Water Transportation Study & Business Planning Update

September 11, 2017

Last Presentation to the Joint Board – March 2017
## Two Water Transportation Studies

<table>
<thead>
<tr>
<th>Comprehensive Boston Harbor Water Transportation Study and Business Plans</th>
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<tbody>
<tr>
<td>• Baseline site profiles for planning of passenger ferry routes in the harbor</td>
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<tr>
<td>• Comprehensive business plans for up to three financially sustainable services that can be launched in one to five years</td>
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<table>
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<tr>
<th>Water Transportation Strategy for the Boston Harbor Islands National and State Park</th>
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<tr>
<td>• Baseline site profiles for planning new services at Park Gateway sites</td>
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<tr>
<td>• Strategy and scope for an RFP to procure a ferry service operator including recommendations for one or two new services</td>
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**Deliverables: Comprehensive Boston Harbor Study**

| 30 site profiles | 10 sites with models for estimated ridership demand | 3 corridors detailed market and feasibility analysis + estimates of ridership, time savings, operating costs, deficits/subsidies, and seasonality | Model congestion mitigation and reduced emissions |

- **Stated Preference Survey** to gather additional data on possible ridership

- **Financial Model + Business Plan** for up to 3 new routes based on these findings
<table>
<thead>
<tr>
<th>June + July 2017</th>
<th>Aug + Sept 2017</th>
<th>October 2017</th>
<th>Nov to Feb 2018</th>
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<td>- stakeholder workshops</td>
<td>- site profiles</td>
<td>- develop an overall strategy with a set of sites and corridors being</td>
<td>- overall strategy + strategic implementation plan</td>
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<td>- background research on existing conditions and potential sites</td>
<td>- recommendations of sites for further study</td>
<td>analyzed for market and operational feasibility</td>
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<td>- stated preference survey</td>
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Survey Update:

Where would you ferry?

We want your input on travel across and around Boston Harbor...

Visit bostonharborsurvey.com and enter the code Sshore to participate.

• Launched - August 21 (after live testing period & consultation w/ OPMI)
• To date: 2500+ taken
  • In person (on boat) interviews
  • Posters and postcards
  • Digital promotion
  • Key stakeholders & municipal partners
• Survey data analysis in begins in October
Survey Update Continued:

Surveys coded to track outreach and enable project management team to promote targeted outreach.

Survey area developed from preliminary research of potential interest and ridership as well as feedback from workshops.
Next Step:

- BHN and consultant team to work with OPMI
  - Analyze survey data
- Present finds back to key stakeholders and municipal partners
- Public events and meetings
  - Water Transportation Advisory Council
  - MassDOT and FMCB
  - Seaport Economic Council
- Other activities? Organizations?

10 sites with models for estimated ridership demand

3 corridors
detailed market and feasibility analysis + estimates of ridership, time savings, operating costs, deficits/subsidies, and seasonality

Model congestion mitigation and reduced emissions

Financial Model + Business Plan for up to 3 new routes based on these findings
Appendix

• Sponsors & consultant team
• History & summary of regional services
• Additional study objectives
• Past board presentation
Study Sponsors

- MassDOT
- Massport
- National Park Service
- Seaport Council of the Executive Office of Housing and Economic Affairs
- Massachusetts Convention Center Authority
- The Barr Foundation
- Cabot Family Charitable Trust
- Envoy Hotel
- Clippership Wharf
Consultant Team

- Steer Davies Gleave
- KPFF
- Moffatt and Nichol
- Elliott Bay Design Group
- Progressions
- Norris and Norris
# Ferry History

### 1600’s & 1700’s
**Before the bridges**

1630’s: ferry from Boston to Charlestown, Chelsea, and Cambridge  
+ Neponset River crossing  
+ Fore River ferry

### 1800’s
**New developments**

1829: Steam ferries begin operation  
1833: Service from East Boston to downtown  
1860: Leisure service to Nantasket

### 1900 to 1950’s
**Flourishing to fading**

1900’s and 1910’s: peak period for passenger ferry service  
1952: East Boston Ferry stops operating

### 1970’s to 2000
**Mitigation**

1975: Hingham service (1984 mitigation for SE expressway expansion)  
1987: Charlestown service (Central Artery North Area)  
1997: Lovejoy to WTC (Third Harbor Tunnel)

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Adapted from BRA’s *Boston Inner Harbor Water Transportation Plan* (January 2000)
Existing Passenger Ferry Service in Boston Harbor and to the Islands
**Hingham to Boston**

**MBTA Service**

**Dock:** Hewitt’s Cove to Rowes Wharf

**Daily Service**
Frequency - 18 departures (direct service)
Fare - $9.25/ride
Farebox Recovery - 68% (system-wide, 2015)

**Owner:** MBTA owns two boats and contracts with BHC; Operators own additional boats in service

**Operator:** Boston Harbor Cruises

**Funding:** MBTA
Hingham to Hull to Logan to Boston

**Docks:** Long Wharf North, Logan Airport, Pemberton Point, Hewitt’s Cove (+ Grape)

**Daily Service**
- Hingham: 15 arrivals and departures
- Hull: 9 departures, 15 arrivals
- Logan: 14 landings

Fare - $9.25/ride

Farebox Recovery - 68% (system-wide, 2015)

**Owner:** MBTA contracts with BHC; MBTA owns two boats

**Operator:** Boston Harbor Cruises

**Funding:** MBTA
Long Wharf to Charlestown

**MBTA Service**

**Docks:** Long Wharf South to Navy Yard (Pier 4)

**Daily Service**
Frequency - 39 daily weekday roundtrips
Fare - $3.50/ride
Farebox Recovery - 68% (system-wide, 2015)

**Owner:** MBTA contracts with BHC; MBTA owns two boats
**Operator:** Boston Harbor Cruises

**Funding:** MBTA
Salem to Boston

Docks: Salem Ferry Terminal to Long Wharf

Daily Service (Seasonal)
Frequency - 5 trips/day
Fare - $25/ride ($8 for commuter boat)
Farebox Recovery - (To be determined)

Owner: Salem owns the boat and contracts with BHC for operations
Operator: Boston Harbor Cruises

Funding: Salem and farebox
Lynn to Boston

Docks: Blossom Street Pier to Long Wharf

Daily Service (Short term mitigation)
Frequency - 1 trip/day
Fare - $7
Farebox Recovery - (To be determined)

Owner: BHC owns the boat
Operator: Boston Harbor Cruises

Funding: MassDOT and City of Lynn
Winthrop to Quincy to Boston

Docks: Winthrop Ferry Dock, Marina Bay/Squantum Point, Fan Pier, Rowes Wharf

Daily Service (Seasonal)
Frequency - 6 to 8 trips/day
Fare - $8.50
Farebox Recovery - (To be determined)

Owner/Operator: Town of Winthrop owns and operates the boat

Funding: Town of Winthrop and farebox with temporary MBTA support
Boston to Provincetown

Docks: World Trade Center West, Central Wharf, and MacMillan Pier

Daily Service (Seasonal)
Frequency - 1 to 4 trips/day/operator
Fare - $59
Farebox Recovery - 100%

Owner/Operator: Boston Harbor Cruises and Bay State Cruise Company own and operate boats

Funding: Farebox with market rate ticket pricing
Boston to Georges, Spectacle, Peddocks (+ Inter-Island)

Docks: Long Wharf North

Daily Service (Seasonal)
- Georges: 3 to 7 departures to the island
- Spectacle: 3 to 6 departures to the island
- Peddocks: 2 direct trips to the island

Fare - $17
Farebox Recovery - (To be determined)

Owner: BHN contract to BHC
Operator: Boston Harbor Cruises

Funding: Farebox
Hingham and Hull to Five Islands

**Docks:** Hewitt’s Cove, Pemberton Point

**Daily Service (Seasonal)**
- Grape: 5 landings/day (Wed. to Sun. only)
- Peddocks: 6 landings/day
- Georges: 7 landings/day
- Lovells: 4 landings/day
- Bumpkin: 3 landings/day (Wed. to Sun. only)

Fare - $17
Farebox Recovery - (To be determined)

**Owner:** BHN contracts with BHC

**Operator:** Boston Harbor Cruises

**Funding:** Farebox
Boston to Thompson Island

Docks: EDIC/Marine Industrial Park

Daily Service (Seasonal)
Frequency - 3 weekend departures to the island
Fare - $17
Farebox Recovery - (To be determined)

Owner/Operator: Thompson Island Outward Bound owns and operates the boat

Funding: Thompson Island and farebox
Boston and Hull to Boston Light

Docks: Central Wharf and Pemberton Point

Daily Service (Seasonal)
- 2 departures per day to Little Brewster from Boston on Friday, Saturday, and Sunday
- 3 departures from Hull two days each summer
Fare - $30 ($41 if climbing the light house)
Farebox Recovery - (To be determined)

Owner: BHN contracts with UMass Marine Operations
Operator: UMass Marine Operations

Funding: Farebox
Service Delivery Model

Public/Private Partnership
Contract Relationship

Public Operator
Organization, staffing, and management with marine expertise

Private Operator
Economic Feasibility
Sustainable Funding

Understanding Costs

- Vessel Size
- Vessel Speed
- Route Length
- Frequency
- Crew Requirements

Cost

Sustainable Funding

- Operating Revenue
  - Farebox Recovery
  - Parking or other user fees
- Ancillary Revenues
  - Advertising/Concessions
- Public Subsidy
  - Local General fund
  - Dedicated Tax (sales, property, parking, etc)
  - Transportation District
- Public/Private Partnerships
- Private Funding
  - Developers, employers, etc
Performance Measures

Passenger Performance Measures

- Safe
- Reliable
- On-Time
- Cost Effective
- Experience or Satisfaction

Organizational Performance Measures

- Number of passengers carried
- Meeting financial goals
New Vessel Technologies

Environmentally Responsible Design

- Vessel Operating Goals
  - Minimize energy use
  - Minimize air emissions and discharge
- Vessel Construction Goals
  - Minimize drag
  - Maximize use of recycled and renewable material
  - Minimize waste and scrap
- New Tech
  - Design software
  - Diesel /Electric
  - Hydrogen Fuel Cell
Break-out Session 2: Your Criteria for Prioritizing Sites and Routes
Past Board Presentations
Water Transportation Advisory Council

March 9th, 2017
Key facts and details

- Water Transportation Advisory Council was created by statute in 2016.
- Chaired by the Secretary of Transportation
  - staffed by MassDOT and the MBTA
- Membership is proscribed in statute, though it may be expanded. Currently includes:
  - Co-Chairs of the Joint Committee on Transportation.
  - Several Mayors and Town Managers from coastal communities
  - Massport, Seaport Economic Council…
  - Boston Harbor Cruises & Steam Ship Authority
  - Boston Harbor Now
- Authority: Advisory to the Secretary of Transportation
Water Transportation Advisory Council Overview

On July 31st, 2016 the Legislature enacted HB 4450, creating the Water Transportation Advisory Council

- Create a vision for a comprehensive system of water transportation services to serve the commonwealth’s ferry passengers, including commuters and tourists
- Identify an overall vision for the ferry system to enable the transportation of people, goods and vehicles by water
- Develop a series of goals and objectives to support the overall vision
- Identify implementable policies and improvements including, but not limited to, investment of public funds to support operating and capital expenses for existing and new ferry services
- Support the state agencies and independent authorities responsible for planning, designing, constructing, operating, funding and maintaining the ferry transportation infrastructure facilities
- Meet at least quarterly and report on activities every 6 months
Key Element of Work Plan

- Review and give feedback BostonHarborNow Sustainable Water Transportation Study*
- Business cases presentations for current and past services
- Infrastructure/Systems tours
- Geographic Working Groups to explore connectivity and coordination options. Including:
  - Land side connectivity
    - Walking, biking, & transit
  - Parking best practice
  - Economic development & supportive land use

*more information on next slide
Summary: “A Comprehensive and Integrated Water Transportation System Study for Boston Harbor”

• Boston Harbor Now to solicit and manage consultants on behalf of principal clients MassDOT and Massport plus a consortium of public and private funders

• Goals 1) Compile baseline site profiles for planning of passenger ferry services
   2) Comprehensive business plans for up to three **financially sustainable services** that can be launched in 1-5 years

• RFP to be issued in March of 2017 and 8-10 months to complete work

• Geography is Gloucester to Provincetown, inner and outer harbor up to dams

• Also includes National Park Service funded *Transportation Vision, Strategy and Action Plan for the Boston Harbor Islands National and State Park*
Study: Project Deliverables

- Criteria defined and consistent data compiled for +/- 25 potential passenger ferry sites harbor wide. Can serve as a baseline for ongoing evaluation and planning if maintained and updated.

- Clear and transparent methodology for evaluating which sites can support financially sustainable services and in what time frame.

- Business plans for up to three new or expanded and financially sustainable services that could be launched in next 1-5 years.
Key MassDOT & MBTA Staff

Astrid Glynn – MassDOT Rail & Transit Administer
John Ray – Assistant General Manager Commuter Rail Services
Mimi Lannin – Deputy Director of Finance Rail & Water Transportation

QUESTIONS?
Appendix
Water Transportation Advisory Council Members

- Secretary of Transportation (Chair)
- General Manager of the MBTA
- House Chair on Joint Committee on Transportation
- Senate Chair on Joint Committee on Transportation
- President of Boston Harbor Now
- Officer of Boston Harbor Now
- Executive Director of Seaport Economic Council
- General Manager of Woods Hole, Matha’s Vineyard and Nantucket Steamship Authority
- CEO of Massport
- Representatives of private ferry operations
- Mayors of Boston, Lynn, New Bedford, Quincy and Salem
- Town Managers of Hingham, Hull, Provincetown and Winthrop
Water Transportation Advisory Council Members

• Stephanie Pollack – Secretary of Transportation and MassDOT CEO
• Brian Shortsleeve – MBTA Acting General Manager
• Senator Thomas McGee – Senate Chair on Joint Committee on Transportation
• Representative William Strauss – House Chair on Joint Committee on Transportation
• Cathy Abbott – Boston Harbor Now
• Philip Griffiths – Boston Harbor Now
• Caroline Kirk – Seaport Economic Council
• Ellen Cebula - Seaport Economic Council
• Wayne Lamson – Steamship Authority
• Tom Glynn – MassPort
• Alison Nolan – Boston Harbor Cruises
• Martin Walsh - City of Boston
• Judith Kennedy – City of Lynn
• Jon Mitchell – City of New Bedford,
• Thomas Koch City of Quincy
• Kim Driscoll – City of Salem;
• Ted Alexiades – Town of Hingham
• Philip Lemnios – Town of Hull
• David Panagore – Town of Provincetown
• James McKenna – Town of Winthrop
• Carlo DeMaria - Everett
• James Folk - Convention Center Authority
## Calendar (DRAFT)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event Details</th>
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| **February 23** | **10am to 12pm** | • Work Plan/Schedule Adoption  
• Winthrop Case Study  
• Final update on Boston Harbor Now Study  
• Set Working Groups |
| **May 25**      | **10am to 2pm** | • Boston Harbor Infrastructure & Ferry Locations Tour and meeting  
• Quincy Case Study |
| **September 14**| **10am to 12pm** | • Lynn/Salem Case Study  
• Understanding the work of the SEC – Presentation by Ellen Cebula  
• Parking best practices |
| **December 15** | **10am to 12pm** | • TBD |
A Comprehensive and Integrated Water Transportation System Study for Boston Harbor

- Criteria defined and consistent data compiled for +/- 25 potential passenger ferry sites harbor wide. Can serve as a baseline for ongoing evaluation and planning if maintained and updated.

- Clear and transparent methodology for evaluating which sites can support financially sustainable services and in what time frame.

- Business plans for up to three new or expanded and financially sustainable services that could be launched in next 1-5 years.

- From NPS study a framework for next Harbor Islands ferry contract (2019).
A Comprehensive and Integrated Water Transportation System Study for Boston Harbor

Study Approach

- Establish a comprehensive list of potential passenger ferry sites harbor-wide, anticipate +/- 25 sites

- Compile site profiles, including potential ridership demand, infrastructure, local development/zoning/planning activities and intermodal connectivity

- Evaluate each site for likelihood of supporting financially responsible service in 1-5 years and 5-10 years

- Select +/- 10 promising sites for ridership demand modelling

- Select +/-3 sites or networks for detailed market and feasibility analysis

- Develop comprehensive business plan and financial sustainability analysis
A Comprehensive and Integrated Water Transportation System Study for Boston Harbor

Project Implementation Schedule

• January/February 2017 - Boston Harbor Now and, MassDOT finalizing consultant scope of services and confirming funding commitments

• March 2017 – anticipated release of RFP

• Anticipate 8-10 months for work once contract awarded