

The Frenchman Bay Plan

Introduction

After a year and a half of stakeholder gatherings, work group meetings and conversation about the future of Frenchman Bay, a core team of stakeholders committed to forming a coalition of partners materialized as the **Frenchman Bay Partners** (FBP). The FBP have been busy conducting focus sessions with a wider group of stakeholders, organizing a bay planning effort, and establishing a website for sharing information. The core team agreed that a conservation planning method would best serve the development of a Frenchman Bay Plan and adopted the *Open Standards for the Practice of Conservation* as a planning tool.

Frenchman Bay Partners involved in bay planning efforts include:

- John Bennett: Trenton Harbormaster
- Antonio Blasi: Hancock Point Kayak Tours, Hancock Planning Board member, Hancock County Planning Commissioner
- Jane Disney and George Kidder: Staff Scientists, MDI Biological Laboratory
- Anne Krieg, Planning Consultant
- Carol Korty and Bob Pulver: Lamoine Conservation Commission
- Bob DeForrest, Terry Towne, and Billy Helprin : Maine Coast Heritage Trust
- Chris Petersen: College of the Atlantic
- John Kelly and Abe Miller-Rushing: Acadia National Park
- Tom Martin and Jim Fisher: Hancock County Planning Commission
- Fiona de Koning: Acadia Aqua Farms
- Wendy Norden: University of Maine at Machias
- Barbara Arter: Friends of Blue Hill Bay
- Joe Porada: Downeast Acadia Sea Farms
- Natalie Springuel: Maine Sea Grant

The core planning team that participated in the two day planning retreat that resulted in this first draft of the Frenchman Bay Plan included:

- Bob DeForrest: Maine Coast Heritage Trust
- Jane Disney: MDI Biological Laboratory
- George Kidder: MDI Biological Laboratory
- Antonio Blasi: Hancock Point Kayak Tours, Hancock County Planning Commissioner, Hancock Planning Board member
- Frank Dorsey: Friends of Taunton Bay & Frenchman Bay Conservancy
- Chris Petersen: College of the Atlantic
- Glen Mittelhauser: Maine Natural History Observatory
- Abe Miller-Rushing: Acadia National Park
- Fiona de Koning: Acadia AquaFarms

Also in attendance were University of Maine graduate students Britt Cline and Bridie McGreavy and AmeriCorps Volunteer Leader, Molly Miller, who took notes on the group process and entered information into *Miradi* software. *Miradi* is a computer program that allows users to design, manage, monitor, and learn from their projects to more effectively meet their conservation goals.

Geographic Area

The geographic area of the Frenchman Bay Plan is the entire Frenchman Bay Watershed including 13 towns, three unorganized territories, and three rivers.



Vision

The Frenchman Bay Plan will ensure a healthy and sustainable future for Frenchman Bay where multiple users can enjoy the inherent beauty and benefit from the ecological and economic viability of the bay.

Important Habitats and Species (Conservation Targets)

The following species and habitats represent the entire array of biodiversity in Frenchman Bay and are listed in order of priority. The top four targets (in bold) will be addressed by this plan.

1. **Mudflats**
2. **Eelgrass**
3. **Sub-tidal bottom habitats**
 - i. **-Bottom invertebrates (lobster, cucumber, urchin, scallop, shrimp, mussels)**
 - ii. **-Groundfish**
4. **Migratory fishes (between salt and freshwater)**
5. Coastal wetlands (salt marsh)
6. Estuarine habitats
7. Islands
 - iii. **-Shorebirds and seabirds (and in other habitats)**
8. Rocky inter-tidal and sub-tidal
 - Rockweed
 - Kelp
9. Open water habitats
10. Marine mammals (harbor seals, porpoises)



The ecological health of all conservation targets is integral to marine livelihoods in Frenchman Bay. Therefore, this plan addresses the impact of threats not only to the ecological health of an area or species, but also to the economic viability of the conservation target)

Threats to Priority Habitats and Species

The human induced actions or events that directly degrade one or more of the top four conservation targets are listed below.

Threats to a Healthy Frenchman Bay

- Inappropriate residential & commercial construction practices
- Increased impervious surfaces
- Misuse of household / landscape chemicals and petroleum products
- Septic systems
- Some fishing practices
 - Habitat modification by worming and clamming
 - Dragging in specific areas
 - Overharvesting of clams
- Illegal fishing practices
- Invasive species (green crabs, potentially Asian shore crabs, *Codium* algae)
- Human disturbance to wildlife



Developing Models of Action

Each threat was ranked in terms of its scope, severity, and irreversibility relative to the species and habitats to which the threat applied. The four most severe threats, in terms of the amount of the bay that is affected, the degree to which the bay is affected and the long terms affects of those threats have been identified.

Most Severe Threats to Key Coastal Habitats and Species in the Frenchman Bay Watershed

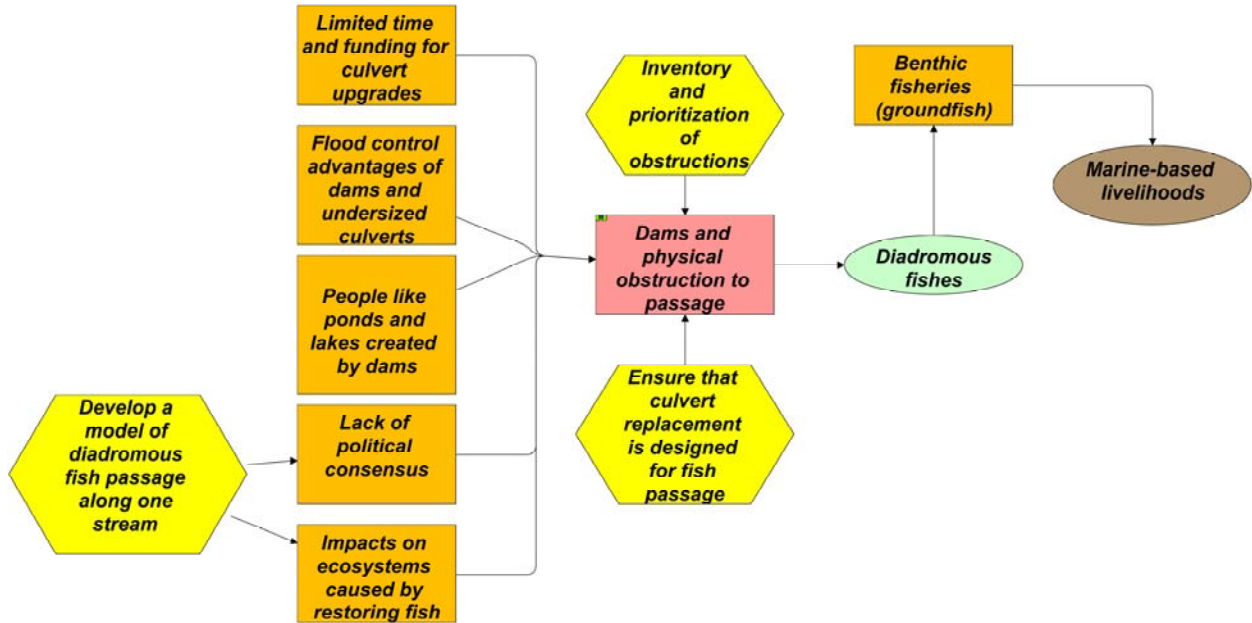
- Some fishing practices
- Dams and physical obstruction to fish passage
- Invasive species
- Septic systems (bacteria and nutrient additions)

Models of action or “conceptual models” were created for addressing each of the four prioritized threats. In each model, threats were linked to conservation targets, factors that contribute to those threats were identified, and strategies were developed to address threats and their contributing factors.

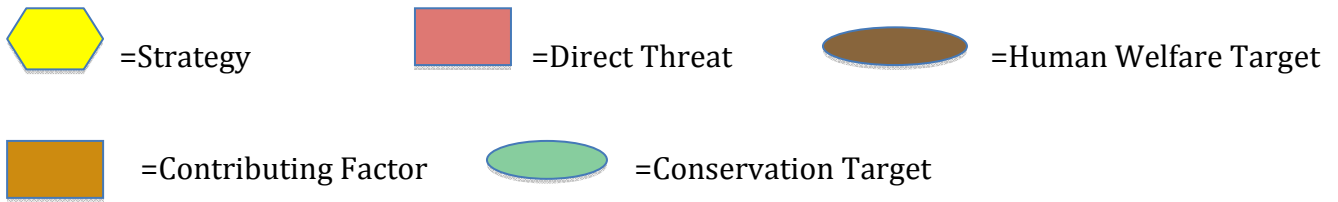
Models of Action

Threats → conservation targets
Contributing factors → threats
Strategies → threats

Model of Action to address the threat of dams and physical obstructions to fish passage



(model developed with *Miradi* software)



These models can get quite complex and difficult to display. The fish passage model was the simplest to depict, because the threat only affects one conservation target (migratory or “diadromous” fishes). Similar models were developed for each of the other threats: some fishing practices, invasive species and septic systems, each of which affect multiple habitats and species. Full models can be viewed on the website at www.frenchmanbaypartners.org.

Summary of All Conceptual Models

Threats	Habitats/Species	Strategies	Goals
Invasive Species	-Mudflats -Eelgrass	-Promote EPA “no discharge” zoning -Monitor for invasive species -Scenario planning for invasive species -Eradicate green crabs	TBD*
Some Fishing Practices	-Mudflats -Eelgrass -Bottom Habitat -Migratory Fishes	-Create a communication plan for Frenchman Bay users -Facilitate discussions to encourage community-based management ** More strategies are needed but are to be developed by the fishing community **	TBD
Dams	-Migratory Fishes	-Inventory and prioritize obstructions -Ensure that culvert replacement is designed for fish passage -Develop a model of migratory fish passage along one stream	TBD
Septic Systems --- - Bacterial Pollution - Nutrient Inputs	-Mudflats -Eelgrass -Migratory Fishes	-Conduct shoreline or watershed surveys -Identify and address major sources of bacterial pollution -Conduct a build-out scenario for whole bay -Create buffers and set backs -Research impact of not treating sewage in winter -Provide incentive ordinances for innovative small-scale sewage treatment -Help residents get septic system replacement grants	TBD

*TBD (To Be Determined)

Next Steps:

1. Get Feedback from Fishing Community: Not all sectors of the fishing community were represented in stakeholder meetings leading up to the development of this draft. Representatives of diverse fisheries will be engaged in developing strategies and goals surrounding those fishing practices that may have an impact on priority habitats or species.

2. Get Feedback from Municipal Officials: Not all municipalities were represented at the stakeholder meetings leading up to the development of this draft. A presentation will be made to each board of selectmen or town council in the watershed in order to get input and endorsement of the Frenchman Bay Plan from municipalities.

3. Complete a viability assessment: This process involves identifying important indicators of the health of each priority habitat and species and assessing their present status. In order to accomplish this, literature searches will be conducted and experts will be consulted. With a clear understanding of the indicators, definitive, measurable goals can be established for each habitat and species.

4. Compile a State of the Bay Report: This report will lay out the status of each of our target habitats and species and direct future research. The state of the bay report will help to inform the viability assessment.

5. Assemble a Frenchman Bay Atlas: Create a set of maps to help inform viability assessments and the state of the bay report. The Frenchman Bay Atlas will also help to inform the viability assessment.

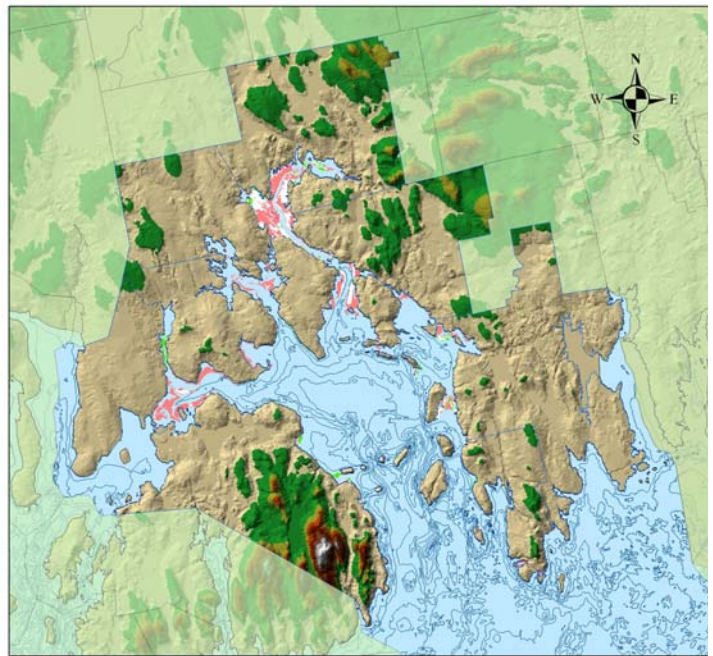
6. Complete the Frenchman Bay Plan: The details of the plan will be fleshed out as more information becomes available. Additional details will be derived from rating all direct threats to conservation targets; this will ensure that the most important threats are being addressed by the plan. The completed viability assessment will inform goal-setting so that appropriate strategies and monitoring methods are put in place. Strategies will be rated to eliminate those unlikely to be effective.

What	Who	By When
Get Feedback from fishing community	Bridie McGreavey (UMaine) and Molly Miller (MDIBL)	May 2012
Get Feedback from municipal officials	Jane Disney (MDIBL) and FBP Committee	November 2012
Complete viability assessment	Britt Cline (UMaine) and Molly Miller (MDIBL)	May 2012
Compile "State of Bay" report	FBP Committee and COA students	Fall 2012
Assemble Frenchman Bay Atlas	Alex Brett (COA), Rob Freeman and team (EMCC)	April 2012
Complete Frenchman Bay Plan	FBP Committee	Winter 2013

Planned Maps for Atlas

- Marine surficial geology
- Terrestrial surficial geology
- Aquaculture sites
- Wastewater treatment plants/ outfalls
- Overboard discharges
- Licensed air emitting facilities
- Current/historic migratory fish distribution
- Dam locations
- Census data 2000 and 2010
- Land cover
- Marine resources (Shellfish)
- USFW habitat analysis (91 species of birds/ fishes)
- Habitat data from *Beginning with Habitat* (significant wildlife habitats (NRPA))
- Eelgrass distribution
- Seed mussel conservation areas

Frenchman Bay Eelgrass



Legend

- | | |
|--|------------|
| | Loss |
| | Gain |
| | No Change |
| | Town Lines |

0 2.5 5 10 Miles

Map Atlas Data We Need

- Historical fishing data (Local fishermen/ historical societies)
- Coastal access points (Island Institute)
- Conserved lands (Maine Coast Heritage Trust)
- Municipal zoning and land use maps
- Bacterial/ biotoxin closures (Maine DMR)

To comment on this first draft of the Frenchman Bay Plan, or to share data for the State of the Bay Report, go to the Frenchman Bay Forum at www.frenchmanbaypartners.org or send an e-mail to jdisney@mdibl.org or call 207-288-9990 ext. 423.