Beneficial Use of Dredged Material

Section 1122 of the Water Resources Development Act of 2016

Pilot Project Proposal Form

POINT OF CONTACT: Ron Salski, Lake Bluff Park District,
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1. Name of Project: Public Beach Protection Pilot in Four Illinois Coastal Communities

2. Purpose of the proposed project

   Illinois Department of Natural Resources' (IDNR) Coastal Management Program (Coastal) convenes the Illinois Sand Management Working Group. The working group is comprised of local and state agencies, and several sections of the U.S. Army Corps of Engineers (USACE), Chicago District (Chicago District). It focuses on ways these organizations can collaborate to protect and restore Illinois' public Lake Michigan shoreline. Our four communities – Village of Lake Bluff, City of North Chicago, Village of Glencoe, and City of Evanston – actively participate in the Illinois Sand Management Working Group. As a part of this group, we are exploring ways to leverage our individual resources to address Lake Michigan shoreline issues in a sustainable and cost-effective way. This pilot project proposal includes: dredging and sand transport, onshore sand placement, native plantings, and beach monitoring. It could serve as an important proof-of-concept of how multiple communities – in close partnership with USACE – can amplify the collective impact of shoreline protection measures; this paves the way for lasting, more holistic public shoreline protection in our region and around the U.S.

   Our proposal would place dredged material from the Waukegan Harbor federal approach channel onshore to protect 54,560 yards of shoreline at 6 sites: Sunset Park and Beach in Lake Bluff; Foss Park in North Chicago; Glencoe Beach in Glencoe; and Dog Beach, Greenwood Street Beach, and Lee Street Beach in Evanston. The proposed project would also support planting of trees, shrubs, and grasses in all four communities that reduce shoreline and bluff erosion and enhance these habitats. These plantings would help dredged material to stay in place and ensure more lasting ecosystem benefits. Through the Illinois Sand Management Working Group, we have an arrangement with state coastal geologist –

Dr. Ethan Theuerkauf – that can use drone technology to three-dimensionally map how the nearshore and shoreline in our four communities responds to pilot project activities. The monitoring methodology will be the same as Illinois Beach State Park's proof-of-concept project, currently funded by the Regional Sediment Management program (more details below). This research will allow us to continue to adapt shoreline management practices based on ecosystem response.

This is a coordinated project among four communities and we are in different stages of lakefront planning. The Chicago District plans dredging activities for Waukegan Harbor federal approach channel two years in advance. Depending on timing for this pilot project program, our proposed project could begin as early as spring 2020. Project communities that are still in the planning phase for erosion control and shoreline enhancement activities would complete and approve all plans before spring 2020. Our proposed project description includes activities outlined in our master plans; but, we recognize that, if selected, project activities may need to be adjusted based on available funds and available dredged material.

The pilot project proposal builds on our existing partnership with the Chicago District. In July 2017, we submitted a letter of intent to the Chicago District to beneficially use dredged material from the Waukegan Harbor approach channel to protect and restore our public parks and beaches (see Appendix A). In the earlier proposal, our communities would pay the difference in transportation costs (similar to an existing arrangement that the Chicago District has with IDNR for placing sand from Waukegan Harbor in the nearshore of Illinois Beach State Park). In February 2018, we received a positive response from the Chicago District that it is considering our request and undertaking an environmental analysis under the National Environmental Policy Act to determine whether such an action would cause any adverse impacts to human health and the environment.

The proposed pilot project meets all criteria outlined below:

a. Reducing storm damage to property and infrastructure

   Current storm damage to our shoreline costs thousands of dollars to repair and endangers important infrastructure, including: piers, break walls, beach access points, boat launches, water pipes, sewer pipes, and roads. For example, in spring 2016, the damage from a single storm at Illinois Beach State Park, which is directly north of the proposed pilot project, cost 15 times more than normal maintenance ($17.19/ cubic yard to truck quarried sand in for emergency onshore nourishment vs. $1.12/ cubic yard for delta transport costs to beneficially use USACE dredged material in the nearshore.) The proposed project would provide much-need protection against shoreline and bluff erosion resulting from higher lake levels, more frequent and severe storms, and greater volumes of stormwater runoff. We currently use quarried sand that is trucked in to address erosion. This method of repair is costly and it damages municipal roads and neighboring habitats.

Our proposed approach of onshore placement of dredged sand would also mitigate these impacts.

b. Promoting public safety

Shoreline modifications (erosion and sediment overwash) cause significant drop-offs at our swimming beaches and endanger beach access points, boat launches, piers, and broader infrastructure like roads. For example, at the Lake Bluff Park District, shoreline erosion prevented access to, and created a two-foot drop-off at, the public access point to the beach. The proposed project could prevent or mitigate the erosion and promote public safety by protecting public access points and infrastructure. Our beaches themselves are also important for public safety. Regional water rescue training takes place at the Glencoe Park District and City of Evanston; Foss Park District has plans to implement similar safety events.

c. Protecting, restoring, and creating ecosystem habitats

The proposed project would include shrub and tree plantings in the cities of North Chicago and Evanston to provide and restore as much as 25,000+ square yards of habitat for migratory birds and other wildlife. (The proposed amount can be scaled, depending on available funding.) It would also include green infrastructure installments (rain gardens and/or bioswales) that will offer new habitat and reduce bluff erosion and Lake Michigan pollution caused by stormwater (see Appendix D for stormwater impacts at Glencoe Beach).

In addition, Glencoe Park District's site already has 24,200 square yards of high-quality bird habitat and all four communities' parks and beaches are home to important beach, dune, and bluff ecosystems. In the proposed project sites, you can find many federally- and state-listed threatened and endangered species, including: Piping Plover, Short-eared Owl, Red-wing Blackbird, Black-crowned Night Heron, Rufa Red Knot, and Mississippi Kite. Proposed project erosion control and dune enhancement activities would help ensure these important species continue to call our communities home. Our project proposal strongly aligns with USACE Chicago District ecosystem projects in the region, where it has protected and restored over 4,000 acres of habitat at 32 sites in its 8+ county area of Illinois and northwest Indiana. All those projects have a critical migratory bird component.

The western shoreline of Lake Michigan is part of a globally significant north-south migratory flyway. The 140-mile portion of the flyway from the urbanized area north of Milwaukee, Wisconsin to east of Portage, Indiana has limited locations where migratory birds can find food, shelter, and protection from hazards (both natural and man-made).

Despite the limited number of stopover sites, this flyway is used by millions of migrant birds including: hawks, falcons, owls, waterfowl, gulls, terns and shorebirds, and an estimated 5,000,000 migrant songbirds (per Chicago Field Museum of Natural History). This flyway extends from the tip of South America to as far north as the Arctic Circle, a distance over 9,000 miles. Birds using this flyway can pass through as many as 14 US States, Canada, Mexico, Central and South America. The economic impact associated with wildlife watching is significant and birding is a major component. According to the U.S. Fish and Wildlife Service in 2011, the number of wildlife watchers in the U.S. (over the age of 16) was nearly 72 million; this generated over $142 billion in economic benefits. The state of Illinois had more than 3 million wildlife watchers generating over $1.3 billion. The habitat projects in these four shoreline communities will add to the bird watching economic output in Illinois and all the states and countries that these birds migrate through.

As noted earlier, we truck in quarried sand to address erosion. This approach uses large and heavy equipment that can impact air quality through its emissions, consume non-renewable fuel, leak fuel or oil, and trample nearby habitats. By placing material pumped from dredges onshore, the project would reduce shoreline erosion and mitigate many of these ecosystem impacts.

d. Stabilizing stream systems and enhancing shorelines

This project would enhance our shorelines by providing safer, healthier, and more ecologically diverse beaches. All four communities plan to plant native groundcover and grasses along our bluffs and the shoreline to restore beach and bluff habitat, protect placed shoreline material, and limit the future impacts of erosion. We propose planting on as much as 35,000+ square yards of habitat to stabilize and enhance our bluffs and shoreline. Coupled with the habitat projects noted in section (c) above, this would be overall 60,000+ square yards of enhanced and stabilized area. (The proposed amount can be scaled, depending on available funding.) The plantings would limit soil erosion and bluff destabilization resulting from higher lake levels, provide additional native plants and greater habitat diversity, and enhance park and beach aesthetics. Proposed raingardens and/or bioswales in the Village of Glencoe would also reduce bluff erosion caused by high stormwater runoff.

e. Promoting recreation

The six proposed project sites in our four communities all include public beaches (see maps in Appendix B). Addressing shoreline erosion in these important public areas will promote recreation in the following ways:

- Re-build the only swimming beach and surrounding area in Foss Park, North Chicago, where extreme erosion and public safety concerns required the park district to close;
- Expand existing swimming areas and promote swimming classes, which is a life skill;
- Offer local fitness programs, yoga classes, and walking and biking trails, which support a healthy lifestyle;
- Improve trail access and protect current trails and neighboring bluffs;
- Promote birding and wildlife watching with protected and restored habitat;
- Increase non-motorized watercraft launches, which improves public access for paddle boards, sail boats, and kayaks; and
- Enable us to continue offering nature and recreational camps.

f. Supporting risk management adaptation strategies

The project's goals for long-term sustainability would allow our communities to implement appropriate adaptation strategies and plan for future changes in lake levels or weather patterns. Beneficial use of dredged material – coupled with plantings and habitat improvements – would protect our shorelines and provide us with the opportunity to consider additional innovative ways to continue to do so. As noted above, we plan to work closely with the state coastal geologist to three-dimensionally map how the nearshore and shoreline in our four communities responds to pilot project activities. This monitoring, along with ongoing assessments of changing environmental conditions, will enable us to be proactive in the implementation of lasting adaptation strategies into the future.

3. Description of the proposed project, including more details on how material will be used beneficially to meet project purposes identified in 2 above

PROJECT DESCRIPTION

Our proposed project would place dredged material from the Waukegan Harbor federal approach channel onshore to protect 54,560 yards of shoreline at 6 sites: Sunset Park and Beach in Lake Bluff; Foss Park in North Chicago; Glencoe Beach in Glencoe; and Dog Beach, Greenwood Street Beach, and Lee Street Beach in Evanston. The proposed project would also support planting of trees, shrubs, and grasses in all four communities that reduce shoreline and bluff erosion, enhance habitats, and capture stormwater runoff.

The proposed project has two components: 1) beneficial use of dredged material from the Waukegan Harbor approach channel (on average, 71,000 cubic yards per year) for public beach nourishment in four communities and 2) plantings for erosion control and habitat enhancements. Overall, the pilot project activities benefit all of Illinois' coastal communities

because it sets up a blueprint for other communities to undertake similar projects (at cost share) with the Chicago District and each other in the future.

This is a coordinated project among four communities and we are in different stages of lakefront planning. The Chicago District plans dredging activities for Waukegan Harbor federal approach channel two years in advance. Depending on timing for this pilot project program, our proposed project could begin as early as spring 2020. Project communities that are still in the planning phase for erosion control and shoreline enhancement activities would complete and approve all plans before spring 2020.

1. Beneficial use of dredged material for public beach nourishment:

The proposed project is a collaborative effort of four Illinois coastal communities – Village of Lake Bluff, City of North Chicago, Village of Glencoe, and City of Evanston. The beneficial use of dredged material from the Waukegan Harbor federal approach channel will be placed onshore to combat rapid shoreline erosion and to enhance 54,560 yards of public beaches, parks, and open space in these communities. Placement of this dredged material would prevent and/or mitigate shoreline erosion, which threatens the local economy, outdoor recreation, key infrastructure, and important wildlife habitat.

Locations where dredged material will be beneficially used include:

- Lake Bluff, Illinois; Sunrise Park and Beach (455 Sunrise Avenue)
    - 6,921 square yard site
    - Requires an estimated 769 cubic yards of material

- North Chicago, Illinois; Foss Park (1901 Foss Park Avenue)
    - Ideal project size would be 9,880 square yards
    - Requires an estimated 4,477 cubic yards of material

*Foss Park plans to rebuild its swimming beach and surrounding beach area, and material required comes from the park master plan and contractor estimates.

- Glencoe, Illinois; Glencoe Beach (55 Hazel Avenue)
    - 14,134 square yard site
    - Requires an estimated 1,500 cubic yards of material

- Evanston, Illinois; Dog Beach (1631 Sheridan Road), Greenwood Street Beach (1401 Sheridan Road), Lee Street Beach (1111 Lake Shore Boulevard)
    - Dog Beach: 2,955 square yard site; Greenwood Street Beach: 5,713 square yard site; Lee Street Beach: 6,722 square yard site; total area: 15,390 square yards
    - Requires an estimated 3,000 cubic yards of material

*Dog Beach has suffered from severe erosion and estimates of needed material are based off Foss Park numbers, as the city may have to rebuild much of the beach. Evanston plans to take additional measures to protect Dog Beach, including building a groin.

Summary of dredged material placement activities		
City or village	Total nourishment area (in sq. yards)	Est. material needed (in cub. yards)
Lake Bluff	6,921	769
North Chicago	9,880	4,477
Glencoe	14,134	1,500
Evanston	15,390	3,000
Overall total	**46,325**	**9,746**

In Village of Lake Bluff, Village of Glencoe, and City of Evanston, beneficial use of dredged material will protect the existing public beaches and parks outlined above. In the City of North Chicago, beneficial use of dredged material will rebuild a former beach and restore and stabilize bluff habitat, both of which have suffered from severe erosion. Please see Appendix B for maps of the proposed sites and Appendices C, D, E and F for park master plans and other relevant planning documents.
As stated in the 2016 Water Resources Development Act, all transportation and placement of dredged material from Waukegan Harbor would be at federal cost. Additional activities such as grading and planting would be cost shared at 65% federal, 35% non-federal, per Section 204 Beneficial Use of Dredged Material.

2. Erosion control and shoreline enhancements

Illinois' coastline is a high-energy system. Our communities plan to take additional steps to ensure that beneficially used dredged material continues to protect our public beaches, parks, and open spaces long into the future. We plan to undertake the following erosion control and enhancement activities to protect our shorelines:

- Lake Bluff, Sunrise Park and Beach
    - Grading of placed dredged material.
    - Planting 2,184 square yards of the park bluff face with native grasses and sedges, with overseeding for desirable native forbs and planting of red oaks once grasses are well-established.
    - Planting 96 square yards of additional beach grass to limit overall beach erosion.
- North Chicago, Foss Park
    - Grading of placed dredged material.

- Plantings of an estimated 90 trees, 200 shrubs, and 440 groundcover and grasses to restore and stabilize a 24,666-square yard bluff area. (This is the ideal project size and can be scaled.)
- Plantings of an estimated 980 groundcover and grasses for restoration and erosion control in a 21,777-square yard beach area. (This is the ideal project size and can be scaled.)

*The Foss Park Master Plan also includes planned installation of a quarrystone breakwater and quarrystone groin. This aspect is not included as a part of this proposed project, but will support efforts to protect the shoreline and keep dredged material in place.

- Glencoe, Glencoe Beach
  - Grading of placed dredged material.
  - An estimated 12,000 square yards of rain gardens, bioswales, and/or plantings to capture stormwater and prevent further bluff erosion.

*Glencoe Beach experiences extreme erosion and bluff destabilization from stormwater runoff. Glencoe Park District is in the process of developing a proposal with several contractors to address this (see Appendix D). As planning moves forward, more specific stormwater management strategies will be identified.

- Evanston, Dog Beach, Greenwood Street Beach, Lee Street Beach
  - Grading of placed dredged material.
  - Plantings of dune grasses along the western edge of Lee Street Beach to limit erosion.
  - Plantings of shrubs and trees at Greenwood Street Beach and Lee Street Beach to provide migratory bird and other wildlife habitat.

Summary of Section 204 ecosystem activities	
City or village	Est. area for erosion control and enhancement (in sq. yards)
Lake Bluff	2,280
North Chicago	46,443
Glencoe	12,000
Evanston	Area to be determined
Overall total	**60,723+**

Proposed project timeline:

This suggested timeline would be adapted based on the potential start time for the WRDA pilot program.

Project activity	Potential timeframe
Glencoe and Evanston finalize and have approved planned restoration activities at project sites	Spring 2018 – Spring 2019
Waukegan Harbor federal approach channel dredging	As early as spring 2020 **Spring 2018-2019 dredging activities are already planned*
Placement of dredged material onshore at North Chicago, Evanston, Lake Bluff, and Glencoe	As early as spring 2020
Planting activities at North Chicago, Lake Bluff, Evanston, and Glencoe	As early as summer - fall 2020

Under Section 204 Beneficial Use of Dredged Material, the shoreline protection and ecosystem restoration activities outlined above would be cost-shared at 65% federal and 35% non-federal. It has cost our four communities altogether about $75,000 annually, on average, to truck in and grade quarried sand to address eroding public shorelines. This would enable our communities to instead put this $75,000 toward erosion control and habitat enhancement activities outlined in the proposed project description above. With a 65% federal cost share, we could leverage our resources to achieve $214,285 worth of ecosystem restoration and shoreline protection work. Receiving the dredged material at 100% federal cost will allow us to extend our resources even further by eliminating the costly and inefficient process of trucking in quarried sand. (Please see #6, description of project costs, for further details.)

ADDITIONAL INFORMATION

Science-based decision making

Through the Illinois Sand Management Working Group, the four communities plan to continue partnering with the state coastal geologist for science-based decision making. In addition to the planned three-dimensional drone shoreline and nearshore mapping in our four communities noted above, the state coastal geologist has another three projects that support the long-term sustainability of this effort.

- A joint project with the U.S. Army Corps of Engineers, Chicago District that uses drone technology and boat-based surveys to track nearshore sediment. This research will test whether nearshore placement mitigates beach and dune erosion at Illinois Beach State Park. The methodology for this study, once tested, could be applied in other areas to explore similar questions. This project will take place from April 2018 – April 2019 and is funded out of the Regional Sediment Management (RSM) program.
- A Great Lakes Restoration Initiative-funded project (through National Oceanic and Atmospheric Administration) in partnership with IDNR staff that assesses Illinois Beach State Park habitat. Data from this research will enable the state to prioritize areas in the park to implement targeted shore protection strategies.
- Ongoing shoreline monitoring at Sunrise Park in Lake Bluff. Data collection started in October 2017 and will be completed in April 2018. This research will provide localized data on shoreline change and aids in the development of targeted shore protection strategies. This data collection method can also be applied in other communities.

4. The name of all non-federal interests planning to act as the sponsor, including any non-federal interest that has contributed to or is expected to contribute toward the non-federal share of the proposed beneficial use project.

    - Lake Bluff Park District
    - Foss Park District (of North Chicago)
    - Glencoe Park District
    - City of Evanston

    As noted above, our four municipalities have a history of partnership and collaboration with each other and the Chicago District through the Illinois Sand Management Working Group. In July 2017, we submitted a letter of intent to the Chicago District to continue working together on erosion in our region.

5. List the U.S Army Corps of Engineers (Corps.) water resources development project(s) that the proposed beneficial use project is associated with.

    There are several U.S. Army Corps of Engineers water resources development projects associated with this pilot project proposal:

    - **Operation and Maintenance of Waukegan Harbor federal navigation harbor**. This involves routine dredging of the approach channel, inner and outer harbor, and advanced maintenance area.
    - **Waukegan Harbor Sec 107 Small Navigation Project.** This project evaluates structural and non-structural alternatives for harbor modification to decrease the harbor shoaling rate.

- **32 constructed USACE Chicago District Aquatic Ecosystem Restoration (AER) projects**. Together, this work totals 4000+ acres of migratory bird habitat along the western shoreline of Lake Michigan. This pilot project proposal would add to the total acreage, increasing the connectivity of resting, feeding, and shelter areas for 325+ species of resident and migratory birds along this globally significant portion of the Upper Mississippi River Flyway. Our pilot proposals are closest to the Fort Sheridan Estuary, Chicago Botanical Gardens, Fort Sheridan Ravine, Rosewood Park, and Lake County Ravine 8. Many of these sites are managed by fellow Illinois Sand Management Working Group participants.
- **Evaluation of the Application of Structure from Motion Topographic Survey for monitoring of Nearshore Placement in Southern Lake Michigan**. This RSM study is a proof-of-concept study to utilize Structure from Motion (SfM) surveys to monitor the efficacy of nearshore, onshore, and alongshore movement of sand following nearshore placement operations. This study will be conducted during the summer of 2018.

6. Provide an estimate to the extent practicable, of the total beneficial use project cost, and the federal and non-federal share of those costs.

   As noted earlier, we submitted a letter of intent to U.S. Army Corps of Engineers, Chicago District for a complementary project in July 2017. The Chicago District is supportive, and we are moving through the review process. At this time, we do not have total beneficial use project costs. However, the Chicago District did a rough cost estimate in 2015 for a neighboring area in Burns Harbor, Indiana for onshore placement of dredged material at Ogden Dunes. This could serve as a high-level proxy for our pilot proposal.

   For the Burns Harbor project, it would cost about $8/cubic yard above current nearshore placement practices, plus an additional $80,000 for equipment mobilization and de-mobilization. On average, 71,000 cubic yards are dredged annually from the Waukegan Harbor Approach. This would amount to an additional $648,000 above current harbor operation and maintenance practices to place the material onshore, a federal cost under this pilot program.

   At present, our four communities have spent an average of $75,000 collectively each year on trucking in quarried sand for shoreline nourishment and grading. As noted above, under the pilot program, we would be able to apply that funding to cost-shared Section 204 Beneficial Use of Dredged Material projects that support habitat protection and restoration, recreation, public safety, reducing storm damage, enhancing shorelines, and other innovative solutions. The 65% federal share of restoration activities would be $139,285 for a project with a 35% non-federal cost-share of $75,000.

   If the four communities were theoretically to apply this whole amount ($75,000) to a cost-shared Section 204 project as a part of the pilot project program, the total federal and non-federal costs could break down as follows:

- 100% of the transportation and placement of dredged material would be federally funded ($648,000 in the example outlined above)
- The non-federal cost-share would be 35% of any additional work worth up to $214,285 based on a budget of $75,000.
- 65% of additional work valued at $214,285 for a total of $139,285 would be federally funded (again, based on a non-federal budget of $75,000)

Estimated Maximum Federal Cost in a Given Year (above regular O&M):

(8*71,000) + (80,000) + (0.65*214,285) = $787,285

Estimated Maximum Non-Federal Cost in a Given Year:

(0.35*214,285) = $75,000

Estimated Maximum Total Project Cost in a Given year:

$862,285

These estimates represent the maximum potential project cost in a given year. Our partnership through the Illinois Sand Management Working Group seeks to leverage our local resources to be more cost-effective overall for our tax payers. As you can see, under this pilot program we could potentially partner in a multi-faceted $862,285 project for our constituents rather than simply trucking in and grading $75,000 of quarried sand.

Table 1: Hypothetical maximum project values for a beneficial use project under the Section 1122 pilot program based on different non-federal contributions over one dredging year.

Non-federal cost-share (35%)	Federal cost-share (65%)	100% federally funded transportation and placement	Total beneficial use project
$75,000	$139,285	$648,000	$862,285
$100,000	$185,714	$648,000	$933,714
$200,000	$371,429	$648,000	$1,219,429

Table 2: Hypothetical maximum project values for a beneficial use project under the Section 1122 pilot program based on a $75,000 non-federal contribution spread out over multiple dredging years.

Number of years	Total non-federal cost-share (35%)	Total federal cost-share (65%)	100% federally funded transportation and placement	Total beneficial use project
1	$75,000	$139,285	$648,000	$862,285
2	$75,000	$139,285	$1,296,000	$1,510,285
3	$75,000	$139,285	$1,944,000	$2,158,285

Since most of the proposed beneficial use project costs are represented by transportation and placement of the material, we could deliver even greater savings to our taxpayers by expanding the project to include multiple dredging cycles. This would benefit our communities and keep this important material in the littoral transport system of western Lake Michigan.

7. Describe, to the extent practicable, an estimate of the anticipated monetary and non-monetary benefits of the proposed beneficial use project with regards to the environmental, economic, and social benefits of the project.

   Environmental Benefits: The proposed project would protect and enhance planned and current habitat, provide shoreline protection, and preserve the aesthetic beauty of the lakefront and its open spaces, natural habitats, and wildlife. Through this project, we propose to protect 54,560 yards of public shoreline, parks, and open space and create and enhance 60,000+ square yards of high-quality habitat and natural buffers. As noted above, this area is a globally significant migratory bird flyway. Our communities are also home to federally- and state-listed threatened and endangered species, including Piping Plover, Short-eared Owl, Red-wing Blackbird, Black-crowned Night Heron, Rufa Red Knot, and Mississippi Kite.

   - Protects 54,560 yards of shoreline
   - Creates or enhances 60,000+ square yards of habitat and natural buffers

   Economic Benefits: The proposed project would continue to bolster the local economy, maintain and increase employment, and protect property values. In Illinois, coastal counties are critical to the state's economy through shipping, outdoor recreation and tourism, local businesses, and job creation. In 2014, the coastal economy contributed about $680 billion to Illinois' Gross Domestic Product (GDP), according to the National Ocean Economics Program. Wildlife viewing also boosts our local and state economy, with about 3 million wildlife watchers in Illinois. This can have a huge economic impact, with wildlife viewers spending over 1 billion dollars in Illinois in 2011.

   Our communities collect $1,488,289 in visitor and boating fees and $319,106 in camping fees at our parks and beaches. We also employ 240 young adults as lifeguards, gate attendants, aquatic camp counselors, beach attendants, and maintenance personnel each summer.

   - Recreation fees (parking, boating, and camping) – $1,807,395
   - Job Provided – 240 Young Adults

Additionally, this pilot program would eliminate or decrease the cost to these four communities of trucking in quarry sand at the taxpayer's expense. This would allow us to reinvest these tax dollars into additional shoreline protection and restoration projects, as well as other public services. As calculated above, *this project with Chicago District would enable us to leverage our resources to achieve, overall, an estimated $862,285 worth of work, 46 times the impact of what we would be able to complete, on average, as individual communities*. The proposed pilot program therefore demonstrates the return on investment of collaborative public shoreline management. This work can serve as a blueprint for other communities seeking to beneficially use dredged material for public benefit.

Social Benefits: These shorelines and beaches are open to the public, and the long continuous stretches of parks, beaches, and open space create a wide range of recreational opportunities in an unparalleled lakefront environment. Through proposed and current sites, our communities have a combined 11 public swimming beaches, a dog beach, and both motorized and non-motorized boat launch facilities. Each summer, we offer: volleyball, nature, and youth and teen aquatic camps; parent-child aqua action camps; adult camps; and aquatic counselor-in-training programs.

The proposed project would enhance opportunities for residents and visitors to experience Lake Michigan, local trails, and public parks. These beaches, parks, and open spaces provide important places for neighbors, family, and friends to gather and participate in outdoor activities like running, biking, volleyball, sailing, kayaking, stand up paddle boarding, and experiencing wildlife first-hand.

- Estimated Total Visits during Peak Season of 220,854

8. Describe if local support exists for the proposal.

As the facilitators of the Illinois Sand Management Working Group, the Illinois Department of Natural Resources' Coastal Management Program is very supportive of this proposal. A letter of support from the Director of the Coastal Management Program is included in this application package. The City of North Chicago, Village of Lake Bluff, Lake Bluff Open Lands Association, Village of Glencoe, and City of Evanston are also very supportive, and letters of support can be provided from these organizations as needed.

Moreover, federal and state legislators strongly encourage the local collaboration between our communities and can offer letters of support as needed for this project as well. Many of the federal and state legislators listed below also participate in the Illinois Sand Management Working Group. Federal and state legislators include:

At the federal level:

U.S. SENATORS

Senator Richard Durbin

Washington DC Office:
711 Hart Senate Office Building
Washington, DC 20510
Phone: (202) 224-2152

District Office:
230 S. Dearborn Street, Suite 3892
Chicago, IL 60604
Phone: (312) 353-3899

Senator Tammy Duckworth

Washington DC Office:
524 Hart Senate Office Building
Washington, DC 20510
Phone: (202) 224-2854

District Office:
230 S. Dearborn Street, Suite 3900
Chicago, IL 60604
Phone: (312) 886-3506

U.S. REPRESENTATIVES

9th District of Illinois – Congresswoman Janice Schakowsky

Washington DC Office:
2367 Rayburn House Office Building
Washington, DC 20515
Phone: (202) 225-2111

District Office:
5533 N. Broadway
Chicago, IL 60640
Phone: (773) 506-7100

10th District of Illinois – Congressman Brad Schneider

Washington DC Office:
1432 Longworth House Office Building
Washington, DC 20515
Phone: (202) 225-4835

District Office:
111 Barclay Blvd, Suite 200
Lincolnshire, IL 60069
Phone: (847) 383-4870

At the state level:

ILLINOIS SENATORS

7th Senate District – Senator Heather Steans

Springfield Office:
623 Capitol Building
Springfield, IL 62706
Phone: (217) 782-8492

District Office:
5533 North Broadway
Chicago, IL 60640
Phone: (773) 769-1717

9th Senate District – Senator Daniel Biss

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417B Capitol Building
Springfield, IL 62706
Phone: (217) 782-2119

District Office:
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Skokie, IL 60076
Phone: (847) 568-1250

29th Senate District – Senator Julie Morrison

Springfield Office:
M115 Capitol Building
Springfield, IL 62706
Phone: (217) 782-3650

Deerfield Office:
700 Osterman Avenue
Deerfield, IL 60015
Phone: (847) 945-5200

30th Senate District – Senator Terry Link

Springfield Office:
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Springfield, IL 62706
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District Office:
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Phone: (847) 623-3006

ILLINOIS REPRESENTATIVES

14th Legislative District – Representative Kelly Cassidy

Springfield Office:
271-S Stratton Office Building
Springfield, IL 62706
Phone: (217) 782-8088

District Office:
5533 North Broadway
Chicago, IL 60640
Phone: (773) 784-2002

17th Legislative District – Representative Laura Fine

Springfield Office:
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Springfield, IL 62706
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18th Legislative District – Representative Robyn Gabel

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58th Legislative District – Representative Scott Drury

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59th Legislative District – Representative Carol Sente

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60th Legislative District – Representative Rita Mayfield

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9. State of the non-federal interest's financial ability to provide a share of the project costs.

   We understand that under this pilot program, 100% of the cost to transport and place dredged material would be federal. We also understand that the costs of ecosystem restoration, and/or additional shoreline protection activities under Section 204 Beneficial Use of Dredged Material would be at a 65% federal and 35% non-federal cost-share. The four agencies listed in this pilot program are able and willing to fulfill this cost-sharing arrangement. We understand that the long-term operation and maintenance of any Section 204 activities would be our responsibility.