

# THE US ARMY CORPS OF ENGINEERS- MN POINT CAP 111

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Source: Google Earth



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- CAP 111 Authority Overview
- Project Overview
  - Scope
  - Project Modeling
- Schedule
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- Considered Alternatives
- Path Forward



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# PURPOSE & BACKGROUND OF CAP 111 STUDY



The purpose of the Section 111 program is to determine the **effect of Federal navigation structures** on the shoreline, and develop plans for the mitigation of shore damages attributable to those structures. By monitoring the Great Lake shorelines over various time periods, the Detroit District can more efficiently manage dredged material from navigation channels for placement within the nearshore region and utilize knowledge gained through substantial analyses to address impacts by all structures. The section 111 program is **critical to the Corps' desire to maintain a healthy and natural shoreline.**

Section 111 of the 1968 River and Harbor Act provides authority for the Corps of Engineers to develop and construct projects for prevention or mitigation of damages caused by Federal navigation work. This applies to both publicly and privately owned shores located along the coastal shorelines of the United States.

The Corps can initiate an investigation of a prospective mitigation of damages project upon receipt of a request from a sponsoring agency empowered under state law to provide the required local cooperation.



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# PURPOSE & BACKGROUND OF CAP 111 STUDY



## **This authority may not be used for the following purposes:**

- 1.To construct works for prevention or mitigation of shore damage caused by riverbank erosion or vessel-generated wave wash.
- 2.To prevent or mitigate shore damage caused by non-Federal navigation projects.

## **A recommendation to construct a project to prevent or mitigate shore damage attributable to a Federal navigation project may be considered when both of the following conditions exist:**

- 1.The navigation project has been determined to be the cause of the damage, and abandonment of the navigation project is not the most viable solution.
- 2.Analysis based on sound engineering and economic principles clearly demonstrates the feasibility of the proposed work.

## **Construction Requirements for Federal cost sharing are as follows:**

- 1.If the work recommended is confined to mitigation work where erosion is totally attributable to the Federal navigation works, costs are shared in the same manner as the project causing the erosion or shoaling.
- 2.If the work recommended is a combination of mitigation and restoration of beaches eroded due to other causes, mitigation work will be shared in the same manner as the project causing the erosion or shoaling and the remaining work will be 100 percent local, unless it qualifies as a Federal beach erosion control project.

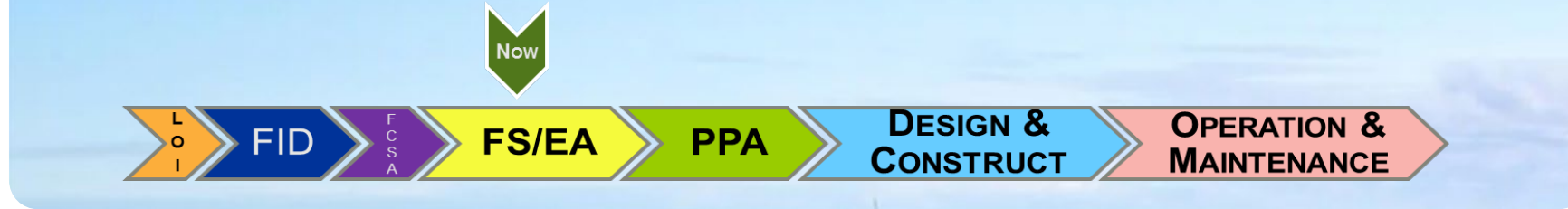


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# TYPICAL SECTION 111 PROJECT STEPS



- **Letter of Intent (LOI)** from a non-federal Sponsor initiates the project
- **Federal Interest Determination (FID)** approval from USACE Division
- **Feasibility Cost Sharing Agreement (FCSA)** signed by non-federal Sponsor
- **Feasibility Study (FS) with Integrated Environmental Assessment (EA)**
  - 24 month process to complete Detailed Project Report (DPR)
  - Cost share: 100% federal for first \$100,000; cost share based on cost share of construction of original structure
- **Sign Project Partnering Agreement (PPA)**
  - Defines federal and non-federal contributions
  - Some non-federal contributions may be in the form of in-kind services and credit for lands, easements, rights-of-way, relocations, and disposal areas (LERRDs)
  - Defines long term operations and maintenance responsibilities
- **Design & Construction**
  - Cost sharing at the same proportion of the original federal project causing the shore damage. Work beyond that directly attributable to the federal navigation project is 100% non-federal.
- **Operation and Maintenance**
  - All operation, maintenance, repair, rehabilitation and replacement (OMRR&R) of the project in the future is at 100% non-federal cost



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# PROJECT LOCATION AND REMINDER OF PURPOSE AND NEED



**Project Location** - Minnesota Point, Minnesota is a long strip of land separating Duluth-Superior Harbor from Lake Superior. Minnesota Point is located on the south shore of Lake Superior at Duluth, Minnesota and is delineated by two navigation entrances to the harbor: Duluth Entry at western limit and Superior Entry at the eastern limit. Duluth Harbor is a deep draft commercial harbor that is about 360 miles from Detroit, Michigan.

**Study Purpose & Need** – The purpose(s) of the Minnesota Point Section 111 Feasibility study is to: 1) determine if the Federal navigation structures at Duluth and Superior Entries are contributing to the erosion damage on the shoreline of Minnesota Point; 2) to develop a feasible, economically-justified, and environmentally sustainable solution that will prevent or mitigate further shore damage cause by the Federal structures. The Minnesota Point provides a natural barrier for Duluth-Superior Harbor against the wave climate of Lake Superior. The erosion of the Minnesota Point shoreline has increased the threat of wave-induced flooding of residential properties and a historic pine forest, and threatens municipal infrastructure. Finally, a shoreline erosion solution is needed to protect this valuable regional resource.





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# PROJECT LOCATION AND REMINDER OF PURPOSE AND NEED



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# PROBLEMS, OPPORTUNITIES, OBJECTIVES, CONSTRAINTS

## Problems

**Minnesota Point Problem Statement:** Shoreline erosion is occurring and is driven by water level fluctuations and the perturbation of the natural sediment supply, causing flooding (induced by the density and proximity of development), the loss of dune complexes, the loss of a historical forest and reduced recreational opportunities on the Minnesota Point Shoreline.

## Objectives

- Prevent or mitigate erosion damage to the shoreline on Minnesota Point over the next 50 years.
- Prevent or mitigate erosion damage to cultural resources located on Minnesota Point over the next 50 years.

## Opportunities

- Analyzing the erosion on Minnesota Point will provide a better understanding of long-term impacts, sediment budgets and coastal processes
- Preventing or mitigating the erosion on Minnesota Point will increase climate resiliency and promote economic growth and stability.
- Preventing or mitigating the erosion on Minnesota Point will provide an opportunity to leverage Corps O&M dredged material.
- Preventing or mitigating the erosion on Minnesota Point could strengthen Duluth-Superior Harbor and preserve and restore natural land features on Minnesota Point.

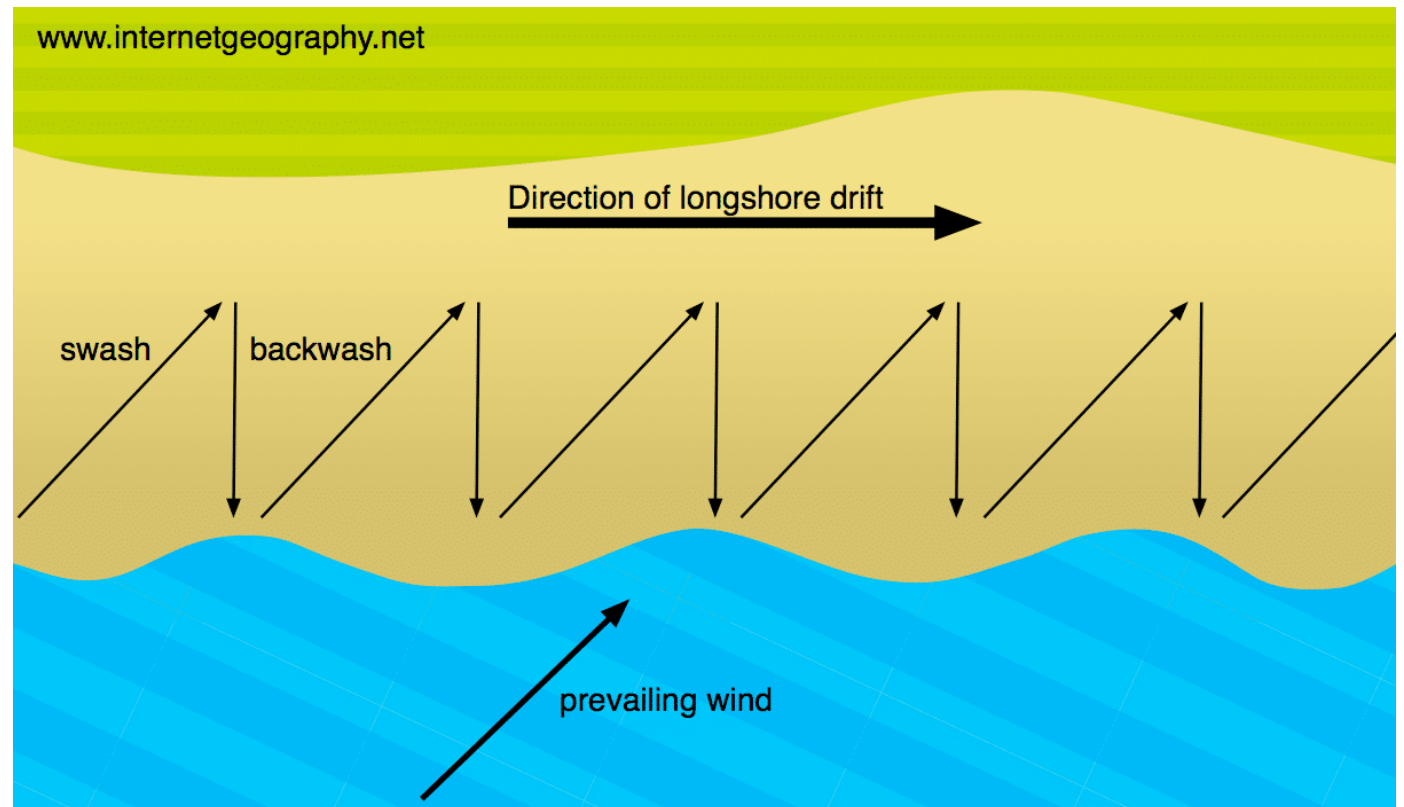
## Constraints

- Shore damage prevention or mitigation alternatives cannot violate the Clean Water Act.
- Shore damage prevention or mitigation alternatives cannot create an unsafe navigation environment.



Develop a hydrodynamic and sediment transport model for the Minnesota Point Feasibility Study. The work shall include the following features:

- Deliver a vetted numerical model of hydrodynamics and sediment transport for Minnesota Point along with necessary input data files to allow simulations under varying conditions.
  - Wave Climate
  - Water Levels
  - Sand Supply (littoral drift)
- Prepare a report that documents the model and associated skill assess
- One year to develop model and report





# SCHEDULE MILESTONES

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P2 SCHEDULE (496834 24 FEB 2023) PROVIDED AS RAH WITH MORE DETAILED BREAKDOWN



Milestone Name	Date Presented at last outreach meeting	Current Scheduled Date
Start Study / Receipt of Initial Funds		
Federal Interest Determination Approval	15 Mar 2022	15 Mar 2022 (A)
Feasibility Scoping Meeting	10 Mar 2023	10 Mar 2023 (A)
Feasibility Cost Share Agreement (FCSA)	N/A	N/A
Tentatively Selected Plan Meeting	24 Jul 2025	10 APR 2026
Approval of Final CAP Decision Document	23 Jun 2026	01 OCT 2026
Project Partnership Agreement Execution	31 Jul 2026	25 FEB 2027
Start Plans and Specs	TBD	TBD
Draft P&S Complete	TBD	TBD
Certified BCOES Review	TBD	TBD
Contract Award	TBD	TBD
Project Physical Completion	TBD	TBD
Project Fiscal Closeout	TBD	TBD
Notice of Project Completion	TBD	TBD



# COMPLETED WORK



- **Project Kickoff: 04/15/2022 – 08/02/2023**
  - Federal Interest Determination
  - Charette
  - Develop Scope Schedule Budget
  - Develop Project Management Plan
  
- **FSM: 10/14/2022 – 04/17/2023**
  - Request Funding
  - Approve Schedule, Budget, and PMP
  
- **Coastal Sediment Survey: 09/01/2023 – 01/30/2024**
  - 30 Days of sediment sampling
  - Draft Report
  - Review Report
  
- **Coastal Model Award: 05/23/2023 – 03/13/2024**
  - Draft SOW
  - Contracting Action



# UPCOMING WORK



- **Modeling Kickoff: 04/09/2024 – 04/16/2024**
  - Finalize milestones
  - Quality Plan development
- **Literature Review and Boundary Condition Development: 04/10/2024 – 06/11/2024**
  - Review literature
  - Review data available
  - Define data gaps
  - Develop conceptual model
  - Develop model boundary conditions
- **Develop Hydrodynamic and Sediment Transport Model: 06/12/2024 – 12/03/2024**
  - Model development
  - Government Review
  - Forcing scenario modelling
  - Government Review
  - Final Model Runs



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# UPCOMING WORK



- **Develop Sediment Budget: 10/16/2024 – 12/17/2024**
  - **Draft Sediment Budget**
  - **Final Sediment Budget**
- **Finalize Report: 12/18/2024 – 2/25/2025**
  - **Complete Model Report**
  - **Government Review**
  - **Finalize Report and Appendices**



# PRELIMINARY ALTERNATIVE PLANS



Measures	Bypassing Plant	Beach Nourishment	Constructed Dune System combined w Dune Grasses	Offshore Submerged Reef	Remove Federal Structures
Bypassing plant	Bypassing Plant				
Beach Nourishment	Bypassing Plant + Beach Nourishment	Beach Nourishment			
Constructed Dune System combined w Dune Grasses	Bypassing Plant + Constructed Dune System combined w Dune Grasses	Beach Nourishment + Constructed Dune System combined w Dune Grasses	Constructed Dune System combined w Dune Grasses		
Offshore Submerged Reef	Bypassing Plant + Offshore Submerged Reef	Beach Nourishment + Offshore Submerged Reef	Constructed Dune System combined w Dune Grasses + Offshore Submerged Reef	Offshore Submerged Reef	
Remove Federal Structures	Bypassing Plant + Remove Federal Structures	Beach Nourishment + Remove Federal Structures	Constructed Dune System combined w Dune Grasses + Remove Federal Structures	Offshore Submerged Reef + Remove Federal Structures	Remove Federal Structures

- **Design Scenario Depends on Findings of Study**
  - Seeks to mitigate impact to near shore cause by Federal Structures
- **Project Partnering Agreement (PPA)**
  - Defines federal and non-federal contributions
  - Some non-federal contributions may be in the form of in-kind services and credit for lands, easements, rights-of-way, relocations, and disposal areas (LERRDs)
  - Defines long term operations and maintenance responsibilities
- **Design & Construction**
  - Cost sharing at the same proportion of the original federal project causing the shore damage. Work beyond that directly attributable to the federal navigation project is 100% non-federal.
- **Operation and Maintenance**
  - All operation, maintenance, repair, rehabilitation and replacement (OMRR&R) of the project in the future is at 100% non-federal cost

**WE LOOK  
FORWARD TO  
CONTINUING  
TO PARTNER!**



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