

Community Innovation Challenge Grant

APPLICATION

Project title: Municipal Portable Closed Loop Pressure Wash Water Recycle System for Commercial Fishing Fleets in Harwich and Chatham

Amount requested: \$25,500

Identify the lead applicant entity: Town of Harwich, MA

Lead applicant primary contact:

First Name, Last Name: Thomas Leach, Harwich Harbormaster

Name of Municipality: Town of Harwich, MA

Phone Number: (508) 430-7532

Email Address: tleach@town.harwich.ma.us

Lead applicant secondary contact:

First Name, Last Name: Stuart Smith, Chatham Harbormaster

Name of Municipality: Town of Chatham, MA

Phone Number: (508) 945-5185

Email Address: ssmith@chatham-ma.gov

Check type of participating entities:

- Two or more municipalities seeking to collaborate
- Regional school(s)
- School districts considering forming a regional school district or regionalizing services
- Regional planning agency or council of government
- Local government entity and non-profit seeking to collaborate
- Single municipality (for internal efficiency grant proposal)

List all participating entities:

Harbormasters Department, Town of Chatham

Harbormasters Department, Town of Harwich

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Purpose of the grant:

The Towns of Harwich and Chatham are seeking \$25,500 from the Community Innovation Challenge (CIC) Grant Program to purchase and implement a portable closed loop pressure wash recycle system benefiting the local commercial fishing industries and protecting the environmentally sensitive water quality the industry relies on.

The goal of this portable system will be to eliminate the potential discharge of contaminated wash water into coastal waters and groundwater by commercial boat power washing. Seasonal boat maintenance includes the scraping and pressure washing of boat hulls creating contaminated wash water that may contain heavy metals from hull paint, oil, grease, and other pollutants. The waste water is considered "industrial waste water" as defined by the Massachusetts' Department of Environmental Protection regulations (314 CMR) and can have severe negative impacts on coastal waters and productive habitats (i.e. shellfish beds) that are critical to the commercial fishing industry. According to Massachusetts Office of Coastal Zone Management's *Massachusetts Clean Marina Guide*, the discharge of pollutants from boat maintenance activities, including pressure washing, can have severe and long-term impacts on the aquatic environment. (CZM 2008) Traditionally, the pressure washing and scraping of boats occurred on marina premises where wash water ran out into the coastal waterways exposing various toxins to marine life. The increasing awareness of wash water impacts on coastal resources have resulted in regulations of boat maintenance activities. This places the Harbormasters and marina staff responsible for the proper collection and disposal of the hazardous waste water to comply with federal, state, and local regulations.

Recently, the Harwich Harbormaster attempted to address this issue by piloting a temporary tarp-dam system to be used during pressure wash activities, but was informed by the Massachusetts Department of Environmental Protection that this was not an adequate means of wash water pollution prevention. After much research and consideration, the Harwich Harbormaster has identified a highly accepted portable closed loop pressure wash recycle system that will capture and store harmful contaminants while recycling the wash water minimizing fresh water use. This system was identified by Massachusetts Office of Coastal Zone Management as a Best Management Practice for boat hull maintenance and cleaning.

Another goal of this project is to reduce the high cost of seasonal boat maintenance incurred by local fishing fleets. There are approximately 80 commercial fishing boats docked and maintained in Harwich and Chatham waterways. In an average fishing season, boats are hauled once per year to conduct routine maintenance necessary to extend the life of the vessels. On average, the cost to move one 40ft fishing vessel once per season is \$300. This results in an approximate total of \$32,000 incurred by the Chatham and Harwich commercial fishing fleets annually. A town-managed portable pressure wash recycle system is easy to transport to each boat and set up in a short amount of time. This will reduce the cost of hauling boats around the marina yard as well as reduce the amount of time spent on boat maintenance. Also, off-site disposal of wash water is another cost traditionally incurred by fishermen. After pressure washing the vessel, boat operators would collect the wash water and pay for it to be processed at an off-site disposal facility. A closed loop pressure wash recycling system will reduce the cost of wash water disposal by recycling the wash water used to clean every boat. This will minimize the disposal to one or two times per season for all commercial fishing boats in Harwich and Chatham.

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CIC funding will support the cost of a trailer mounted closed loop pressure wash recycle system, a modular plastic tray catchment system, and the registration and insurance of the trailer. The Harwich and Chatham Harbormasters have identified two locations that fit the criteria (i.e. on top of impervious surface with a sloping grade) with MA CZM's Best Management Practices when determining a location for a pressure wash site. Traditionally, pressure wash operations at boat yards required discharge permits that resulted in high cost filing fees to towns. A closed loop pressure wash recycle system does not require any permits. The wash water, that will be recycled during the season, will be shipped to a disposal facility after all the boats have been cleaned. The Town of Harwich will then charge a modest fee to the fishermen who utilize this program. This innovative approach to managing pressure waste water is cost effective for the towns, the commercial fishing industry, and will protect environmentally sensitive waterways.

Benefits:

There are several benefits to implementing a closed loop portable commercial boat pressure wash control system in the Towns of Harwich and Chatham.

Cost Savings Benefits:

- Eliminates the cost of a discharge permit incurred with a permanent system;
- Reduces fresh water use costs;
- Minimizes the cost of discharge removal from multiple times per season to one disposal per season;
- By reducing the amount of boat transport in the boat yard, there would be an estimated cost savings of \$32,000 per season to the local fishing fleet;
- The Towns of Harwich and Chatham would receive a labor cost savings since this system would be operated and moved by the boat operators themselves.

Environmental Benefits:

- Reduced fresh water demand;
- Improved water quality protection to ground water and local waterways;
- Improved method of toxic paint removal and disposal of hazardous washing fluid.

Improved access

- Improved access for commercial fishermen to affordable and environmentally sound pressure washing services.

This project has generated significant support from Cape Cod community groups, such as the Cape Cod Hook Fisherman's Association. Unfortunately, Harbormasters across the nation are constantly facing strained budgets. Harwich and Chatham dedicate a majority of funding for other town services. There will be no opportunity to fit this project into a Town budget for several years. Harwich and Chatham will continue to pursue funding with the help of Barnstable County's Resource Development Office.

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Cost impact:

Associated costs with implementing a portable closed loop pressure wash water recycle system include: utility connection costs, operation and maintenance costs of the system, employee system training costs, employee time for transporting the equipment between Harwich and Chatham, and seasonal disposal of wash water. The Harwich and Chatham Harbormasters will be responsible for the costs of operation, seasonal maintenance, and cost of utilities. Training and employee time needed for this system will also be incurred by each Town. Disposal costs will be billed to the Town of Harwich Natural Resource Department who will then invoice a flat fee to each fisherman using the system.

Measures of success:

The Towns of Harwich and Chatham will measure the program's success in the following ways:

- The number of boats utilizing the portable closed loop pressure wash water recycle system;
 - This will be measured through a usage log where fishermen must document their use of the power wash unit in the Harbormaster's office.
- The amount of wash water collected and disposed of at the end of the fishing season.
 - The harbormaster will document the gallons of waste water recycled using the closed loop system.

Proposed budget for the portable closed loop pressure wash water recycle system project:

Item	Cost
A Trailer Mounted Closed Loop Pressure Wash Recycle System (includes shipment of the system from the manufacturer)	\$20,000
Registration and Insurance of the Trailer	\$500
Modular Catchment System	\$5,000
Total	\$25,500

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Project timeline:

Timeline to implement a portable closed loop pressure wash recycle system in the Towns of Harwich and Chatham.										
Spring 2012			Summer 2012			Early Fall 2012		Late Fall/ Early Winter 2012		
March	April	May	June	July	August	September	October	November	December	January
Identify a manufacturer to construct modular catchment tray system.			Purchase the portable wash water tank and pump.			Train Harbormaster Office staff on new system.		Invite local commercial fishing fleet to utilize system.		
Identify appropriate locations at the marina sites for this system to be used.			Purchase the modular tray system.			Develop a set of operator friendly instructions for boat operators.		Document success of use.		
						Develop log system to document use.				

Innovative aspects of the portable closed loop pressure wash water recycle system:

The innovative aspects of this proposed project include portability, the advanced equipment and the municipal collaboration.

Portability

Traditional pressure wash systems are stationary or require forklifts to move expensive heavy pads from one location to another. They also include large holding tanks that contain the contaminated water that takes up a large area in marinas. The proposed system will be mounted on a trailer for transportation at any given time between Harwich and Chatham. This trailer will also house a tank that will hold the recycled wash water until the end of the season requiring no additional space. The modular catchment system will be constructed out of light weight material that can be assembled and disassembled quickly by boat operators. Currently, there are no modular systems being used on Cape Cod to collect contaminated wash water. These features increase efficiency for the Harbormasters' offices as well as for the fishermen utilizing these services.

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Advanced closed loop pressure wash recycle system

The proposed system is one of the most advanced pieces of washing equipment available. It will reduce the use of fresh water through a state of the art recycle process enabling the wash water to be used on all of the commercial vessels in one season. The filter can withstand the washing of 40 boats before needing to be replaced. In traditional systems, foul odors can arise from waste water holding tank. The proposed system contains a UV light treatment tank to remove any organics that contribute to the odors. Closed loop pressure wash recycling systems can be easily purchased as a turn-key package through several dealers throughout the United States.

Town collaboration

Currently there are no towns with in the 15 towns on Cape Cod cooperatively working on managing the pressure washing of boats in their marinas. Harwich and Chatham are pleased to be the first two towns to pilot a collaborative agreement to tackle the issue of pressure waste water issues together.

Potential applicability to other local governments:

The long-term goal of this project is to build the foundation for replication in other towns. This proposed system is geared for the commercial fishing industry in the area promoting environmental stewardship of coastal waterways. The project plan is structured such that other towns can easily mirror the prototype for the modular tray system and it does not require extra staff to operate it. This is also an opportunity to observe how specific closed loop pressure wash recycle systems work.

Attachments in order include:

Local Support Signature Page

Cape Cod Hook Fishermen Association Letter of Support

Pleasant Bay Alliance Letter of Support

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LOCAL SUPPORT DOCUMENTATION FORM

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First Name, Last Name: Thomas Leach, Harwich Harbormaster

Name of Municipality: Town of Harwich, MA

Phone Number: (508) 430-7532

Email Address: tleach@town.harwich.ma.us

List all participating entities:

Sign on behalf of the Applicants: As evidence of commitment to the proposed project, applicants must submit documentation of signoff from each participating entity: if a city by the mayor or city manager, if a town by the board of selectmen, if a town with a town council by the town manager or administrator, if a school district by the school committee, if a district by the prudential committee. Original signatures are required. Attach additional signature pages, if necessary. Applicants may duplicate this form, if desired, in order to gather required signatures on multiple copies of the form.)



Signature

LARRY G. BALLANTINE

Print Name

TOWN OF HARWICH

Entity

CHAIRMAN, SELECTMEN

Title

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Jill R. Goldsmith

Signature

Jill R. Goldsmith

Print Name

Town of Chatham

Entity

Town Manager

Title

Signature

Entity

Print Name

Title

Signature

Entity

Print Name

Title

Signature

Entity

Print Name

Title

Signature

Entity

Print Name

Title



January 12, 2012

Tim Dodd
Grant Program Manager
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Dear Mr. Dodd,

I am writing to support a Community Innovation Challenge Grant application from the Harbormasters of two towns that will enhance the opportunity for commercial fishermen to save the environment by providing a control for wash water generated during the process of cleaning fouling from vessel hulls at various town landings in Chatham and Harwich. This fleet represents more than 80 vessels here which ply the Atlantic from the elbow of Cape Cod.

The problem of controlling wash water and paint trimming has become a major issue for fishermen whose vessels are so large they cannot be easily taken over the road. The Department of Environmental Protection recently identified this wash water as industrial waste and issued a Notice of Non-Compliance to the Town of Harwich. Of course, safely disposing industrial waste is very expensive, and at times cost prohibitive.

Our commercial fishermen and their families depend desperately on being able to cut costs in order to stay in business. I am writing to you on behalf of the fishermen and as the CEO of CCCHFA- the largest commercial fishing group on Cape Cod, working with over a 120 independent fishing businesses and more than 300 local fishing families.

Please support this historic maritime community by granting a Community Innovation Challenge Grant to control our wash water.

Thank you for your consideration.

Sincerely,

John Pappalardo
CEO

Protecting a resource, a tradition, and a way of life.



PLEASANT BAY
ALLIANCE

Via Email: kgarofoli@barnstablecounty.org

Ms. Katherine Garofoli
County of Barnstable
Superior Courthouse
Route 6A
Barnstable, MA 02630

January 11, 2012

Re: Harwich and Chatham Application to the Community Innovation Challenge Grant


Dear Ms. Garofoli:

The Pleasant Bay Alliance is a regional organization of four towns--Chatham, Harwich, Orleans and Brewster--formed to coordinate management of the Pleasant Bay Area of Critical Environmental Concern (ACEC). The purpose of this letter is to convey the Alliance's strong support of an application submitted by the Towns of Harwich and Chatham for \$25,500 to purchase a closed loop pressure wash recycle system. The acquisition of this portable system would have tremendous benefit to the sensitive coastal resources of the Pleasant Bay ACEC and of other embayments in the region. In addition, the system would provide important support to the region's commercial fishing fleet by providing a cost-saving and environmentally preferable option for vessel maintenance.

Commercial and recreational boating is a vital and time-honored tradition in Pleasant Bay. The commercial fishing fleet is an important part of the region's maritime heritage. However, the management plan recognizes that boating and vessel maintenance can pose significant environmental impacts to water quality and sensitive coastal resources. The Management Plan for the Pleasant Bay ACEC seeks to promote measures that ensure that commercial and recreational boating can co-exist with resource health. For example, in 2010 the Alliance obtained a designation of Pleasant Bay as a federal No Discharge Area. The plan also seeks to address negative impacts associated with vessel maintenance. The management plan, which has the approval of Town Meetings in all four member towns, as well as the Secretary of Energy and Environmental Affairs, calls for *adherence to the MCZM Marina Best Management Practices* (recommendation 8.8.3), and *addressing the need for environmentally safe haul out facilities for commercial vessels* (recommendation 8.8.4). The acquisition of the closed loop pressure wash recycle system would advance these key resource management objectives.

The acquisition and shared use of the environmentally-protective equipment demonstrates the positive community, economic and environmental benefits that can accrue from innovative regional partnerships. The Alliance applauds the towns in their efforts to secure this equipment. We strongly urge the Community Innovation Challenge Grant to fully fund this application.

Sincerely,



Carole Ridley
Coordinator

cc: Larry Ballantine, Harwich Selectman
Jim Merriam, Harwich Town Administrator
Jill Goldsmith, Chatham Town Manager
Stuart Smith, Chatham Harbormaster
Tom Leach, Harwich Harbormaster