



# Orleans Dredge Purchase Feasibility Study

Kick-Off Meeting  
Town Hall, Orleans, Massachusetts  
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## Project Goals and Objectives

- Assess the feasibility of purchasing and operating a dredge and associated equipment within shallow-draft boat harbors and waterways within the Town of Massachusetts
  - Driven by importance of maintaining safe and navigable entrance and internal navigation channels
- The Town recognizes the importance of maintaining a working relationship with Barnstable County so they can utilize funding when it becomes available. However, the Town also wants to be prepared to maintain their own waterways, marinas, private channels, and mooring areas.

# Project Outline and Timeline

- **Task 1. Meetings and Stakeholder Engagement**
  - **Kick off Meeting** – Review Goals, Objectives, Deliverables
    - **Meeting 1** – Once data collection complete, update DAC on deliverables. Discuss equipment to be included in financial analysis.
    - **Meeting 2** – Meet with local municipal leaders and Barnstable County Dredge personnel. To include visits to Barnstable County Dredge and Edgartown Dredge and disposal sites.
    - **Meeting 3** – Meet with DAC to discuss findings, recommendations and next steps.



# Project Outline and Timeline

- **Task 2. Compile Information on Dredging Projects**
  - Woods Hole Group will compile information from:
    - Historic dredging projects
    - Data collected in support of Nauset Estuary and Pleasant Bay dredging efforts.
  - Data obtained will be used to identify and characterize grain size, type of material, and potential volumes that may be dredged from Nauset Estuary, Pleasant Bay, and Rock Harbor.
  - Expected that regional stakeholders will provide supplemental information for areas outside previously permitted / dredged channels, including:
    - historic permits obtained,
    - existing permits,
    - historic quantities dredged,
    - historic dredging location(s),
    - historic dredged sediment types,
    - historic disposal locations, etc.

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- **Task 3. Identification of Suitable Equipment**

- Once regional sediment characteristics and historic dredging events have been analyzed, Woods Hole Group will research and identify the most suitable dredging equipment for maintaining navigation channels within the specified region and beneficially reusing and/or disposing of dredged material.
  - **Hydraulic Cutter Suction Pump Dredge?**
  - **Hopper Dredge?**
  - **Mechanical Dredge?**
- Initial costs for the purchase of recommended equipment (dredge superstructure (hydraulic dredge, hopper, etc.), support boats, pipe, booster pump, etc.) labor costs, fuel costs, pumping rates, maintenance costs, etc.



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- **Task 4. Operational Cost Forecast**

- Task 4 will include a cost analysis of dredge ownership v. using the Barnstable County Dredge v. using a commercial dredge contractor to complete Town projects.

- **Task 5. Feasibility Assessment**

- Develop a regional sediment budget (the amount of material that could be expected to be dredged on an annual basis) for waterways in Orleans.
- The sediment budget will be factored against the operational cost forecast for owning and operating regional dredging equipment within the specified region, generating a cost per cubic yard of material dredged.
- This unit cost will help to determine the capital outlay for each scenario, and if applicable, how quickly the initial investment might be recovered.

- **Task 6. Final Report**

- The final report will provide an outline of the assumptions that were made in generating these data and will provide a comprehensive list of recommendations, possible funding sources, and next steps for future work.

# Project Outline and Timeline

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Task 1. Meetings and Stakeholder Engagement – 3/2020; 5/2020; 8/2020

Task 2. Regional Sediment Characterization – April 2019

Task 3. Identification of Suitable Equipment – May 2019

Task 4. Operational Cost Forecast – June 2019

Task 5. Feasibility Assessment – June 2019

Task 6. Final Report – July 2019



# Questions? / Next Steps

- Stakeholder Engagement - Questionnaire v. Meeting Participation
  - DAC to engage?
- Schedule Site Visits with Barnstable County, Edgartown Dredge Programs
- Summarize Existing Datasets

