Michigan; creating walkways; expanding available parking; expanding boat launch facilities; creating a harbor and/or marina; establishing a building setback line from Lake Michigan to avert problems associated with erosion; conducting dredging to facilitate boating; and stabilizing the streambank along Centerville Creek. Resident suggestions at that time collected via a survey included creating additional parking in the Hika Park area and additional commercial development that was recreation-related and/or marine-focused (e.g. a restaurant, motel, gift shop, or sport-oriented store) (Bay-Lake RPC 1985).

After evaluating these ideas, the final 1985 *Waterfront Plan* contained many recommendations for the waterfront area, including: controlling erosion along Lake Michigan and Centerville Creek; landscaping the waterfront area; acquiring land north of Centerville Creek and south of Hika Park for future Village use; providing a larger parking area; creating a trail system; stabilizing the shoreline and dredging the mouth of the creek; restoring fish habitat; and improving access to Hika Park (e.g., by building walkways and potentially redesigning the curve along Lakeshore Drive to more safely accommodate increased traffic on weekends). A few planning activities proposed were: establishing a historic preservation zoning district in the Hika area to "protect historic structures from destruction or encroachment from incompatible uses," creating a waterfront planning district including the Hika area, and rezoning land near the millpond and Lake Michigan shoreline for conservation purposes (Bay-Lake RPC 1985). So far, local partners (the Village and others) have acted on recommendations related to improving fish habitat and increasing the available area for recreation by increasing the size of the park. The proposed project would address the recommendations related to improving pedestrian access to the park and installing a pedestrian bridge over Centerville Creek. The Village is also considering updating the 1985 *Waterfront Plan*.

Approximately 10 years later, in 1996, the Bay-Lake RPC and an advisory committee helped develop a *Park Site Master Plan for Hika Bay Park & Dam Impoundment Area*. Around that time, dam removal planning efforts were underway. The process used to develop the 1996 Master Plan incorporated opportunities for public input. The Master Plan encouraged connecting the Village-owned areas separated by Centerville Creek and Lakeshore Drive with crosswalks and bridges; improving safety and security; stabilizing sediment after the removal of Centerville Dam; adding trails, benches, a gazebo, and other passive recreational facilities; making the park

accessible to those with disabilities; habitat enhancements; buffering adjacent land uses; etc. (Bay-Lake RPC 1996).

Most recently, a *20-Year Comprehensive Plan* for the Village of Cleveland was completed in 2007. The plan articulates the value the Village places on natural resources and indicates that its policies include promoting Hika Park and the Lake Michigan shoreline as providing quality recreational opportunities. The plan recommended creating additional recreational areas along Lake Michigan by expanding Hika Park, promoting recreational opportunities and natural beauty at Hika Park and other public access sites, and investing in enhancement of these areas. The plan also indicates the Village would research the possibility of establishing a visitors' center near Hika Park focused on tourism and natural resources. At the time the *Comprehensive Plan* was completed, the Village was planning to prepare a comprehensive outdoor and recreation plan, update its waterfront development plan and park plan, create a tourism plan, and invest in the "expansion and enhancement" of natural resource areas that are attractive to visitors, including Hika Bay and Village beaches. (The *Comprehensive Plan* was finalized before the Centerville Creek Corridor was added to the Hika Park.) The *Comprehensive Plan* also recommended that the Village consider creating a management plan to improve the beach at Hika Bay and creating a multi-modal transportation network to provide walking and biking access to the shoreline.

The *Comprehensive Plan* stated that there would continue to be efforts to preserve and enhance the Lake Michigan shoreline and Centerville Creek. Two of the action steps it identified were to investigate building "a permanent dock/marina at Hika Park" and to "focus on multipurpose uses for Hika Park and adjacent waterways." The *Comprehensive Plan* also indicated that the Village would like to move its public works facilities away from Lake Michigan. That was also identified as a high priority goal during a subsequent Village facilities needs planning effort (S. Grunwalk, Village of Cleveland, personal communication, July 22, 2016). Other written materials have also suggested that the Village anticipates moving its public works shop, which would improve aesthetics and make available more land for recreation and potentially for parking (Bay-Lake RPC 1985; LNRP 2009; Village of Cleveland 2012; Kirsch and Kettler 2015).

In 2005, as part of its comprehensive planning process, the Village also circulated a community visioning survey to residents that asked about their vision of the Village in 10-20 years. There were approximately 500 individual responses recorded; the number of people who provided these responses is not recorded in the *Comprehensive Plan*. Approximately 20 respondents commented on the need for clean water, clean streams, or a clean Lake Michigan. Approximately 10 responses addressed protecting historic resources or designating a historic district. There were 6 responses addressing preserving the lakeshore and public access to it, as well as another response that suggested developing the lakeshore. Many others directly addressed the amenities in Hika Park more specifically, summarized in Table 1. No comments indicated that residents were concerned about or opposed to installing additional amenities in Hika Park (Bay-Lake RPC, 2007).

Table 1: Responses to 2005 Cleveland Community Visioning Survey Pertaining to Hika Park

Suggestions	**Number of Respondents**
Rebuild the dam on Centerville Creek	1

Suggestions	Number of Respondents
Restore habitat near former dam	2
Expand or further develop Hika Park	10 (of which 2 mentioned a footbridge over the creek)
Improve the boat landing and pier at Hika Park	5
Install a playground at Hika Park	3
Maintain Cleveland's parks	3
Expand trails and lanes for biking and walking in Cleveland	16

(Source: Bay-Lake RPC 2007)

As noted above, LNRP and Friends of Hika Bay are partners in planning future activities at natural areas in Cleveland. For example, a WDNR $10,000 grant awarded in 2016 to LNRP will support a beach clean-up, water quality monitoring, vegetation management, educational seminars, and other community engagement (WDNR n.d.b.). The Friends group anticipates that a gazebo or viewing area, trails on the Hika Shores property, the pedestrian bridge, and additional signage could potentially be the next public access improvements to be built in Hika Park (Kirsch and Kettler 2015; Friends of Hika Bay 2016). See Figure 9, which shows, conceptually, some possible future changes to the park. New signs in the northeastern and northwestern portion of the park have been discussed because there are not currently any signs in those portions of the park, other than one in the northeast corner of the park that marks the boundary between the park and nearby residences. Some of individuals who live close to the Hika Shores parcel had requested a sign identifying the northeastern boundaries of the park to discourage visitors from crossing onto private property, and one such sign was installed by the Village (Village of Cleveland Plan Commission 2016; S. Grunwald, Village of Cleveland, personal communication, June 11, 2016).

4.3.6 Other Local Land and Water Use

The lots in Cleveland near Hika Park are primarily residential. A land use map within the 2007 Comprehensive Plan suggests the zoning districts applicable to Hika Park and vicinity are a mixture of environmental preserve, neighborhood residential, and shoreline residential (Bay-Lake RPC 2007). There are also some woodland plots along Centerville Creek, upstream of the park, as well as some agricultural lands (Seilheimer 2015). A few local businesses exist along Lincoln Avenue to the west of Hika Park. These include a historic tavern on Lincoln Avenue, approximately 600 feet west of the park.

There are two other parks in Cleveland: Dairyland Park and Veteran's Memorial Park. Dairyland Park extends across 6.5 acres, not far from Interstate 43, and includes a playground and shelter. This park is used for one of the Village's annual festivals. Veteran's Memorial Park encompasses 80 acres. Approximately 15 acres are used for active recreation, such as baseball, volleyball, and tennis. Veteran's Memorial Park includes restrooms and a covered pavilion with grills. The remainder of the park is available for passive recreation, including hiking along trails. In the winter, visitors can also use its cross country ski trails and its sledding hill (Bay-Lake RPC 2007). In addition, approximately 56 acres of woods were set aside as Veterans Park Conservation Area, through which a portion of the south branch of Centerville Creek runs (Village of Cleveland 2003). In addition, there are two conservation areas in the Town of Centerville that are along Lake Michigan. Fischer Creek Conservation Area, immediately

outside the Village's border, covers 160 acres and includes 1 mile of Lake Michigan shoreline. It is approximately 2 miles north of Hika Park and offers trails through wooded areas, meadows, former fields, and bluffs, as well as parking, restrooms and, picnic areas. A little further to the north, Point Creek Conservation Area covers 39 acres. Its shoreline consists of a high bluff, and the conservation area also includes wetlands, meadows, and woodlands (Bay-Lake RPC 2007; Manitowoc County 2001a, b).

5.0 ENVIRONMENTAL CONSEQUENCES

This section outlines likely environmental consequences of the No Action alternative and the preferred alternative. This section also addresses planned methods to mitigate a few of the potential impacts (i.e., mitigation measures). In sum, the below analyses indicate that all anticipated consequences of both alternatives are expected to be minor, and most of the anticipated impacts of the preferred alternative would be beneficial, including improvements to accessibility and visitor safety. Neither the preferred alternative nor the No Action alternative is anticipated to have any significant impacts.

5.1 Physical Environment

The proposed small-scale, low-impact construction proposed is not intended to materially alter floodplains or soils. If a bridge were constructed, there could be *de minimus* adverse effects to the physical environment (particularly to soil) in a very small area, as discussed in Table 2, which summarizes anticipated consequences to the physical environment. During bridge construction, best management practices will be used for sediment and erosion control, such as a temporary erosion control mat, silt fence, and riprap (Cedar Corporation 2015e). A new approach road to allow equipment to get to the bridge site will not be needed (S. Grunwald, Village of Cleveland, personal communication, July 25, 2015).

The primary impacts from the bridge to soils would come from driving pilings into the ground on either side of Centerville Creek to support the bridge. There would be four pilings, each approximately 20 feet long and 10.75" in diameter. (The length of the pilings will be adjusted to meet the minimum requirements of bearing 15 tons per pile.) The abutments on either side of the bridge that the pilings will go through are expected to be approximately 10'6" wide and approximately 2'6" long, giving each abutment a footprint of a little more than 26 square feet. Thus, along the banks of the creek, two patches of soil approximately 26 square feet each will be replaced with impermeable materials comprising the abutments (Cedar Corporation 2015d).

Approved construction plans show gravel or crushed stone being added to existing soil to give pedestrians a smooth approach to the elevation of the bridge. The gravel area would be 200 square feet on the northern side of the bridge and 100 square feet on the southern side of the bridge. The amount of crushed stone to be laid down at the end(s) of the bridge will also be minimal compared to the size of the parking lots that already exist in Hika Park, to the north and south of Centerville Creek. Also, the plans show 40 cubic feet of riprap (with a footprint of 20 square foot) needed in front of the northern abutment (Cedar Corporation 2015d, e). There is already considerable riprap on the southern side of the creek bed, as shown in Figure 3.

Given the length of the Centerville Creek riparian area in Cleveland, the abutments, gravel bridge approaches, and riprap would have *de minimus* impact on soils. The current size of Hika Park translates to approximately 600,000 square feet. The soil would be impacted in an area totaling approximately 370 square feet, which would affect less than 0.1% of the area within the park. For these reasons, overall adverse impacts of minor soil displacement and compaction in the small area where the bridge is to be installed would not be significant.

The bridge is not anticipated to impact site hydrology. The pilings for the bridge would extend into the floodplain. However, the top of the abutments and deck of the bridge will be installed just above the 100-year flood elevation (the abutments will allow the finished grade of the bridge to be 587 feet, whereas the 100-year flood elevation is 584 feet) (Cedar Corporation 2015c).

Table 2: Anticipated Consequences to Physical Environmental Resources

Physical Resource	Preferred Alternative	No Action Alternative
Soil/ Sediment	A small amount of short-term compaction could occur during the construction phase, along with compaction where the pilings, abutments, and gravel bridge approaches are installed on shore. Soil would be impacted in less than 0.1% of the park. There is little or no potential for sediment displacement or compaction in Centerville Creek. Overall adverse impacts of minor soil displacement and compaction would not be significant because of the small area affected and because best management practices will be used during construction for sediment and erosion control (e.g., a temporary erosion control mat, silt fence, and riprap).	No impacts in the short term. Later installation of a bridge would have impacts similar to those of the preferred alternative.
Hydrology	No impacts. While Centerville Creek is in the floodplain, the deck of the proposed bridge would be installed above the 100-year flood elevation. There would be no anticipated effects to the floodplain. The WDNR permit for the bridge concludes that it will not materially affect flood flow capacity (WDNR 2015a). In addition, there would be no impacts to stream flow because the bridge would be supported on pilings and abutments on shore.	No impacts in the short term. Later installation of a bridge would have impacts similar to those of the preferred alternative.

5.2 Biological Environment

Table 3 summarizes the potential consequences to biological resources of the alternatives considered. The infrastructure improvements would occur in a small area, relative to the size of the park, Centerville Creek, and adjacent areas. Neither the No Action alternative nor the proposed project would be anticipated to affect water quality or wetlands because there would be no construction within a water body or wetland, and best management practices will prevent impacts to Centerville Creek during construction. The bridge permit issued by WDNR notes

that, assuming all the permit conditions are followed, the project will not adversely affect water quality, will not increase water or environmental pollution, and will not adversely affect wetlands. As discussed below, the proposed action could have minor, *de minimus* beneficial and adverse impacts to plants and animal species, most of which would be temporary.

WDNR found, as part of approving the project, that the proposed bridge "will not be detrimental to the public interest because it will not impact any habitat." The DNR bridge permit also requires the permittees to minimize the removal of trees, shrubs, and other shoreline vegetation. Further, the permit requires decontaminating all equipment used for the project prior to and after its use in order to prevent the spread of invasive species. Every time equipment is moved, it is either to be allowed to dry thoroughly for 5 days or it is to be washed with hot and/or high pressure water after any mud, aquatic plants, and animals are removed (WDNR 2015a).

While the proposed project could have some impacts in the near term, these minor impacts, individually and cumulatively, to plants and animals would not be significant. Any disturbances from the proposed bridge to species would be *de minimus* given the small area affected. Minor adverse impacts to plants could be associated with installation of bridge abutments. While the bridge would result in some shading, which could result in minor reductions in photosynthetic activity in a small area, the fact that it will be elevated will allow some light to reach plants beneath the bridge at different times of day. There would be no anticipated impacts to fish. The proposed project could impact wildlife by providing new areas offering shade, shelter, connectivity, and/or areas to rest to some species. To the extent any biological function were lost in localized areas near where abutments were installed, wildlife using the impacted area could migrate to similar, neighboring areas.

NOAA consulted the USFWS pursuant to the Endangered Species Act about the possible effects of its proposed action on threatened or endangered species or their critical habitats, to the extent they might be present at Hika Park. There is no critical habitat at Hika Park. The only listed species that has been observed in Hika Park is the rufa red knot, which can stop in Hika Park on its migratory journey, as discussed in section 4.2.5. If any rufa red knots were feeding or resting within Hika Park during construction activities, they could easily move elsewhere. Since Hika Park is not in a region where rufa red knots would be expected to nest or breed, behaviors and life stages sensitive to disturbance should not be affected. Therefore, if there were any rufa red knots present in the vicinity during construction, they would likely depart and continue their migratory journey, leading to no effect on the species (L. Mandell, USFWS, personal communication, August 3, 2015). After consulting with USFWS, NOAA concluded that the proposed project would not have effects on any federally-listed threatened or endangered species or on federally-designated critical habitat. (For more information, see section 6.0 of this document and the correspondence between NOAA and USFWS in Appendices B and C.) While USFWS does not issue concurrences for no effect determinations, the Deputy Field Supervisor responding to NOAA's letter did not recommend any measures to mitigate potential impacts to any species or habitats or otherwise raise any concerns (L. Mandell, USFWS, personal communication, August 3, 2015).

NOAA also considered what level of review was conducted to comply with Wisconsin's endangered and threatened species laws. Before issuing the bridge permit to the Village of

Cleveland, WDNR requested and reviewed an evaluation of endangered or threatened resources pursuant to protocols developed by WDNR's Bureau of Natural Heritage Conservation. The evaluation, performed pursuant to Wisconsin Statute 29.604 (which protects endangered and threatened species), is confidential. However, it enables the staff at WDNR to determine whether any changes to the project, as proposed, would be desirable to ensure that there would not be adverse effects to any threatened or endangered species identified by the State of Wisconsin (C. Webb, WDNR, personal communication, May 26, 2016). WDNR did not request any changes to the project, and compliance with state endangered and threatened species protection law and regulations has been assured.

Table 3: Anticipated Consequences to Biological Environmental Resources

Biological Resources	**Preferred Alternative**	**No Action Alternative**
Water Quality	No impacts. Installation of the bridge would not affect water quality because the bridge spans Centerville Creek without requiring any supports be installed in the Creek itself. Sediment and erosion control methods would ensure that the work done near the banks of the creek will not adversely affect water quality or increase water pollution in surface waters (WDNR 2015a).	No short- or long-term impacts.
Wetlands	No impacts because the bridge would not be located within an area delineated as wetlands. No wetlands would be filled, excavated or disturbed during construction or as part of the proposed project.	No short- or long-term impacts.
Plants	No significant impacts. There could be minimal adverse impacts, most of which would be temporary (during construction), as well as some long-term beneficial impacts. Constructing the bridge abutments would be expected to eliminate some habitat for plants, but only in a very small area. Shading underneath the 8-foot wide bridge could reduce shoot density, biomass, and growth of plants in the immediate vicinity (Kelty and Bliven 2003). However, as these effects would occur in only a very small proportion of the park, they are *de minimus*. To the extent that installing the bridge would encourage people from trying to cross the creek on foot, installing the bridge could also result in beneficial impacts to plants in and around the creek.	No impacts in the short term. Later installation of a bridge would have impacts similar to those of the preferred alternative.
Fish	No impacts. Pursuant to a general permit authorized by WDNR, the bridge would not be constructed between March 15 and May 15 to minimize the potential for short-term adverse effects, because those are key times for fish movement, fish spawning, and fish egg incubation. Best management practices to be utilized by contractors are intended to prevent pollutants generated during construction from entering the creek. There would not be long-term effects because fish can easily move between shaded and unshaded areas if the presence of the bridge were to contribute to any minor differences in food supply, water temperature, or shelter.	No short- or long-term impacts.
Wildlife	No significant impacts. Minor, short-term impacts could occur during construction. While the brief periods of construction activity might disturb certain birds, mammals, or other wildlife in localized areas, most affected species could move elsewhere during that time. Over the long term, new opportunities for animals to feed, shelter, travel, or rest on or adjacent to new infrastructure could be created, which could result in minor positive or	No impacts in the short term. Later installation of a bridge would have

Biological Resources	Preferred Alternative	No Action Alternative
	negative impacts that would not be significant and that are hard to predict due to predator-prey interactions and other factors. There would be no anticipated effects to threatened or endangered species or critical habitat. NOAA consulted the U.S. Fish and Wildlife Service (see Appendices C and D), and WDNR's Bureau of Natural Heritage Conservation reviewed the proposal before the bridge permit was issued.	impacts similar to those of the preferred alternative.

5.3 Cultural and Socioeconomic Environment

Potential impacts to the cultural and socioeconomic environment from both alternatives are detailed in Table 4. These impacts are not anticipated to be significant. No changes to land uses or development patterns will result from installing a bridge, as it is consistent with local zoning and land use. Minor changes to visitor use of the park could result from the proposed project, as outlined in Table 4. These would constitute minor beneficial impacts on the socioeconomic environment, particularly to accessibility and visitor safety. The pedestrian bridge could make it easier for users to access Hika Shores from the area south of the creek where the boat ramp, parking lot, and restrooms are located. The proposed bridge would increase pedestrian safety and discourage people from trying to cross the creek on foot, which the Village described as impassible during much of the year (Village of Cleveland 2012). Not constructing the bridge would result in individuals continuing to be unable to cross between the northeastern and southeastern portions of Hika Park unless they walk along Lakeshore Drive (or ford the creek). As noted elsewhere, there is no sidewalk on the eastern side of Lakeshore Drive, the portion of the park most visitors would be expected to use; walking along the shoulder of the road could pose a safety hazard. Thus, both the status quo and the near-term consequences of the No Action alternative would have minor adverse impacts to public safety. Over the longer term, the impacts of the No Action alternative would be similar to those of the preferred alternative.

Both the proposed project and the No Action alternative would be anticipated to have no impact on cultural or historical artifacts or resources. The State Register of Historic Places does not contain any listings in Cleveland. The nearest sites are two shipwrecks approximately 9 miles offshore of Hika Park (Wisconsin Historical Society 2016), which are not susceptible to any impacts from the proposed bridge because its installation on land would have no impact on underwater resources. There is also one building in Centerville on the State Register of Historic Places and a few historic ("Cream City Brick") buildings identified near Hika Park, off of Lincoln Avenue, mostly to the west of Lakeshore Drive (Bay-Lake RPC 1985). Other resources of possible historical interest are the remnants of Centerville Dam northeast of the intersection of Lakeshore Drive and Lincoln Avenue (Inter-Fluve 2012) and the two former piers in Hika Bay described in section 4.3.3. One (called Centerville Pier) was just south of the existing, seasonal pier. There was also a second pier in Hika Bay (called East Pier), approximately two blocks further south (a little north of Jefferson Avenue), which at one time was able to support horse-drawn wagons. Remnants of pilings from the second pier remained as of the mid-1980s, according to the Town of Cleveland's 1985 *Waterfront Plan*. In addition, there was formerly a tannery along Centerville Creek, which closed some time before the former wastewater treatment

plant, on the Department of Public Works property, opened in the 1960s (Bay-Lake RPC 1985). The proposed project is not anticipated to affect any of these sites.

NOAA's evaluation found that the work proposed by the Village of Cleveland as of 2014 would have no adverse effects on historic properties, and this finding was submitted to the Wisconsin Historical Society (WHS) (see Appendix D). NOAA received no response from WHS. Pursuant to the implementing regulations for the National Historic Preservation Act, if a State Historic Preservation Officer does not respond to a federal agency within 30 days of receipt of a proposed finding, the agency may proceed with an undertaking.[2]

Before WDNR authorized the bridge to be constructed in accordance with a state general permit, a WDNR archaeologist cleared the project. The archaeologist's review was conducted in 2015 pursuant to Section 44.40 of the Wisconsin statutes, which requires state agencies to consider whether a proposed action by the state (e.g., issuance of a permit) will affect any historic property that is a listed property on the Wisconsin or any local inventory of historic places. The 2015 WDNR review covered the project as currently proposed (personal communication from Mark Dudzik, WDNR, to Carrie Webb, WDNR, June 11, 2015).

Table 4: Anticipated Consequences to Cultural and Socioeconomic Resources

Resources	Preferred Alternative	No Action Alternative
Recreational Uses	Minor beneficial impacts. Construction of the pedestrian bridge would improve access to the northern portion of Hika Park. The new bridge will not materially obstruct navigation, according to WDNR (WDNR 2015a).	No impacts in the short term. Under current conditions, some users might only use the southeastern part of the park, which could promote use conflicts between swimmers, boaters, and fishers. Later installation of a bridge would have impacts similar to those of the preferred alternative.
Public Safety	Minor beneficial impacts. The project could improve visitor safety because there is no sidewalk on the eastern side of the existing bridge over Centerville Creek, whereas most of the public access infrastructure in the park is on the eastern side of Lakeshore Drive. A pedestrian bridge would also discourage users from crossing Centerville Creek on foot to reach the northern portion of Hika Park.	Continued minor adverse impacts to public safety in the short term. To move between Hika Shores and the southeastern part of Hika Park, most pedestrians would continue to use the existing bridge over Centerville Creek, on Lakeshore Drive. Use of the existing bridge can be dangerous, especially to anyone who tried to walk along the shoulder of the eastern side. The lack of a pedestrian bridge near the shoreline could also encourage some people to try crossing the creek on foot, which is not safe. Later installation of a bridge would have

[2] While the proposed project has been modified since NOAA's 2014 letter, the only modifications were to remove some of project elements (trails, boardwalks, and interpretive signs) that were originally proposed. Given that WHS did not object to the original proposal, NOAA may proceed with funding the subset of the original proposal currently proposed (the preferred alternative).

Resources	Preferred Alternative	No Action Alternative
		impacts similar to those of the preferred alternative.
Cultural and Historic Resources	No adverse effects. NOAA determined the project would have no adverse effect on historic properties and shared this finding with the Wisconsin Historical Society, which did not comment. A WDNR archaeologist also evaluated the project's potential to impact historic properties before the WDNR permit for the bridge was issued.	No impacts in the short term. Later installation of a bridge would have impacts similar to those of the preferred alternative.

5.4 Other Environmental Consequences

This subsection considers additional potential environmental consequences of bridge construction not discussed in the preceding subsections. First, it summarizes potential air quality and noise impacts. Next, it addresses aesthetics and visual impacts. Finally, potential cumulative impacts are identified and discussed. These types of consequences would not occur in the short term as a result of the No Action alternative. Under the No Action alternative, assuming the Village identifies other sources of funding and arranges for the bridge to be constructed as proposed, the long-term environmental consequences would be the same as they would be under the preferred alternative.

5.4.1 Air Quality Impacts

Minor, temporary increases in the amounts of carbon monoxide and other pollutants associated with the use of heavy machinery could be associated with the proposed project, during the installation of the bridge. Any such impacts would primarily be restricted to the construction site. Short-term construction activities should have no long-term air quality impacts on the site or surrounding environment.

5.4.2 Noise Impacts

There could be a minor increase in noise levels within the park during the construction stage of the proposed bridge, particularly when the abutments are being installed. However, the equipment needed for this project is likely to be no more noisy than the scrapers, bulldozers, excavators, and large trucks used as part of the efforts to restore Centerville Creek and excavate and transport a large volume of sediment, much of which was placed in the northern portion of Hika Park (LNRP 2009). Noise impacts are expected to be short-term (last approximately 5 weeks) and limited to active periods of construction. The contractors installing the project will ensure the mufflers or silencers on their mechanical equipment are in good working order (Cedar Corporation 2015e). Machinery required for construction includes an air hammer to drive in steel pilings; concrete trucks to pour and cast concrete; additional trucks to deliver supplies, such as stone and equipment; and a crane to place the bridge on the supports that are built for it (S. Grunwald, Village of Cleveland, personal communication, July 25, 2015).

NOAA evaluated the potential for there to be sensitive populations in close proximity to the area where construction will occur. Cleveland Elementary School is approximately half a mile southwest of Hika Park, off of East Washington Avenue. There are no hospitals, nursing homes, or elder care facilities in Cleveland, and a senior nutrition center in the Village is more than 1 mile away (Bay-Lake RPC 2007). There is also an outpatient clinic operated by the U.S. Department of Veterans Affairs in Cleveland, a few miles from Hika Park. The nearest church to Hika Park is 1.5 miles away. No bridge construction activities would be permitted to occur on Sundays or holidays, except in emergencies (Cedar Corporation 2015e). Other construction sites near and vehicles traveling past the types of facilities near Hika Park used by special populations would likely create more noise than would be audible from construction activities at Hika Park, given the distance any noise from construction activities at Hika Park would have to travel before reaching sensitive populations. Therefore, any short-term noise impacts associated with installing the proposed bridge would not be expected to adversely affect sensitive populations.

5.4.3 Aesthetics and Visual Impacts

Effects on aesthetics of the proposed bridge would be mostly neutral. The new bridge will create new vantage points from which to appreciate the nearby scenery. Some people might think an arched bridge such as the one proposed is graceful. The simplicity of the pedestrian bridge design is another attribute that some people might like, including the fact that no supports need to be sunk into the creek to support the bridge. While others might prefer a bridge designed differently or made of other materials (such as wood), bridge durability and cost are among other considerations for bridge design that had to be weighed. The bridge was designed to meet the Village's specifications, which were determined, after a geotechnical survey, by the Public Works and Utilities Committee. The Village Board also has a role in approving the proposed bridge. All the meetings of the Village bodies making decisions about the bridge have been open to the public. Citizen input may be offered at any of these meetings. For the most part, members of the public have not attended these meetings to discuss potential changes to aesthetics that could result from installing the bridge. However, the Village did receive a letter suggesting that the bridge would disrupt the view of the natural shoreline and considered this comment before making a final decision about whether to support installation of the bridge (Village Board of Cleveland 2015; Village of Cleveland Public Works Committee 2015a, c).

The project could impact the view of Lake Michigan from shoreline areas within Hika Park and from some locations outside the park. The topography and trees would screen the bridge from other locations, at least at some times of year. (There are numerous trees between the highway bridge and the proposed pedestrian bridge, including relatively large trees along the northern side of the creek.) The new bridge will be steel, with wood decking. There are other types of infrastructure in Hika Park that are also made of these materials, such as the fishing pier that is installed seasonally approximately 300 feet away. The pedestrian bridge will be approximately 250 feet downstream from the existing Lakeshore Drive bridge, which is concrete, with a steel guard rail along both sides. There is a picnic shelter over some picnic tables near the southern terminus of the bridge. Near the northern terminus of the bridge is the Village Public Works sewage lift station, with the Public Works garage to its north. Because there are existing structures located in the vicinity of the proposed location for the pedestrian bridge, some of

which have visible steel and wood parts, the proposed pedestrian bridge would fit in with its surroundings.

5.4.4 Cumulative Impacts

NOAA evaluated past, present, and potential future projects at Hika Park and determined that they would not collectively result in significant cumulative impacts because of the types of public access structures being considered, the relatively small area affected, and the fact that projects must comply with federal and state requirements designed to protect threatened and endangered species, wetlands, water bodies, and other natural and historic resources. Past projects and potential future projects are outlined and analyzed below.

As noted in section 4.1.4, a substantial amount of work to restore the channel of and habitat along Centerville Creek upstream of Lakeshore Drive over a linear distance of approximately 2,500 feet was completed within the last few years. More than 15,000 cubic yards of sediment were removed. Materials to improve habitat for fish and increase its complexity, such as riffles, pools, logjams (from large woody debris), and bank cover, were installed. The banks of the creek were stabilized with biodegradable erosion control fabric, vegetation, and soil guard netting. In addition, trees and native plants (such willow and dogwood) were planted in adjacent areas. These measures were designed to reduce sediment delivery to Lake Michigan, increase the floodplain's storm water storage capacity, and reduce the potential for unsafe conditions resulting from saturated sediments, as well as eroding soils. The restoration project was also intended to support the food chain and reduce the temperature of the creek in the summer as a result of the shade provided (LNRP 2009). The company assisting with restoration of Centerville Creek and the millpond monitored planted trees, riparian vegetation, and structural stability for a year after creek restoration activities were otherwise completed. Local citizens were anticipated to monitor and remove invasive plants in the restored area west of Lakeshore Drive for 3 years after the creek restoration project (LNRP 2009). The LNRP and Friends of Hika Bay have also played a key role with respect to managing invasive species, planting trees, and carrying out other maintenance activities throughout the park.

A *NOAA Restoration Center Programmatic Environmental Impact Statement* published in 2015 concluded that stream restoration and bank restoration projects tend to have long-term beneficial impacts to water, living resources, land use and recreation, and socioeconomics. The only potential long-term adverse effects that NOAA's Restoration Center noted these types of projects can have is to cultural and historic resources, depending on how they are carried out (NOAA 2015). The way the permitting process works in Wisconsin, and given's NOAA's effort to consult with the State Historic Preservation Office (at WHS), would be expected to prevent these types of adverse impacts.

Future activities that are reasonably definite in the vicinity of Hika Park include continued management of invasive species and planting of additional native species as part of maintenance activities. Figure 9 depicts a number of additional potential future changes to public access infrastructure at Hika Park that are being considered, including building a viewing area and trails within the Hika Shores area. Trails could provide visitors with opportunities to view species and habitats in the area, including in the recreated ridge and swale ecosystem. However, no funding

for trails has been identified at this time. One possible design suggested that the total length of the future trails on the Hika Shores parcel could be approximately 800 feet. As shown on Figure 9, that could include an 80-foot trail leading from the bridge to a fork where visitors could choose to take an 80-foot trail to the beach or to walk around a loop containing a "ridge walk" and a "swale walk." The swale walk trail could be approximately 120 feet long and lead to a meadow walk trail that could be approximately 220 feet long. The meadow walk trail could connect back to the ridge walk trail, which could be approximately 240 feet long. At the transition from the meadow walk to the ridge walk, there could be another spur trail leading to the beach, at least 60 feet away. Boardwalks could be installed in some places where the trail would cross wet areas and to encourage people not to walk directly through sensitive habitats (M. Friis, Wisconsin Coastal Management Program, personal communication, September 10, 2014). However, no final decisions have been made about potential configurations for future trails and boardwalks; the Village and LNRP want to observe how the bridge is used before planning trails or additional seating at Hika Park (S. Grunwald, Village of Cleveland, personal communication, March 18, 2016).

The *NOAA Restoration Center Programmatic Environmental Impact Statement* assessed the potential impacts of trail restoration and related activities. The assessment found that these types of projects would cause only short-term, minor adverse impacts to geology, soils, water, air, living resources, habitat, and land use/recreation. The types of long-term impacts possible from trail projects could directly and indirectly benefit geology, soils, water, living resources, habitat, cultural and historic resources, and socioeconomics, impacts that would be related to reducing the potential for erosion and allowing controlled public access to sensitive areas (NOAA 2015). The most likely potential adverse effect of future infrastructure installed in the park would be to reduce photosynthetic activity in small areas that are covered with new infrastructure or otherwise shaded by it. Another potential long-term impact could be displacement of habitat in very small areas beneath the infrastructure; however, most motile organisms would be expected to be able to move to nearby areas. Infrastructure also sometimes creates new microhabitats because of the shade, shelter, and substrate it provides, which could attract some organisms after it is installed and have very minor positive or negative effects (Kelty and Bliven 2003; NOAA 2015). However, any such impacts, when viewed on the scale of all available habitat in the area, would be *de minimus*. If another approximately 800 feet of trails/boardwalks were installed in Hika Park, for example, that would create approximately 6,400 square feet or less than one sixth of an acre of trails/boardwalks if they were, hypothetically, 8 feet wide. In all, the Hika Shores property, where most of the potential infrastructure might be installed, is 3.5 acres; if a trail system were installed as proposed, it would occupy less than 5% of that portion of the park and only 1% of the park as a whole.

A few different possible locations for a gazebo/viewing platform with a view of the water have been suggested in Hika Park, but plans to build it were put on hold in spring 2016 (Village of Cleveland Plan Commission 2016). Even if pedestrian bridge installation were followed by installation of trails, additional signage, a viewing area, and/or other infrastructure in Hika Shores to facilitate public use and enjoyment of the Village-owned land, the overall land use for the park will still be oriented around outdoor recreation. Local decision-makers have expressed "the opinion [that] it would be better to observe how the bridge is used, and how it physically integrates with the topography and existing structures in its environment, before any additional

seating or trails are considered" (S. Grunwald, Village of Cleveland, personal communication, March 18, 2016). There are also potential funding constraints. For example, moving the Village Public Works office sewage lift station and garage to an alternate site (identified as a high-priority goal by the Village in 2009) would potentially free up a significant area for habitat restoration, recreational enhancements and/or parking, but could not occur until adequate funding were available for that purpose (LNRP 2009; S. Grunwald, Village of Cleveland, personal communication, July 22, 2016).

As with any long-term community planning effort, it is uncertain whether, when, and how individual ideas and recommendations related to Hika Park might be implemented. Partially funding the construction of the proposed pedestrian bridge sets no precedents for future actions that could significantly affect the quality of the environment. Specifically, funding the proposed bridge would not necessarily mean that CZMA funding will be available for any future projects at Hika Park. The Wisconsin Coastal Management Council reviews projects proposals for WCMP sub-grants each year and makes funding recommendations to the Secretary of the Wisconsin Department of Administration, who makes final funding decisions one year at a time. Similarly, NOAA evaluates each project proposed by WCMP on a case-by-case basis.

Net long-term effects of any potential future park enhancement projects (in combination with past projects and the current proposal) would be likely to be beneficial, but minor, as supported by the analysis published by the NOAA Restoration Center in 2015. Beneficial impacts to natural heritage and the experiences available to the public would derive from providing additional walkways and/or seating, providing vantage points from which visitors could view coastal and riparian settings, as well as flora and fauna. Beneficial impacts to natural resources include providing enhanced opportunities to view, protect, and conserve in the area. If trails or boardwalks were installed, they could also reduce the likelihood of visitors walking through sensitive habitats, which can result in trampling some species. Potential adverse effects (e.g., to soils and living resources) would be mostly temporary and, on the scale of Hika Park as a whole, *de minimus*. Thus, all cumulative effects of existing and potential future infrastructure would be minor. There would be no significant cumulative impacts. Potential cumulative impacts would be similar to the impacts discussed in previous sections of this EA, as long as future infrastructure continues to be relatively small and to be installed consistent with applicable state and federal requirements.

5.4.6 Irreversible and Irretrievable Commitments of Resources

As would be the case for many small construction projects, the primary irreversible and irretrievable consequences of installing the proposed bridge would be the time, money, and human effort to plan and implement the proposed, small-scale project. If the bridge installed were to be damaged by future unforeseen events, it would be difficult to recapture the financial resources invested in implementing the project. Although there is currently minimal public access infrastructure in the portion of the Hika Park northeast of Centerville Creek (Hika Shores), the portion of the park southeast of the creek offers many recreational amenities. The intent of adding additional land to Hika Park over the last approximately 12 years has been to expand recreational opportunities. Installing a new bridge would not irreversibly commit the Village to land uses in any portion of Hika Park that are different from existing land uses.

6.0 COMPLIANCE WITH OTHER ENVIRONMENTAL AND ADMINISTRATIVE REVIEW REQUIREMENTS

Clean Air Act
The Clean Air Act (42 U.S.C. § 7401 *et seq*.) directs the U.S. Environmental Protection Agency to set limits on air emissions to ensure basic protection of health and the environment. The fundamental goal is the nationwide attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). Primary NAAQS are designed to protect human health. Secondary NAAQS are designed to protect the public welfare (for example, to prevent damage to soils, crops, vegetation, water, visibility, and property).
Compliance: Construction activities will comply with all applicable state rules and local requirements related to air quality. Any air emissions associated with installing the bridge would not be anticipated to result in any exceedances of NAAQS.

Clean Water Act
The Clean Water Act (33 U.S.C. § 1251 *et seq.*) is the principal law governing pollution control and water quality of the Nation's waterways. Section 404 of the Clean Water Act authorizes a permit program for the beneficial uses of dredged or fill material in navigable waters. The USACE administers the program. As a condition of wetlands permits issued under Section 404, the USACE also requires compliance with Section 401 of the Clean Water Act, which requires applicants for federal licenses or permits to conduct activities that may result in a discharge of pollution into the waters of the United States to obtain a certification , of compliance with applicable water quality standards and goals, from the appropriate state (or a waiver from the state).
Compliance: On June 2, 2015, the USACE sent a letter to the Village of Cleveland indicating that the project site did not contain any waters of the United States subject to federal jurisdiction and therefore no permit under the Clean Water Act would be necessary for the project (USACE 2015).

Coastal Barrier Resources Act (CBRA)
Originally passed in 1982 and reauthorized multiple times, the Coastal Barrier Resources Act (16 U.S.C. § 3501 *et seq.*; 12 U.S.C. § 1441 *et seq.*) was enacted to address issues related to coastal barrier development and to minimize the loss of human life, wasteful federal expenditures, and damage to fish, wildlife and other natural resources by restricting federal financial assistance in designated coastal barriers, with some exceptions.
Compliance: The project is not within a designated Coastal Barrier Resources Act area and does not involve development activities inconsistent with Act.

Department of Commerce Requirements for Grants and Cooperative Agreements
The Department of Commerce published, in the *Federal Register*, on December 30, 2014, (at 79 *Federal Register* 78390) updates to and a compilation of the Department of Commerce pre-award requirements and standard terms and conditions for grants and cooperative agreements awarded by the Department. These cover the laws, regulations, administrative requirements, and federal and Department of Commerce policies and procedures for financial assistance awards.

Compliance: Special Award Conditions on the financial assistance award that would fund the proposed project require compliance with these requirements.

Endangered Species Act

The Endangered Species Act (16 U.S.C. § 1531 *et seq*.; 50 C.F.R. parts 17, 222, and 224) directs all federal agencies to conserve endangered and threatened species and their habitats and encourages such agencies to utilize their authority to further these purposes. Under the Act, NOAA's National Marine Fisheries Service and USFWS publish lists of endangered and threatened species and their critical habitat. Section 7 of the Act requires that federal agencies consult with these two agencies to minimize the effects of federal actions on endangered and threatened species.

Compliance: No impacts to NOAA trust resources are anticipated because there are no species under National Marine Fisheries Service jurisdiction in the area. NOAA submitted a consultation letter to the USFWS Twin Cities Ecological Services Field Office on June 22, 2015, regarding species under USFWS jurisdiction. NOAA determined that a red knot sighting within Hika Park was reported in 2011. Initially, NOAA posited that installation of the bridge "may affect but is not likely to adversely affect" rufa red knots. The logic for this was that, if any migrating red knots were feeding or resting within Hika Park while construction is underway, they easily could move elsewhere until construction is complete, an insignificant effect. Since Cleveland is not in a region where red knots would be expected to nest or breed, those behaviors, which are sensitive to disturbance, would not be affected. NOAA also considered the extent to which bridge installation work might affect any other listed species. The three other listed species in Manitowoc County are Pitcher's thistle, northern long-eared bat, and piping plover, all of which NOAA concluded would be unlikely to be present, given that the habitat characteristics at Hika Park do not match the types of habitat suitable for these species. Thus, there would be "no effect" to these species. In its response to NOAA's letter, USFWS confirmed that the rufa red knot only uses Hika Park as a stopover area, not for nesting or breeding, and that if individual birds were disturbed during construction, they would leave the site and continue their migratory journey. USFWS further indicated that it recommended a "no effect" determination for the species (see Appendix C). NOAA has revised its determination accordingly. While USFWS does not issue concurrences for "no effect" determinations, the Deputy Field Supervisor responding to NOAA's letter did not recommend any measures to mitigate potential impacts of the project to any species or otherwise raise any concerns.

Environmental Justice

To be consistent with the President's Executive Order 12898 on Environmental Justice (February 11, 1994), Executive Order 12948 (Amendment to Executive Order 12898), and the Department of Commerce's Environmental Justice Strategy, applicants must ensure that their projects will have no disproportionately high and adverse human health or environmental effects on minority or low income populations.

Compliance: The project will have no adverse impacts on any minority or low income populations that may be located near the site. The project is consistent in use and type with existing zoning and land use regulations. The most recent data available from the U.S. Census Bureau indicate that approximately 1 in 20 Cleveland residents and 1 in 20 Manitowoc County residents come from a racial minority. The poverty rate in Cleveland is 4.7%, and the poverty rate in Manitowoc County as a whole is 10%. Minority and low-income visitors to Hika Park

would benefit from the proposed project, which would improve access for all visitors to the northeastern portion of the park.

Executive Order 11990 − Protection of Wetlands, Executive Order 11988 – Floodplain Management, and Executive Order 13690 − Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input

Executive Order 11990 requires federal agencies to avoid the adverse impacts associated with the destruction or loss of wetlands, to avoid new construction in wetlands if alternatives exist, and to develop mitigation measures if adverse impacts are unavoidable. Executive Order 11988 requires federal agencies to avoid, to the extent possible, long and short-term adverse impacts associated with the occupancy and modification of floodplains. Executive Order 13690 updates Executive Order 11988 and establishes a new Federal Flood Risk Management Standard intended to reduce risks and costs associated with future flood disasters by requiring all federal investments in and affecting floodplains to meet higher flood risk standards. It requires all future federal investments in and affecting floodplains to be resilient to flooding, including as it is anticipated to be exacerbated by climate change.

Compliance: Part of Hika Park is in the floodplain, in the zone designated AE by the Federal Emergency Management Agency. As designed, the bridge will be installed just above the 100-year base flood elevation in that location, which was 584 feet according to the 2011 Federal Emergency Management Agency floodplain map. The lowest part of the bridge span will rest on abutments at an elevation of 587 feet. Only pilings shown on the construction drawings would be below base flood elevation. The project does not fall within a delineated wetland. The Village of Cleveland participates in the National Flood Insurance Program (Federal Emergency Management Agency 2016). NOAA's "Guidance Manual on Compliance with Implementing Executive Orders 11988 and 11990" (issued in 2012) outlines an evaluation process for projects that extend into floodplains and wetlands. However, the evaluation process exempts projects that entail minor modification of existing facilities or structures in a floodplain or wetland to improve safety or environmental conditions, as long as modification would not significantly change the expected useful life of the facility or involve certain types of changes to site hydrology. The new bridge would be a minor addition to existing recreational infrastructure at Hika Park. The proposed project would improve the safety conditions for visitors wishing to cross Centerville Creek while remaining in the park, rather than using the bridge along Lakeshore Drive. No buildings will be constructed in the floodplain; the proposed project only involves constructing a bridge. NOAA is in the process of updating its 2012 Guidance Manual and procedures for federally funded projects affected by Executive Order 13690. In the meantime, the existing Guidance is applicable, consistent with the October 8, 2015, "Guidelines for Implementing Executive Order 11988, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input."

Executive Order 13112 − Invasive Species

The purpose of Executive Order 13112 is to prevent the introduction of invasive species, respond to and control invasions in a cost-effective and environmentally sound manner, and to provide for restoration of native species and habitat conditions in ecosystems that have been invaded.

Compliance: The proposed project would not introduce any invasive species to Hika Park, nor will it involve any invasive species removal. The WDNR permit issued for construction of the bridge requires that all equipment used for the project be decontaminated prior to its use and after its use. Every time the equipment is moved, it is either to be allowed to dry thoroughly for 5 days or it is to be washed after any mud, aquatic plants, and animals are removed (WDNR 2015a). These requirements will prevent the spread of invasive species.

Executive Order 13158 − Marine Protected Areas (MPAs)

Executive Order 13158 requires federal agencies to identify actions that affect natural or cultural resources that are within MPAs. It further requires federal agencies, in taking such actions, to avoid harm to the natural and cultural resources that are protected by MPAs.

Compliance: There are no designated Marine Protected Areas in or immediately adjacent to Hika Park. The Wisconsin Historical Society houses a Maritime Preservation and Archaeology Program. NOAA sent a consultation letter to WHS as part of its National Historic Preservation Act compliance. WHS has identified several shipwrecks in Lake Michigan, substantially offshore of Hika Park. For example, one is listed on the State Register of Historic Places as 9 miles northeast of Hika Park (the schooner known as *Home*), and another shipwreck is listed on the State Register as 9.5 miles east of Hika Bay Park (the schooner *Gallnipper*). There is also an unconfirmed shipwreck offshore of Cleveland (the *G.P. Heath*), approximately 0.5 miles south of Hika Park (Wisconsin Sea Grant and Wisconsin Historical Society 2016). The proposed project is not anticipated to have impacts beyond the boundaries of Hika Park and therefore will not affect any shipwrecks or marine protected areas.

Fish and Wildlife Coordination Act

Provisions of the Fish and Wildlife Coordination Act (16 USC § 661-666c) provide for interagency consultation, particularly consultation with the USFWS and appropriate state wildlife agency, when federal agencies plan to conduct activities involving the impoundment, diversion, deepening, control, or modification of a body of water for any purpose, with only two exceptions. Interagency consultation allows federal agencies to incorporate recommended conservation measures intended to reduce potential project impacts on fish, wildlife, and the aquatic and terrestrial plant species upon which they depend.

Compliance: NOAA (and, in some cases, the Village of Cleveland) consulted a variety of State of Wisconsin and federal agencies, listed in section 9.0 of this report, about potential impacts of the proposed project, including USFWS and WDNR. USFWS did not provide any recommendations, as noted under the paragraphs outlining Endangered Species Act compliance. In addition, Wisconsin DNR evaluated the potential for impacts to state-designated threatened and endangered species and did not have concerns about potential effects (C. Webb, WDNR, personal communication, May 25, 2016).

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 *et seq*.) as amended and reauthorized by the Sustainable Fisheries Act (Public Law 104-297), established a program to promote the protection of essential fish habitat in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. After essential fish habitat has been described and identified in fishery management plans by regional fishery management councils, federal agencies are obligated to consult with the

National Marine Fisheries Service with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat.
Compliance: There is no essential fish habitat in the Great Lakes and therefore no potential to adversely affect essential fish habitat.

Marine Mammal Protection Act
The Marine Mammal Protection Act (16 U.S.C. § 1361 *et seq.*), as amended, prohibits the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, as well as the importation of marine mammals and marine mammal products into the U.S. The primary management objective of the Act is to maintain the health and stability of the marine ecosystem, with a goal of obtaining an optimum sustainable population of marine mammals within the carrying capacity of the habitat. The Marine Mammal Protection Act is intended to work in concert with the provisions of the Endangered Species Act. There are some exceptions to the prohibitions on taking marine mammals, including a mechanism for requesting authorization from the National Marine Fisheries Service's Office of Protected Resources for "incidental," but not intentional, taking, of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing or directed research on marine mammals) within a specified geographic region. Regulations adopted under the Marine Mammal Protection Act restrict harassment (meaning any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal in the wild by causing disruption of behavioral patterns, including breathing, breeding, feeding, migration, and sheltering).
Compliance: There are no marine mammals in Great Lakes ecosystems and therefore no potential to adversely affect marine mammals.

Migratory Bird Treaty Act
The Migratory Bird Treaty Act (16 U.S.C. § 715 *et seq.*) provides for the protection of migratory birds. For example, it regulates capturing or killing migratory birds, their import and export, scientific collection, and possession for educational purposes. The Act does not specifically protect migratory bird habitat, but USFWS may suggest consideration of time of year restrictions for construction or remedial activities at sites where it is likely migratory birds may be nesting or project schedules that would avoid the nesting seasons of migratory birds.
Compliance*:* Consultation with USFWS constitutes compliance with this Act. NOAA consulted with a representative of the USFWS Twin Cities Ecological Services Field Office, as noted above. USFWS did not also offer any concerns or recommendations related to migratory bird conservation. The proposed project is fully compatible with the goals and objectives of the Act, including promoting public recreation and education related to migratory birds.

National Historic Preservation Act
The purpose of the National Historic Preservation Act (16 U.S.C. § 470 *et seq.*) is to provide for the preservation of historic American sites, buildings, objects, and antiquities of national significance, and for other purposes by specifically providing for the preservation of historical and archaeological data which might otherwise be lost or destroyed.
Compliance: NOAA's evaluation found that work proposed by the Village of Cleveland would have no adverse effects on historic properties, and this finding was submitted to the Wisconsin Historical Society in 2014 (see Appendix D). NOAA received no response from WHS.

Pursuant to the implementing regulations for the National Historic Preservation Act, if a State Historic Preservation Officer, such as WHS, does not respond to a federal agency within 30 days of receipt of a proposed finding, the agency may proceed with an undertaking (so long as no consulting party, as defined in the regulations, has objected). While the Village's proposal has been modified since NOAA's 2014 letter, the only modifications were to remove some of the originally-proposed elements of the project. Given that WHS did not object to the original proposal, NOAA can proceed to fund a subset of the original proposal comprising the preferred alternative without reengaging WHS.

National Marine Sanctuaries Act

Under the National Marine Sanctuaries Act, federal agency actions, internal or external to a national marine sanctuary, including private activities authorized by licenses, leases, or permits, that are likely to destroy, cause the loss of, or injure any sanctuary resource are subject to consultation with the Secretary of Commerce. Each federal agency proposing such an action must provide a written statement describing the action and its potential effects on sanctuary resources no later than 45 days before the final approval of the action. In addition, sanctuary permits may be required for certain actions that would otherwise be prohibited.
Compliance: There are no National Marine Sanctuaries in Wisconsin.

Rivers and Harbors Act

The Rivers and Harbors Act of 1899 (33 U.S.C. § 401 *et seq.*) regulates development and use of the nation's navigable waterways. Section 10 of the Act prohibits unauthorized obstruction or alteration of navigable waters and vests the U.S. Army Corp of Engineers with authority to regulate discharges of fill and other materials into such waters.
Compliance: The Village of Cleveland consulted the USACE, the agency that typically provides authorizations under the Rivers and Harbors Act. The Corps indicated that the site does not contain any waters of the United States subject to Army Corps of Engineers jurisdiction (USACE 2015). No federal permits would be required. All construction activity would be carried out in compliance with federal and state law.

7.0 PREPARERS OF REPORT

Rebecca L. Feldman, Senior Coastal Management Specialist
The Baldwin Group, Inc., onsite at Office for Coastal Management, National Ocean Service, NOAA
Master of Environmental Management (Coastal Environmental Management and Geospatial Analysis), Nicholas School of the Environment and Earth Sciences, Duke University
Bachelor of Arts (Environmental Policy and English), Amherst College

Patmarie S. Nedelka, NEPA and Environmental Compliance Coordinator
Office for Coastal Management, National Ocean Service, NOAA
Master of Science (Biological and Physical Oceanography), Old Dominion University
Bachelor of Science (Fisheries and Wildlife Management), Michigan State University

8.0 REFERENCES

Bay-Lake RPC. 2007. 20-Year Comprehensive Plan: Village of Cleveland, Manitowoc County. May 2007. http://www.baylakerpc.org/media/2115/Village_of_Cleveland_Comp_Plan_May_2007.pdf

Bay-Lake RPC. 1996. Hika Bay Park & Dam Impoundment Area Park Site Master Plan: Village of Cleveland, Wisconsin. November 1996.

Bay-Lake Regional Planning Commission (RPC). 1985. Waterfront Plan: Village of Cleveland. July 1985.

Buckman, M. 2003. Appraisal of Mech/Kleinert Property for the Wisconsin Department of Natural Resources. Vogels Buckman Appraisal Group. February 27, 2003.

Cedar Corporation. 2015a. Village of Cleveland: Hika Park Pedestrian Bridge, Option #2, Sheet 3 of 3. March 25, 2015.

Cedar Corporation. 2015b. Hika Bay Bridge – Preliminary [Schedule]. July 22, 2015.

Cedar Corporation. 2015c. Maps Submitted with Clear Span Bridge Over Stream General Permit Application, Hika Park Pedestrian Bridge, Contract A-15. May 22, 2015. https://permits.dnr.wi.gov/water/SitePages/StreamAttachment.aspx?ListID=f77d5859-b809-47b4-9ba9-908149168389&stream=true&ItemID=71ca9c92-1bdb-4ebf-a32b-009945eef5d2

Cedar Corporation. 2015d. Construction Drawings for Hika Park Pedestrian Bridge, Contract A-15. May 2015. https://permits.dnr.wi.gov/water/SitePages/StreamAttachment.aspx?ListID=f77d5859-b809-47b4-9ba9-908149168389&stream=true&ItemID=b2112e8d-0237-419d-bc39-cb9316e8fcdc

Cedar Corporation. 2015e. Bidding Documents and Specifications, Hika Park Pedestrian Bridge, Quest eBidDoc #3899079. May 2015.

Cedar Corporation. 2014. Photographic Log, Project Name: Hika Park Pedestrian Bridge-Contract A-15. https://permits.dnr.wi.gov/water/SitePages/StreamAttachment.aspx?ListID=f77d5859-b809-47b4-9ba9-908149168389&stream=true&ItemID=e0a90634-7845-4ab3-9696-934edbe12cdf

Cleveland Chamber of Commerce. 2016. Village of Cleveland, Wisconsin: Generations Along the Lake [Newsletter]. March 2016. http://www.clevelandwi.gov/wp-content/uploads/2016/03/2016-Q1-Newsletter.pdf

Cleveland Chamber of Commerce. 2000. News Bulletin, Village of Cleveland. February 2000. http://www.clevelandwi.net/Downloads/news/00FebNews.pdf

Cornell Lab of Ornithology and National Audubon Society. n.d. eBird Hotspots: Hika Park (Cleveland). http://ebird.org/ebird/hotspot/L506440?yr=all&m=&rank=hc

Domagalski, B. 2011. Red Knot and Ruddy Turnstone at Hika. Wisconsin Birding Network. August 29, 2011. http://www.freelists.org/post/wisbirdn/Red-Knot-and-Ruddy-Turnstone-at-Hika

Domagalski, B. 2009. Red Knot (the complete story). Wisconsin Birding Network. July 22, 2009. http://www.freelists.org/post/wisbirdn/Red-Knot-the-complete-story

Epstein, E.J., Judziewicz, E.J., and E.A. Spencer. 2002. Wisconsin Natural Community Abstracts: Great Lakes Ridge and Swale. WDNR, Bureau of Endangered Resources. http://dnr.wi.gov/topic/EndangeredResources/Communities.asp?mode=detail&Code=CCCOM102WI

Epstein, E., Spencer, E. and D. Feldkirchner. 2002. *A Data Compilation and Assessment of Coastal Wetlands of Wisconsin's Great Lakes: Final Report*. http://dnr.wi.gov/files/pdf/pubs/er/er0803.pdf

Ertel, B., ed. 1976. *Glimpses of Our Heritage: Town of Centerville and Village of Cleveland*. Econo-Print. Sheboygan, Wisconsin.

Federal Emergency Management Agency. 2016. Community Status Book Report: Wisconsin, Communities Participating in the National Flood Program. https://www.fema.gov/cis/WI.html

Federal Emergency Management Agency. 2011. Flood Insurance Rate Map, Manitowoc, Wisconsin and Incorporated Areas: Map Number 55071C0436D. Effective August 02, 2011.

Friends of Hika Bay. 2016. Friends of Hika-Bay Creek Monitoring Site [data from samples collected by LNRP and University of Wisconsin at Manitowoc, 2010-2015]. http://www.hika-bay.org/mon.html

Great Lakes WATER Institute (University of Wisconsin at Milwaukee). 2005. Cladophora Research and Management in the Great Lakes: Proceedings of a Workshop Held at the Great Lakes WATER Institute, University of Wisconsin-Milwaukee, December 8, 2004. UW-Milwaukee Great Lakes WATER Institute Special Report No. 2005-01. http://www.seagrant.wisc.edu/home/Portals/0/Files/Water%20Quality/Dec_05_Cladophora_Research_Workshop_Proceedings_2.pdf

Headwaters Group Philanthropic Services, Edward W. Wilson Consulting, and Coastal Restoration Consultants. 2013. An Evaluation of Sustain Our Great Lakes: A Report Prepared for the National Fish and Wildlife Foundation. June 2013. http://www.sustainourgreatlakes.org/wp-content/uploads/SOGL-Evaluation-Report_Final.pdf

Hogler, S. 2010. Monitoring Wisconsin's Watersheds. WDNR. http://www.hika-bay.org/mon/Point_Fischer_Talk-sm.html

Inter-fluve, Inc. 2012. Centerville Creek Restoration, Cleveland, WI: 100% Design Plans. March 29, 2012. Madison, WI.

Inter-Fluve, Inc. 2009. Centreville Creek Impoundment Restoration. Presentation to Village of Cleveland, WI. September 2, 2009. http://www.hika-bay.org/curr/Centerville_2009.pdf

Inter-Fluve, Inc. 2001. River Planning Grant Assessment. http://www.hika-bay.org/hist/InterFluv_River_Planning_Grant.pdf

Kelty, R.A., and S. Bliven. 2003. Environmental and Aesthetic Impacts of Small Docks and Piers, Workshop Report: Developing a Science-Based Decision Support Tool for Small Dock Management, Phase 1: Status of the Science. NOAA Coastal Ocean Program Decision Analysis Series No. 22. National Centers for Coastal Ocean Science. January 2003. http://coastalscience.noaa.gov/documents/dockpier.pdf

Kettler, J., and S. Grunwald. 2016. Centerville Creek – Hika Park Restoration Project [Budget]. March 14, 2016.

Kirsh, J., and J. Kettler. 2015. Hika Park Phase I – V Summary. Friends of Hika Bay and Lakeshore Natural Resource Partnership. July 25, 2015.

Kirsh, J., and J. Kettler. 2013. Design Concepts for Hika Park Shoreland. Friends of Hika Bay and Lakeshore Natural Resource Partnership. July 25, 2015.

Kleinheinz, G.T., Busse, K.M., and N. Sheth. 2012. Bay-Lake Regional Planning Commission: Great Lake Restoration Initiative Project Description. March 22, 2012. http://www.baylakerpc.org/media/63392/manitowoc%203.22.12.pdf

Lake-Link, Inc. 2015. Hika Bay - Lake Michigan, Manitowoc County, Manitowoc County Fishing Reports and Discussions. http://www.lake-link.com/Wisconsin-Fishing-Reports/report.cfm/24069/Hika-Bay-Lake-Michigan-Manitowoc-County-Manitowoc-County/?startRow=1&sortOrder=DESC&recordsToDisplay=15&reportsOnly=1

Lakeshore Natural Resource Partnership (LNRP). 2015a. The Source. Summer 2015. http://lnrp.org/newsletter/Summer2015/summer2015.htm

LNRP. 2015b. The Source. Fall 2015. http://lnrp.org/newsletter/Fall2015/fall2015.htm

LNRP. 2015c. The Source. Winter 2015. http://www.lnrp.org/newsletter/Winter2015/winter2015.htm

LNRP. 2015d. Spring 2015 Lakeshore Natural Resource Partnership, Inc. Newsletter. http://lnrp.org/newsletter/Spring2015/spring2015.htm

LNRP. 2014a. The Source. Fall 2014. http://www.lnrp.org/newsletter/Fall2014/fall2014.htm

LNRP. 2014b. The Source. Summer 2014.
http://www.lnrp.org/newsletter/Summer2014/summer2014.htm

LNRP. 2014c. The Source. Winter 2014.
http://www.lnrp.org/newsletter/Winter2014/winter2014.htm

LNRP. 2009. National Fish and Wildlife Foundation – Sustain Our Great Lakes Community Grants 2009, Full Proposal. November 1, 2009. http://www.hika-bay.org/curr/pgReportOutputReader.aspx.pdf

Larson, J.L. 2007. Memo Re: Hika Park (#07-0131). Memo from John L. Larson, Applied Ecological Services, Inc. To Judith Perlman, Conservâre. March 16, 2007. http://www.hika-bay.org/map_pic/AES%20Hika%20Invasives.pdf

Manitowoc County. 2001a. Parks/Lake Access: Fischer Creek Conservation Area.
http://www.manitowoccounty.com/recreation/fischer.asp

Manitowoc County. 2001b. Parks/Lake Access: Point Creek Conservation Area.
http://www.manitowoccounty.com/recreation/pointCreek.asp

Murkowski, S. 2011. Red Knot-Manitowoc. Wisconsin Birding Network. August 24, 2011.
http://www.freelists.org/post/wisbirdn/Red-KnotManitowoc

National Oceanic and Atmospheric Administration (NOAA). 2015. NOAA Restoration Center Programmatic Environmental Impact Statement. June 2015.
http://www.habitat.noaa.gov/pdf/NOAA_Restoration_Center_Final_PEIS.pdf

NOAA. 2011a. Summary of Monthly Normals, 1981-2010, Station: Manitowoc, WI US.
http://www.ncdc.noaa.gov/cdo-web/datatools/normals

NOAA. 2011b. Summary of Monthly Normals, 1981-2010, Station: Sheboygan, WI US.
http://www.ncdc.noaa.gov/cdo-web/datatools/normals

Otter, A.J. 1980. *Soil Survey for Calumet and Manitowoc Counties, Wisconsin*. U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the Research Division of the College of Agricultural and Life Sciences, University of Wisconsin. February 1980.

Paetz, D. 2014. The History of Salmon and Steelhead in the Great Lakes. August 13, 2014.
http://troutster.com/history-salmon-steelhead-great-lakes/

Perlman, J. 2004. *Citizen's Primer for Conservation Activism: How to Fight Development in Your Community*. University of Texas Press.

Peterson, E. 2015. Beaches Closed along Lakeshore. Fox 11 News. June 19, 2015.
http://fox11online.com/news/local/beaches-closed-along-lakeshore

Poling, E. and R. Abler. 2013. Abstract: Water Quality Monitoring of Centreville Creek, Manitowoc County, WI. https://ncurdb.cur.org/ncur2016/archive/Display_NCUR.aspx?id=72522

Seilheimer, T. 2015. Centerville Creek Watershed in Manitowoc County. November 2015. http://www.hika-bay.org/ref/Centerville%20Creek%20Land.pdf

Sontag, C. 2013. eBird Checklist S15364569 - Manitowoc Lakefront, Wisconsin. October 9, 2013. http://ebird.org/ebird/view/checklist?subID=S15364569

Sustain Our Great Lakes. n.d. Centreville Creek Restoration. http://www.sustainourgreatlakes.org/projects/centerville-creek-restoration

U.S. Army Corps of Engineers. 2015. Letter Regarding Request for Department of Army Authorization to Construct a Pedestrian Bridge Over a Tributary of Lake Michigan. From T. Cameron, Chief, Regulatory Branch, St. Paul District. To S. Grunwald, Village of Cleveland. June 2, 2015.

U.S. Army Corps of Engineers. 2004. Preliminary Restoration Plan (draft). Detroit District, Contract No. DACW57-01-D-006. February 13, 2004. http://www.hika-bay.org/hist/Centerville_PRP_Draft_2-13-04.pdf

U.S. Census Bureau. 2011. Profile of General Population and Housing Characteristics: 2010.

U.S. Census Bureau. 2015. 2010-2014 American Community Survey 5-Year Estimates.

U.S. Fish and Wildlife Service (USFWS). 2015. Northern Long-Eared Bat Fact Sheet. April 2015. http://www.USFWS.gov/midwest/endangered/mammals/nleb/nlebFactSheet.html

USFWS. 2013. Rufa Red Knot Ecology and Abundance: Supplement to Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Rufa Red Knot (*Calidris canutus rufa*). Docket No. USFWS–R5–ES–2013–0097; RIN 1018–AY17. September 30, 2013. http://www.USFWS.gov/northeast/redknot/pdf/20130923_REKN_PL_Supplement02_Ecology%20Abundance_Final.pdf

U.S. Geological Survey (Wisconsin District). 2015. Beach Advisory Report, 2003-Present: Hika Park Bay. http://www.wibeaches.us/apex/f?p=181:11:0::NO:RP

University of Wisconsin Aquatic Sciences Center. 2013. State of Lake Michigan and Great Lakes Beach Association. 2013 State of Lake Michigan and Great Lakes Beach Association Conference: Tours/Workshops. October 15, 2013. http://aqua.wisc.edu/solm/ToursWorkshops.aspx

University of Wisconsin Madison Water Resources Management Program. 1998. *The Coastal Wetlands of Manitowoc County: Inventory, Assessment and Management Recommendations*.

University of Wisconsin Milwaukee. n.d. Cladophora. Undated. http://www.glwi.uwm.edu/research/aquaticecology/cladophora/

Village Board of Cleveland. 2015. Minutes of the Tuesday, June 16, 2015, Meeting. Approved July 21, 2015.

Village of Cleveland. 2012. Wisconsin Coastal Management Program 2013-14 Grant Program Grant Application 506.

Village of Cleveland. 2003. Wisconsin Coastal Management Program 2004-05 Grant Program Grant Application. http://www.hika-bay.org/hist/WCMP_Grant_2004-05_Hika_Sands.pdf

Village of Cleveland Plan Commission. 2016. Minutes of the Wednesday, April 6, 2016, Meeting. Approved on May 4, 2016.

Village of Cleveland Public Works and Utilities Committee. 2015a. Minutes of the Tuesday, June 9, 2015, Meeting. Approved on July 20, 2015.

Village of Cleveland Public Works and Utilities Committee. 2015b. Minutes of the Tuesday, March 31, 2015, Meeting. Approved on June 9, 2015.

Village of Cleveland Public Works and Utilities Committee. 2015c. Minutes of the Thursday, February 26, 2015, Meeting. Approved on March 31, 2015.

Village of Cleveland Public Works and Utilities Committee. 2014a. Minutes of the Monday, November 17, 2014, Meeting. Approved on December 9, 2014.

Village of Cleveland Public Works and Utilities Committee. 2014b. Minutes of the Wednesday, August 13, 2014, Meeting. Approved on September 9, 2014.

Wisconsin Department of Natural Resources (WDNR). 2016. Wisconsin's Draft 2016 Impaired Waters List. Last updated May 3, 2016. http://dnr.wi.gov/water/wsSWIMSDocument.ashx?documentSeqNo=127715017

WDNR. 2015a. General Permit - Bridge-clear span, GP-NE-2015-36-01966. Issued by Carrie Webb, Water Management Specialist, to Village of Cleveland. June 11, 2015. https://permits.dnr.wi.gov/water/SitePages/StreamAttachment.aspx?ListID=f77d5859-b809-47b4-9ba9-908149168389&stream=true&ItemID=baba4c8e-693e-4ad6-bd6e-0c0f0b42601a

WDNR. 2015b. *The Ecological Landscapes of Wisconsin: an Assessment of Ecological Resources and a Guide to Planning Sustainable Management*. Chapter 8: Central Lake Michigan Coastal Ecological Landscape. PUB-SS-1131J 2014.

WDNR. 2014a. Water Detail: Centerville Creek, Sevenmile and Silver Creeks Watershed (MA01), Centerville Creek (65400). http://dnr.wi.gov/water/waterDetail.aspx?key=3999071

WDNR. 2014b. Impaired Water - Lake Michigan (Hika Park Bay Beach, Lake Michigan). February 27, 2014. http://dnr.wi.gov/water/impairedDetail.aspx?key=481845

WDNR. 2012. State of Wisconsin Department of Natural Resources. Changing Stream Course, Grading, Dredging, Miscellaneous Structures Permit, IP-NE-2011-36-0482, 4843, 4844, 4845. January 31, 2012.

WDNR. 2011. Wisconsin's Lake Michigan Water Trail Project: Inventory and Analysis of Access Sites in Support of a Lake Michigan Water Trail. December 2011. http://dnr.wi.gov/topic/lands/masterplanning/documents/MP-PR-LakeMichiganWaterTrail-2011.pdf

WDNR. 2007. Lake Michigan -- Hika Park Access. Clean Boats, Clean Waters - Sea Grant - Michigan Team. Surface Water Integrated Monitoring System Data for Station ID 10019608. June 10 - July 25, 2007. https://dnrx.wisconsin.gov/swims/

WDNR. 2001. The State of the Lakeshore Basin, Appendix VI: Manitowoc River Basin Watershed Narratives and Tables. Pub WT-667-2000. http://dnr.wi.gov/water/basin/lakeshore/VI_app_lakeshore.pdf

WDNR. n.d. a. Lakeshore Natural Resource Partnership Inc.: Implementing Friends of Hika Bay Action Plan (RP-272-15). Undated. http://dnr.wi.gov/lakes/grants/Project.aspx?project=113982343

WDNR. n.d. b. Lakeshore Natural Resource Partnership Inc.: Friends of Hika Bay Action Plan (RP-289-16). Undated. http://dnr.wi.gov/lakes/grants/Project.aspx?project=126914914

Wisconsin Historical Society. 2016. Centerville - Manitowoc – National or State Register of Historic Places. http://www.wisconsinhistory.org/Content.aspx?dsNav=Nrc:id-4294961467-dynrank-disabled%7cid-4-dynrank-disabled,N:1160-4294961424-4294963065&dsNavOnly=N:1160

Wisconsin Sea Grant and Wisconsin Historical Society. 2016. Shipwrecks: Mid Lake Michigan. http://www.wisconsinshipwrecks.org/Map/MidLakeMichigan

9.0 LIST OF AGENCIES AND PERSONS CONSULTED

Jim Draeger, WHS

Mark Dudzik, WDNR

Michael Friis, WCMP

Stacy Grunwald, Village of Cleveland

Jennifer Hansmann, LNRP

Jim Kettler, LNRP

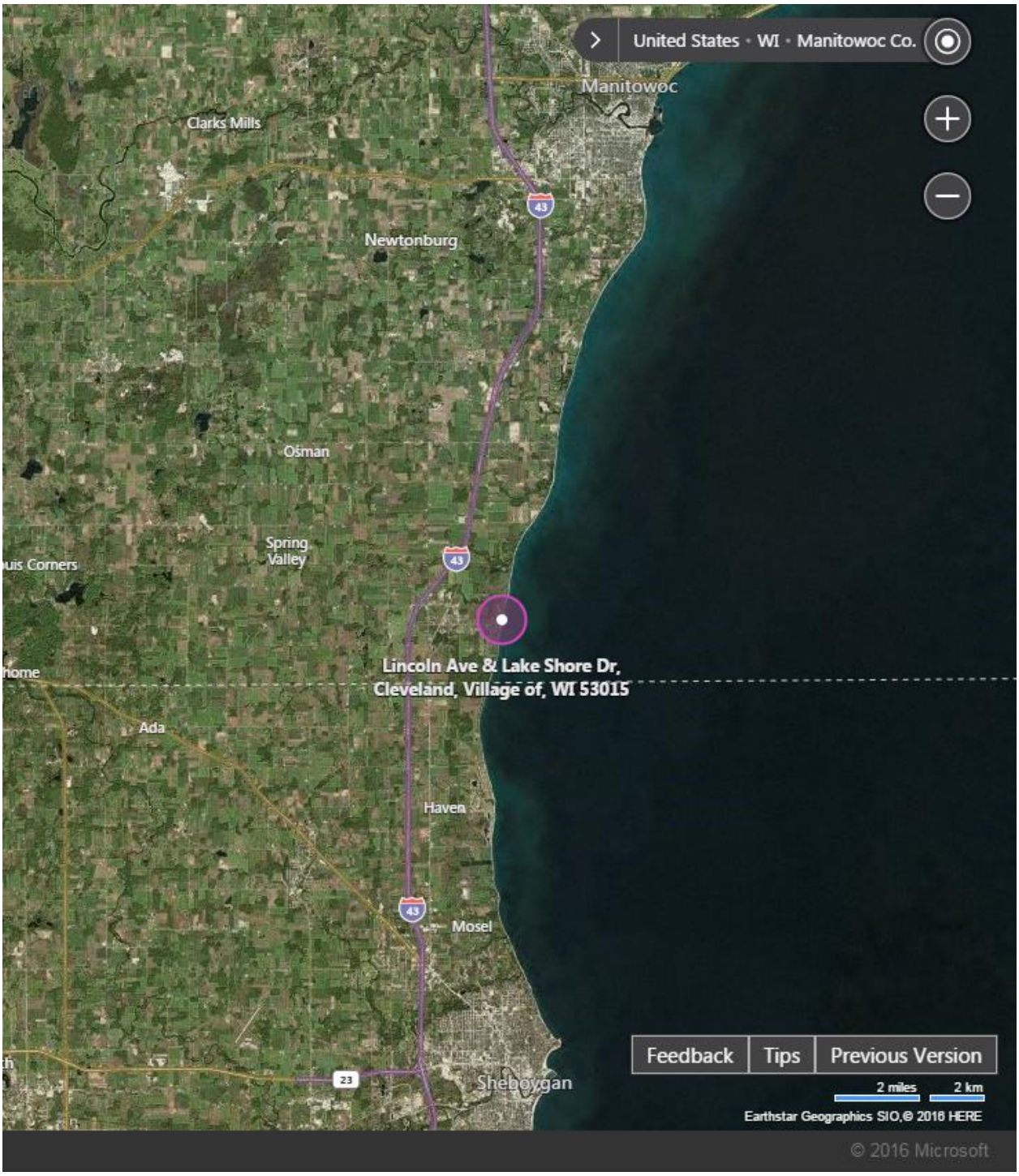
Lisa Mandell, USFWS, Twin Cities Ecological Services Field Office

Carrie Webb, WDNR

10.0 APPENDICES

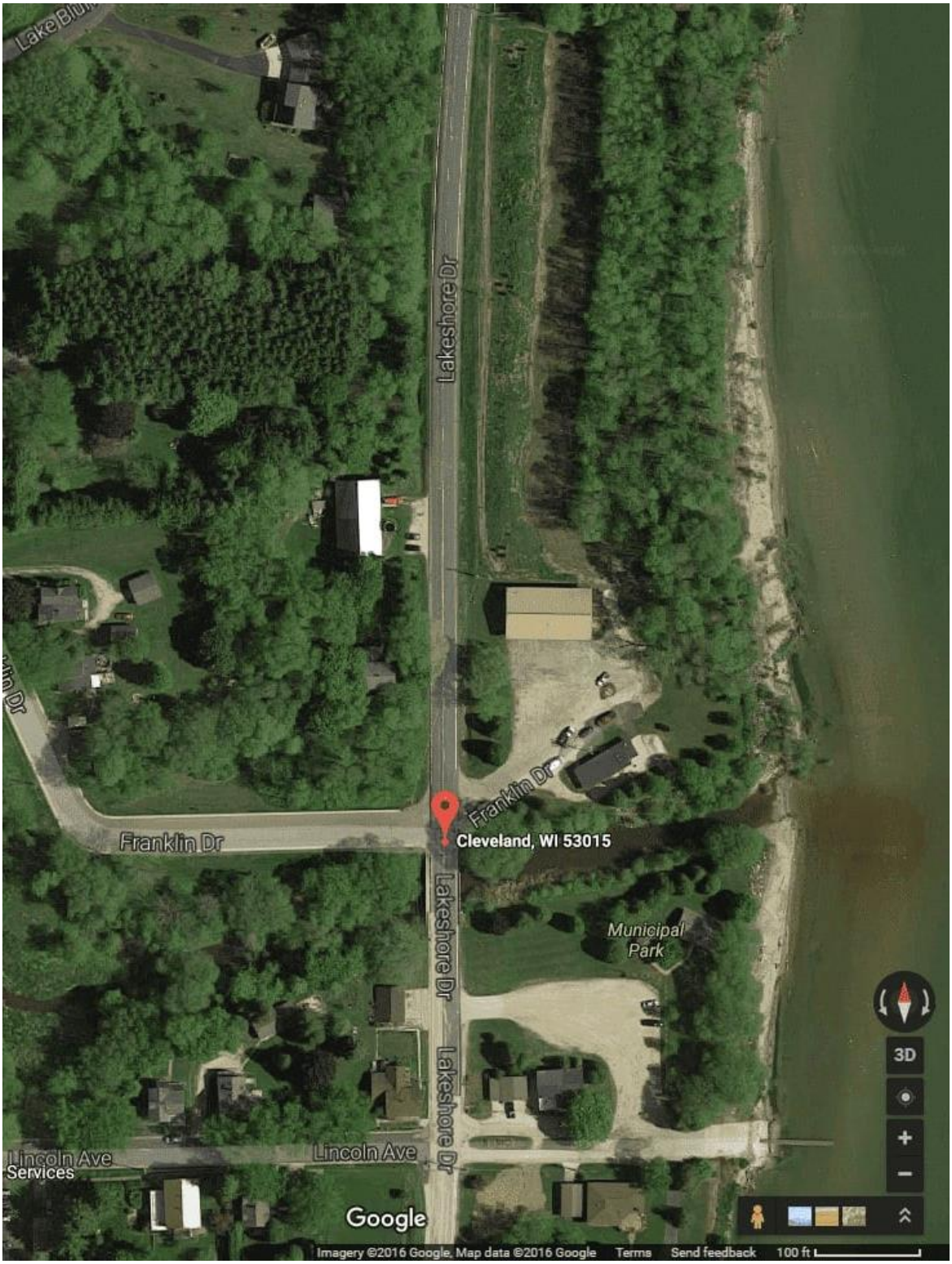
APPENDIX A: FIGURES

Figure 1: Location of Hika Park



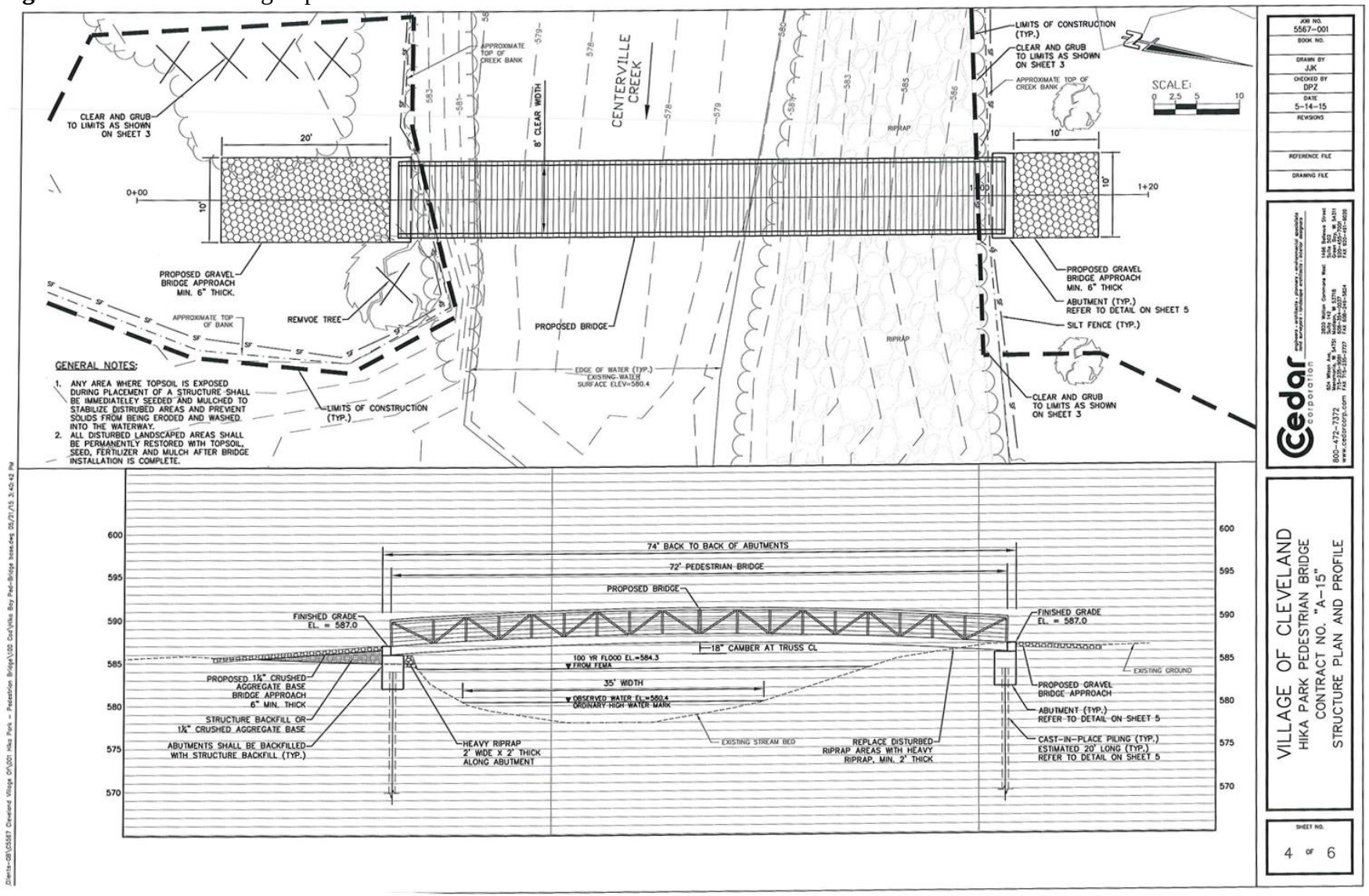
(Aerial photograph from Bing Maps [Microsoft] 2016)

Figure 2: Photograph of the eastern portion of Hika Park, including the seasonal pier



(Aerial photograph from Google Maps 2016)

Figure 3: Hika Park Bridge Specifications



(Source: Cedar Corporation 2015d)

Figure 4: Centerville Creek and Its Southern Shoreline

(Source: Cedar Corporation 2014. Note: The stake with the ribbon in the center of the photograph shows the approximate location for the southern bridge abutment)

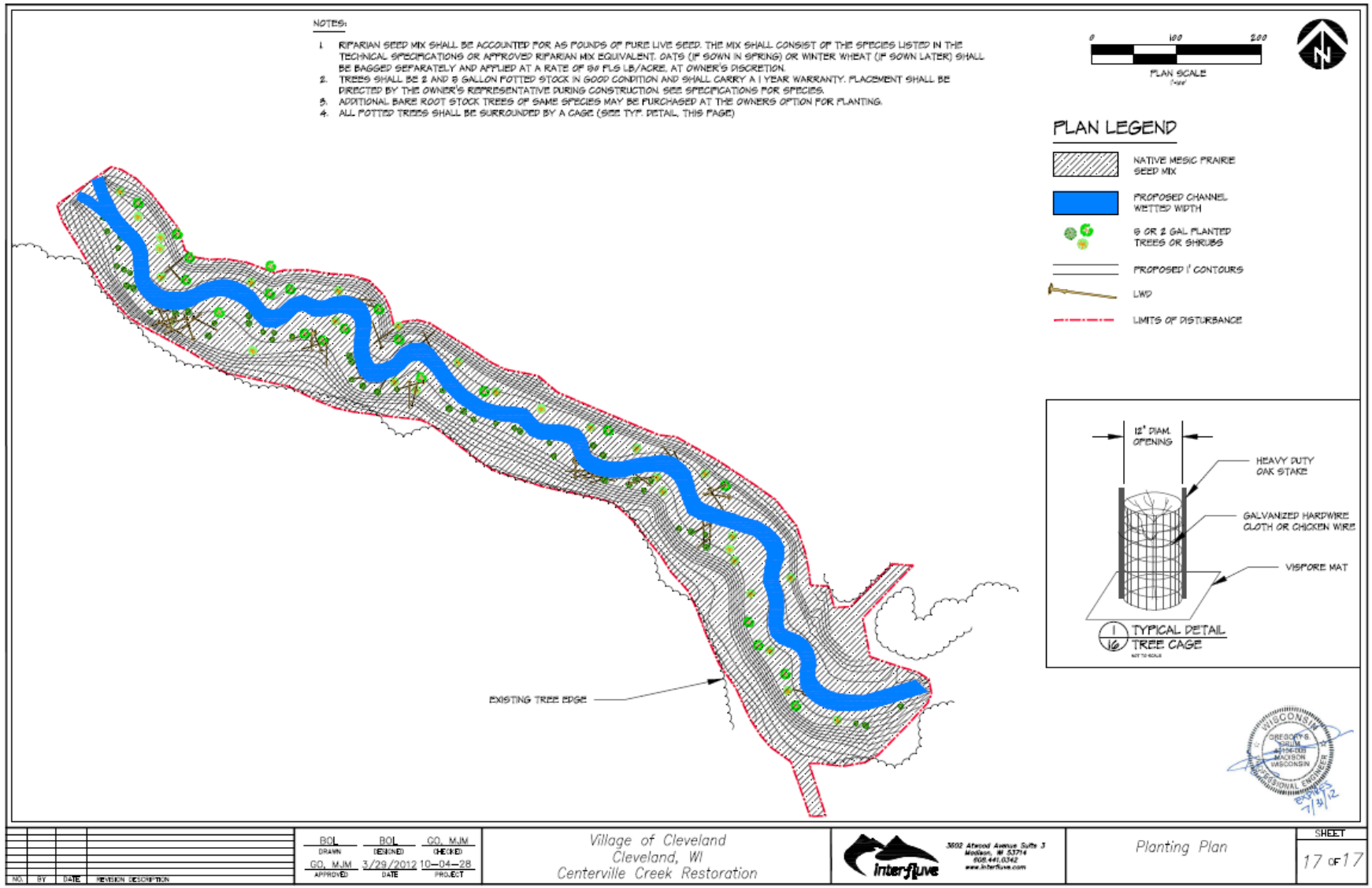
Figure 5: Northern Bank of Centerville Creek

(Source: Cedar Corporation 2014. Note: The stake with the ribbon in the center of the photograph shows the approximate location for the northern bridge abutment)

Figure 6: Centerville Creek and Its Northern Shoreline

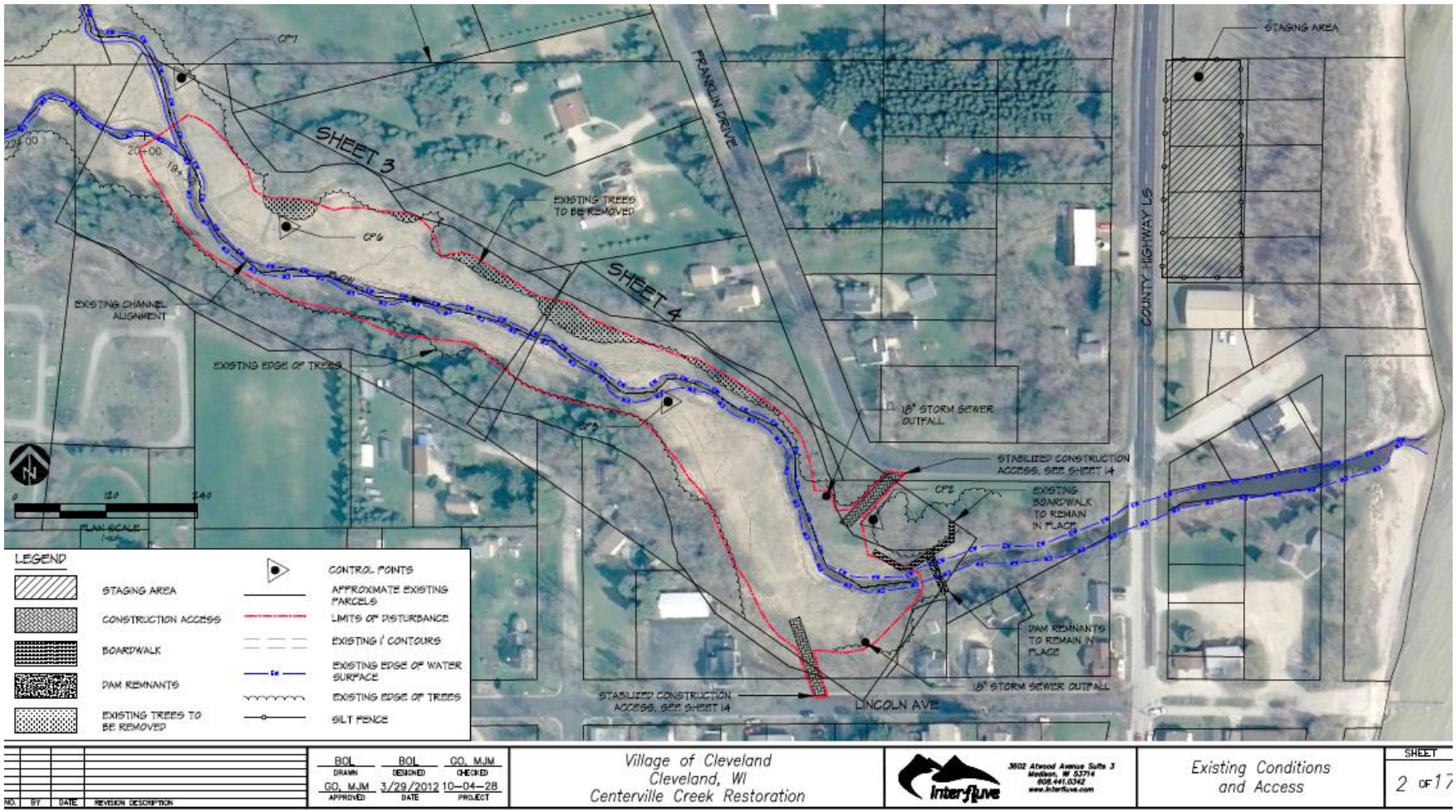
(Source: Cedar Corporation 2014. Note: The stake with the ribbon in the center of the photograph shows the location of a test boring drilled)

Figure 7: Channel Configuration and Planting Plan - Centerville Creek Restoration Project



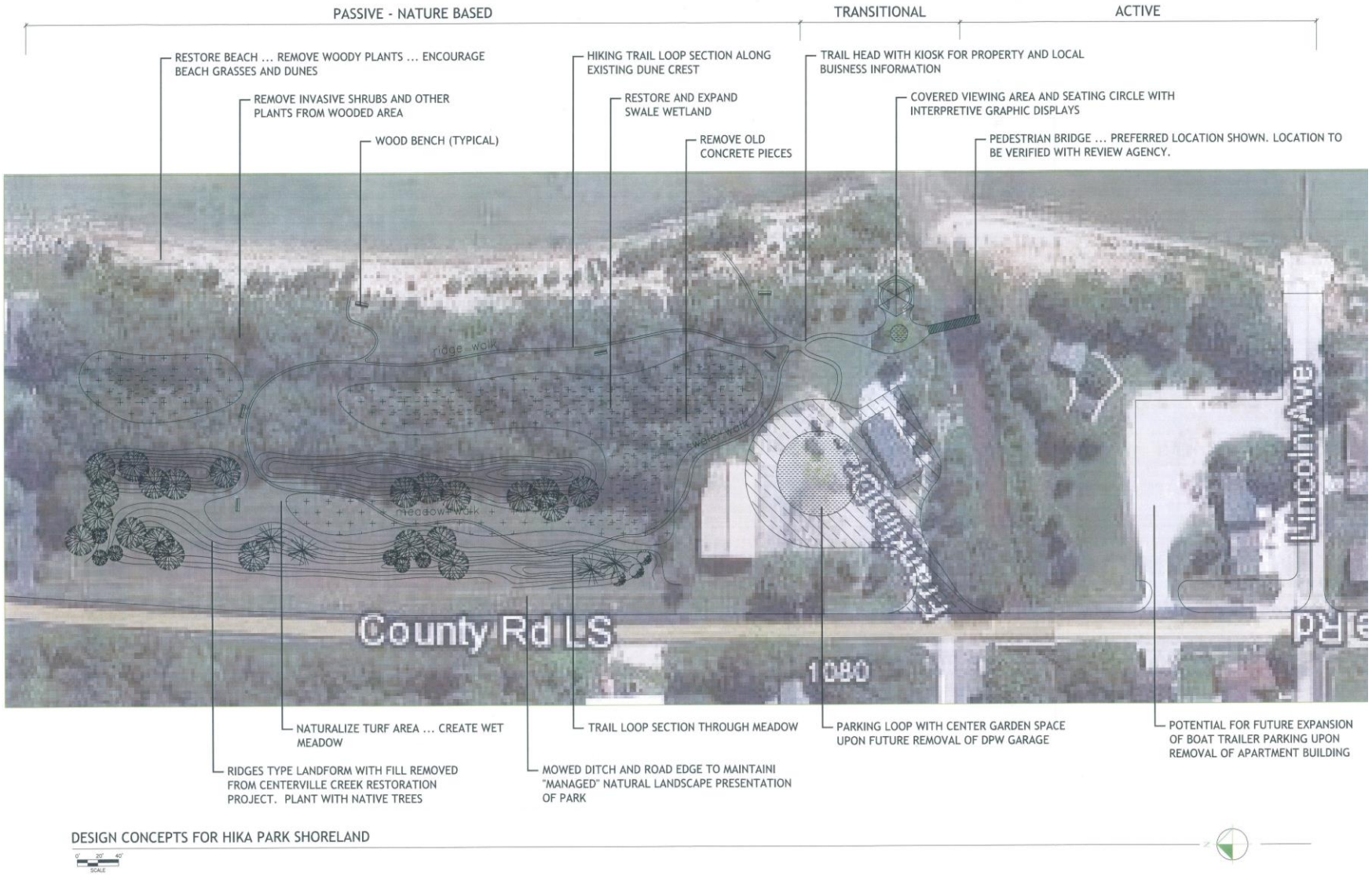
(Source: Inter-Fluve 2012)

Figure 8: Areas Restored During Centerville Creek Restoration Project



(Source: Inter-Fluve 2012)

Figure 9: Conceptual Design for Potential Hika Park Improvements



(Source: Kirsch and Kettler 2013)

Appendix B: Endangered Species Act Consultation Letter

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office for Coastal Management
Silver Spring Metro Center, Building 4
1305 East-West Highway
Silver Spring, Maryland 20910

June 22, 2015

ADVANCE COPY BY EMAIL TO: Lisa_Mandell@USFWS.gov

Ms. Lisa Mandell
Deputy Field Complex Supervisor
U.S. Fish and Wildlife Service, Ecological Services Field Office
4101 American Blvd. East
Bloomington, MN 55425

Re: Hika Park Public Access project, Village of Cleveland, WI

Dear Ms. Mandell:

The National Oceanic and Atmospheric Administration (NOAA) proposes to provide funds to the Village of Cleveland through the Wisconsin Coastal Management Program for the Hika Park Public Access project in Manitowoc County, Wisconsin. Hika Park is owned by the Village. The NOAA funding would be provided pursuant to §306A of the Coastal Zone Management Act. I am contacting you because there are four listed species be found in Manitowoc County, according to the U.S. Fish and Wildlife Service's database. These species are Pitcher's thistle, piping plover, rufa red knot, and northern long-eared bat.

The Hika Park Public Access project centers around constructing a low-impact walking trail to connect two sections of Hika Park separated by Centerville Creek, on the east side of County Highway LS (also known as Lakeshore Drive) in the Village of Cleveland. The project would include constructing a pedestrian bridge over Centerville Creek and the ravine it runs through, to connect the existing public recreation area at Hika Park to a recently-restored ridge and swale wetland ecosystem known as Hika Sands. The bridge would be supported by footings on either side of the creek; no support structures are proposed to be installed within the creek. Other project components include an interpretative trail, boardwalk to enable access to wetland areas, and educational kiosks, primarily in the Hika Sands area, north of Centerville Creek. The nearest intersection is Franklin Drive and County Highway LS; the project area is entirely to the east of County Highway LS. A diagram of the proposed project and related projects is attached (please note that the wetland restoration referenced on the diagram is not part of this project). Along with the Wisconsin Coastal Management Program and the Village of Cleveland, project partners include the Lakeshore Natural Resource Partnership and Friends of Hika Bay.

According to the Recovery Plan for Pitcher's thistle, the species "needs open Great Lakes sand dune habitat subject to natural disturbance processes. [. . . It] is found most frequently among near-shore plant communities, although it occurs in all non-forested areas of Great Lakes dune systems." No critical habitat has been established for the species. All the occurrences of the

species in Wisconsin are in dune habitats, including at Point Beach State Forest, along Lake Michigan in Manitowoc County. There are no sand dunes at Hika Park, and the project area does not offer suitable habitat for Pitcher's thistle. Thus, this species is not expected to be present at the site. **Conclusion: The proposed construction at Hika Park would have no effect on Pitcher's thistle.**

Northern long-eared bats roost during the summer underneath bark, in cavities, or in crevices of live and dead trees. Males and non-reproductive females may also roost in cooler places, such as caves and mines. Occasionally individuals roost in barns, sheds, or other structures. They spend the winter hibernating in caves and mines. No caves or mines have been identified at Hika Park, and bats are not mentioned as regular visitors to the site, based on an Internet search. Because of the lack of suitable habitat, it is very unlikely that northern long-eared bats would be present at the park. **Conclusion: The proposed project is anticipated to have no effect on this bat species.**

According to U.S. Fish and Wildlife Service reports, "Great Lakes piping plovers nest on . . . sandy beaches with sparse vegetation and the presence of small stones (greater than 1 cm (0.4 in.)) called cobble. Piping plovers spend 3 to 4 months a year on the breeding grounds. Nesting in the Great Lakes region begins in early to mid-May. Plovers lay 3 to 4 eggs in a small depression they scrape in the sand among the cobblestones and are, therefore, very difficult to see." Also, "the primary constituent elements required to sustain the Great Lakes breeding population [are] shorelines that support open, sparsely vegetated sandy habitats, such as sand spits or sand beaches, that are associated with wide, unforested systems of dunes and inter-dune wetlands. In order for habitat to be physically and biologically suitable for piping plovers, it must have a total shoreline length of at least 0.2 km (0.12 mi) of gently sloping, sparsely vegetated (less than 50 percent herbaceous and low woody cover) sand beach with a total beach area of at least 2 hectares (ha) (5 acres (ac)). Appropriately sized sites must also have areas of at least 50 meters (m) (164 feet (ft)) in length where (1) the beach width is more than 7 m (23 ft), (2) there is protective cover for nests and chicks, and (3) the distance to the treeline (from the normal high water line to where the forest begins) is more than 50 m (164 ft). . . . The beach width may be narrower than 7 m (23 ft) if appropriate sand and cobble areas of at least 7 m (23 ft) exist between the dune and the treeline."

Piping plovers use breeding grounds in the Great Lakes from May through late July to early September, which could overlap with timeframe for construction at Hika Park (projected to occur during the September to June time period). Hika Park is not critical habitat for piping plover; the critical habitat in Manitowoc County is within Point Beach State Forest, approximately 18 miles to the north. While Hika Park does have sparsely vegetated sandy beaches with cobble on them, and proposed restoration efforts include planting some native species typically found in piping plover habitat, Hika Park appears not to meet the habitat requirements for breeding piping plover because it lacks wide, unforested systems of dunes and interdune wetlands. A description of the

habitat at Hika Park prepared in 2007 notes: "Beach can be thought of as a front beach where Lake Michigan wave action currently dominates. This is characterized by sands with interspersed rocks and cobbles. A 2-4" cobble/rock line has developed at the beach-water interface. The second area farther up the beach is dominated by a sparse line of 6-10" year old cottonwood trees, trunks of which have been buried somewhat from beach action." The total beach area is less than 5 acres, and the beach is narrow (aerial photographs suggest it is at most 50 feet to the treeline in the part of the park south of Centerville Creek, and narrower in most parts of Hika Park north of Centerville Creek, where most of the proposed work is planned). Furthermore, there are no anecdotal reports of piping plover sightings at Hika Park reported on the Internet (see, e.g., http://ebird.org/ebird/hotspot/L506440?yr=all&m=&rank=hc). **Conclusion: the proposed activities would be anticipated to have no effect on piping plover.**

Migrating rufa red knots prefer coastal and estuarine habitats with sediments exposed during part of the tidal cycle, including sandy, gravel, or cobble beaches, tidal mudflats, salt marshes, shallow coastal impoundments, and inlets. According to a USFWS report on the ecology and abundance of this species, "Red knots are restricted to ocean coasts during winter, and occur primarily along the coasts [including the Atlantic Coast and Gulf of Mexico coasts] during migration. However, small numbers of rufa red knots are reported annually across the interior United States (i.e., greater than 25 miles from the Gulf or Atlantic Coasts) during spring and fall migration—these reported sightings are concentrated along the Great Lakes, but multiple reports have been made from nearly every interior State (eBird.org 2012). We lack information on the specific noncoastal stopover habitats used by red knots." During their migratory seasons, the spring and the fall, small numbers of these birds ("typically fewer than 10," according to USFWS) can stop in every inland state over which the knot flies, including Wisconsin.

A small number of migrating red knots could stop at or near Hika Park. This assessment is based on data showing there have been at least 4 red knot sightings in Manitowoc County in the past 5 years, as reported anecdotally, including at Hika Park on August 29, 2011 (Sources: http://ebird.org/ebird/hotspot/L506440?yr=all&m=&rank=hc and http://www.freelists.org/post/wisbirdn/Red-Knot-and-Ruddy-Turnstone-at-Hika). In the town of Manitowoc, 12 miles north of Hika Park, the species was reported in October of 2013 (see http://ebird.org/ebird/view/checklist?subID=S15364569), August of 2011 (see http://www.freelists.org/post/wisbirdn/Red-KnotManitowoc), and July of 2009 (see http://www.freelists.org/post/wisbirdn/Red-Knot-the-complete-story). If any red knots were feeding or resting within Hika Park during construction activities, they could move elsewhere until construction subsided. Since Hika Park is not in a region where red knots would be expected to nest or breed, these behaviors sensitive to disturbance would not be affected. The proposed project will not involve any modification of the shoreline, where the birds are most likely to be found. The responses of any rufa red knot present in the area during construction would be likely to be insignificant. **Conclusion: the proposed work at Hika Park may affect, but is not likely to adversely affect, the rufa red knot.**

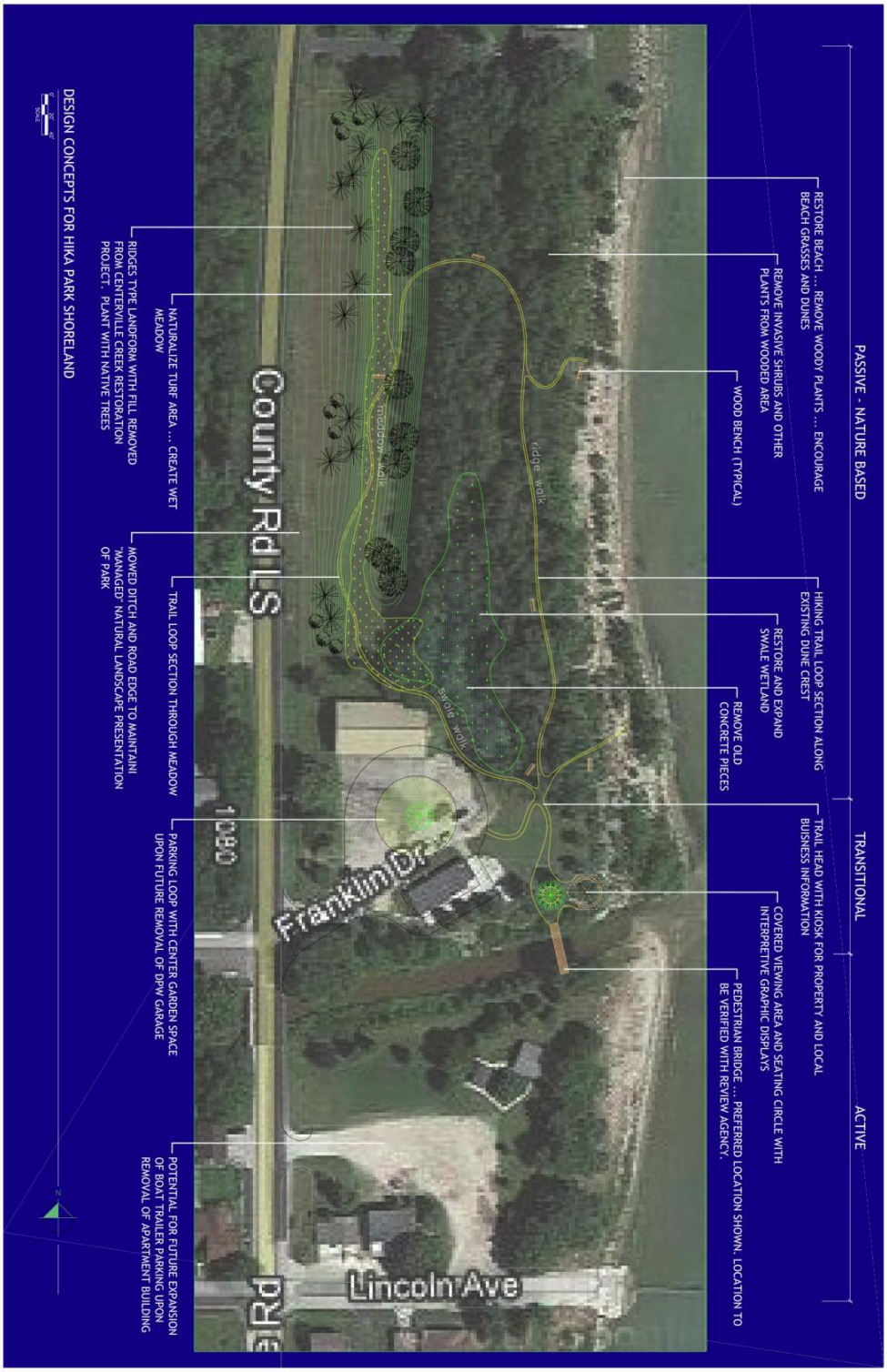
Please let us know whether you concur with these determinations. You may reach me by phone at (301) 563-1138, by email at Rebecca.Feldman@noaa.gov, or by mail at NOAA Office for Coastal Management, 1305 East West Hwy, N/OCM1, Silver Spring, MD 20910. Thanks very much for your assistance.

Sincerely,

Rebecca Feldman

cc: P. Nedelka, NEPA and Environmental Compliance Coordinator, OCM
E. Mountz, Coastal Management Specialist, OCM
M. Friis, Program Manager, Wisconsin Coastal Management Program

Enclosure



Hika Park Design Plans, provided by the Village of Cleveland to the WI Coastal Management Program

Appendix C: Response from the U.S. Fish and Wildlife Service to Consultation Letter

From: Lisa Mandell <lisa_mandell@USFWS.gov>
Date: Mon, Aug 3, 2015 at 2:47 PM
Subject: RE: Informal consultation, Hika Park Public Access Project, Cleveland, WI
To: Rebecca Feldman - NOAA Affiliate <rebecca.feldman@noaa.gov>

We have received both letters. . . . [*text not addressing this consultation omitted*] . . .

With respect to your June 22, 2015, letter on Hika Park Public Access, Manitowoc County, WI, you have made determinations of "no effect" on three Federally listed species: the Pitcher's Thistle, Northern long-eared bat, and piping plover. In addition, you have determined that the project is not likely to adversely affect the rufa red knot. In the case of rufa red knot, the species would use the site as stopover habitat only. As such, we believe that individual birds would not remain present during construction activities, but would continue their migratory journey and leave the site if disturbed. Therefore, a "no effect" determination seems more appropriate for this species.

The USFWS does not issue official concurrence letters for no effect determinations. Rather, the action agency may make this determination using the information available on the USFWS Region 3 web page at: http://www.USFWS.gov/midwest/endangered/. There are two sections to consider – the species list information, which you have already used, and the Section 7 Technical Assistance steps, which will guide you through the decision process. Once you reach the No Effect determination, you just document the determination for your records and consultation is completed.

We do not have any additional comments about the Hika Park Public Access Project. If you have further questions, please feel free to contact me again.

Lisa

--
Lisa Mandell
Deputy Field Supervisor
U.S. Fish and Wildlife Service
Twin Cities Ecological Services Field Office
4101 American Blvd. East
Bloomington, Minnesota 55425
612-725-3548 x2201
Serving Minnesota and Wisconsin

Appendix D: National Historic Preservation Act Consultation Letter

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

FEB 2 5 2014

ADVANCE COPY BY EMAIL TO: jim.draeger@wisconsinhistory.org

Mr. Jim Draeger
State Historic Preservation Officer
Wisconsin Historical Society
816 State Street
Madison, WI 53706

Re: Hika Park Public Access project, Village of Cleveland, WI

Dear Mr. Draeger:

The National Oceanic and Atmospheric Administration (NOAA) proposes to provide funds to the Village of Cleveland through the Wisconsin Coastal Management Program (WCMP) for the Hika Park Public Access project, a component of a larger project to restore Centerville Creek. Pursuant to §106 of the National Historic Preservation Act of 1996 (NHPA), as amended, NOAA has determined that this project is an "undertaking" and is therefore initiating consultation on the project. The NOAA funding would be provided by the National Coastal Zone Management Program, pursuant to §306A of the Coastal Zone Management Act.

The Hika Park Public Access project centers around the construction of a low-impact walking trail to connect two sections of Hika Park separated by Centerville Creek, on the east side of County Highway LS (also known as Lakeshore Drive) in the Village of Cleveland. The project would include constructing a pedestrian bridge over Centerville Creek and the ravine it runs through, to connect the existing public recreation area at Hika Park to a restored ridge and swale wetland ecosystem known as Hika Sands. Other project components include an interpretative trail, boardwalk to enable access to wetland areas, and educational kiosks, primarily in the Hika Sands area, north of Centerville Creek. Hika Park is owned by the Village. The nearest intersection is where Franklin Drive crosses County Highway LS; the project area is entirely to the east of County Highway LS. A diagram of the proposed project and related projects is attached (please note that the wetland restoration referenced on the diagram is not part of this project). Along with the Wisconsin Coastal Management Program and the Village of Cleveland, project partners include the Lakeshore Natural Resource Partnership and Friends of Hika Bay.

NOAA's research identified historic properties near the project area, to the west of County Highway LS, off of Lincoln Avenue. Since the Hika Park Public Access project is focused entirely in the area east of the highway, NOAA believes that this project will result in no adverse effects to any historic properties pursuant to 36 CFR 800.5(b). In accordance with 36 CFR 800.3(c)(4) of the NHPA, NOAA will assume concurrence if no comments are received within 30 days of receipt of this letter.

Should you require any additional information, please contact me at (301) 563-1138 or Rebecca.Feldman@noaa.gov. My mailing address is NOAA, 1305 East West Hwy, N/ORM7, Silver Spring, MD 20910.

Sincerely,

Rebecca Feldman

Rebecca Feldman
NEPA Assessment & Environmental Compliance Specialist

cc: M. Aparicio, NOAA Project Planning and Management Division
P. Nedelka, Environmental Compliance Coordinator, OCRM
E. Mountz, Coastal Management Specialist, OCRM
M. Friis, Program Manager, Wisconsin Coastal Management Program

Hika Park Design Plans, as provided by the Village of Cleveland to the Wisconsin Coastal Management Program