NEW BEDFORD
FAIRHAVEN HARBOR
Three parts to tonight’s presentation:
1. Navigational dredging update
2. Superfund cleanup: background & this year’s work
3. Update on EPA’s analyses of potential alternatives
New Bedford/Fairhaven Harbor
Navigational Dredging

What is Navigational Dredging?

Why is it important?
Environmental Remedy

Phases I and II removed 200,000 cubic yards of contaminated sediment

Cleaner Harbor

Phase III to remove over 55,000 cubic yards of contaminated sediment
Supports Maritime Industries

Commercial Fishing
- Number 1 Value Fish Port; $1 Billion Industry; 500 vessels
- 65.5 Million pounds of fish valued over $280 million; 500 Vessels
- 35 Seafood Processing Plants and 25 Wholesale Companies

Cruise
- Brings ~1,500 People through the Port; 16 Ports of Call in 2009
- 5 Year contract with American Cruise Lines

Ferry
- New England Fast Ferry and Cuttyhunk Ferry bring 120,000 people through the port annually
- Both operations are now moving freight

Freight
- Maritime Terminal: 6 freighters of Moroccan citrus in 2008
- State Pier: Break bulk to Portugal, Africa, Haiti, & Cape Verde
- Sprague Terminal: Home Heating Fuel
- 8 Marina’s in the New Bedford / Fairhaven Harbor, Moorings
- 2007: 1 Sailing Tour; 2008 3 Sailing Tours; Booking now for 2009
- 3 Charter Fishing Operations

Recreation / Excursion
- 4 Operate out of the Port carrying aggregate to the Islands as well as steel and other project cargo

Barge Operations

Shipyards
- Fairhaven Shipyard and Steamship Authority (Fairhaven)
- Major employers and support Commercial Fishing Industry

Supporting Services
- Over 75 supporting businesses
- Ice, Fuel, Vessel Painting, Welding, Electric, Legal, Insurance, Settlement Houses, Salvage
Opportunity for Future Growth

#1 Value Fishing Port in Nation

Industry Growth
(Cruise, Ferry, Shipping, Recreational Boating, Ship Repair)

Trade Expected to Double

Larger Vessels Can Use the Harbor

Modern Piloting Rules Dictate Deepening
How Decisions are Made

- Harbor Plan
- Dredge Materials Management Plan
- Committee of City and Town Officials, and State and Federal Regulators Meets Monthly
Phase III Navigational Dredging
Upper Harbor
Complete
Phase III Navigational Dredging: Lower/Inner Harbor

Underway: June 30 target completion date
The Story to Date
Phase I, II, III

- Industry Progress and Clean-up
- Freighters in Port for the first time in 50 years
- Removed 200,000 cubic yards of contaminated sediment
- Phase III dredging is currently underway, removing another 50,000 cubic yards of contaminated sediment
- 130,000 cubic yards of the material dredged has been placed in CAD cells
CAD CELL TECHNOLOGY
NEW BEDFORD/FAIRHAVEN HARBOR
In 2003, DEP and CZM Published a Study called the DMMP: The Study found CAD Cells to be the best solution for Navigational Dredging.

Fact: Sediments Throughout the Harbor Contain Some Level of Contamination.

In 2003, DEP and CZM Published a Study called the DMMP: The Study found CAD Cells to be the best solution for Navigational Dredging.
WHAT IS A CAD CELL?

- Confined Aquatic Disposal Cell

1. Harbor bottom as is
2. Excavation of silts
3. Excavation of sand and gravel
4. Placement of dredged sediments into the CAD cell
5. Placement of clean cap (after consolidation)
"Environmental and human health risk assessment of the CAD cell alternative has shown that it can provide one of the lowest risk options compared with other alternatives (Kane-Driscoll et al, 2002)."

CONSTRUCTION OF CAD CELLS IN NEW BEDFORD/FAIRHAVEN HARBOR
STATUS OF CAD CELLS IN
NEW BEDFORD/FAIRHAVEN HARBOR
RECENTLY COMPLETED CAD CELL #2

Successful Disposal of Upper Harbor Material
Part 2 - the Superfund harbor PCB cleanup

Aerovox
Electronic capacitor facility released an estimated 275 tons of PCBs from the 1940s to the 1970s

Cornell-Dubilier
Second capacitor facility in outer harbor
the upper harbor, looking north
Color coded sediment PCB levels (prior to dredging)

- **Red**: > 4,000 ppm
- **Orange**: 501 to 4,000 ppm
- **Yellow**: 51 to 500 ppm
- **Green**: 10 to 50 ppm
- **Light Green**: <10 ppm
The 1979 state fishing ban - due to PCBs (covers 18,000 acres)

Do NOT eat any fish
No coma pescado
Não coma peixe

Do NOT eat bottom feeding fish
No coma pescado de fondo:
Não coma peixe de fundo:
- flounder
- lenguado
- sole
- scup
- sargo

Do NOT eat any lobster
No coma langosta
Não coma lagosta

Do NOT eat any shellfish
No coma mariscos
Não coma mariscos
1998 Superfund Cleanup Plan:
Sediments in red require cleanup.
app. 900,000 cubic yards
app. 270 acres
Acushnet shoreline cleanup – 1999-2000

QUICK look at progress to date
NSTAR Power Cable Relocation – 2001
Dewatering facility bulkhead - 2002/03
Dewatering facility and rail spur - 2002-04
Landside view of rail spur and dewatering building
Combined sewer overflow (CSO) pipe relocations to make room for the dewatering facility - 2002-04
Demolition and removal of derelict vessels to allow shoreline business relocation - 2002
The restored river and stream banks (2008)
2005 - pilot underwater cap near Cornell-Dubilier mill
Superfund Full Scale Dredging Process
- performed annually since 2004

- PCB sediments to be dredged
- CDF – confined disposal facility
- Pilot underwater cap
- New Bedford Harbor
- Dewatering facility
- Hurricane barrier
- Cornell-Dubilier
- Superfund Full Scale Dredging Process
- Pump station
- Adredge
- Pipeline
- App. one mile

Map showing the location of dredging processes in the Superfund Full Scale Dredging Process.
1. Dredging in upper harbor
2. Desanding
3. Dewatering
4. Loading to rail for offsite disposal

Superfund dredging and disposal operations
Areas dredged to date shown here in yellow.
This year’s dredging areas (including stimulus funds) shown in green:

Will also relocate submerged high voltage cables to allow dredging in this area
Comparing Coffin Ave air monitoring data to health-based “budget”

Actual Exposures Have Been Well Below the Health-Based Budget Level

health-based exposure “budget”

Monitored exposure to date

Cumulative Exposure (mg/m3-day)

Time Since Start of Work (years)
## Section 3
Update on EPA’s Evaluation of Potential Alternatives

### Cost and Schedule Estimates for Current Approach
3.5% annual inflation assumed; 2006 dollars

<table>
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<th>Annual funding level</th>
<th>Years to complete</th>
<th>Cost to complete</th>
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<td>$80 million</td>
<td>4 to 5</td>
<td>$341 million</td>
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<td>$30 million</td>
<td>18</td>
<td>$540 million</td>
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<tr>
<td>$15 million</td>
<td>38</td>
<td>$1,056 million</td>
</tr>
</tbody>
</table>
1. Harbor bottom as is

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One alternative: use CAD cells to dispose of some of the sediment.
Existing and Planned CAD Sites in New England

Boston (550,000 cy)
New Bedford (130,000 cy thru 4/09)
Hyannis (23,000 cy)
Providence (825,000 cy)
New London (105,000 cy)
Norwalk (25,000 cy)

Existing and Planned CAD Sites in New England

(825,000 cy)
Boston Harbor CAD Cells

Figure 2: Boston Harbor Navigation Improvement Project, Mystic River and Inner Confluence Disposal Cells
Providence
In-Channel
CAD Locations
New Bedford’s CAD cell “#1” being excavated in 2005
(for navigational dredging)
On-going CAD cell evaluation: preliminary results

- Significant savings in time AND cost to complete
- Other urban harbors have successfully used CAD cells
- Computer modeling will evaluate protectiveness
- Environmental monitoring of City’s navigational CAD cell (work in progress)
Any Superfund CAD cell in the lower harbor would be in the same general area as the City’s existing navigational CAD cells.
Next step for public comment and decision making for any changes to the harbor cleanup:

- Winter 2009/2010 for potential lower harbor CAD cell

(again, still in the evaluation phase)
Questions?