New Bedford Harbor Superfund Site Update

November 2019

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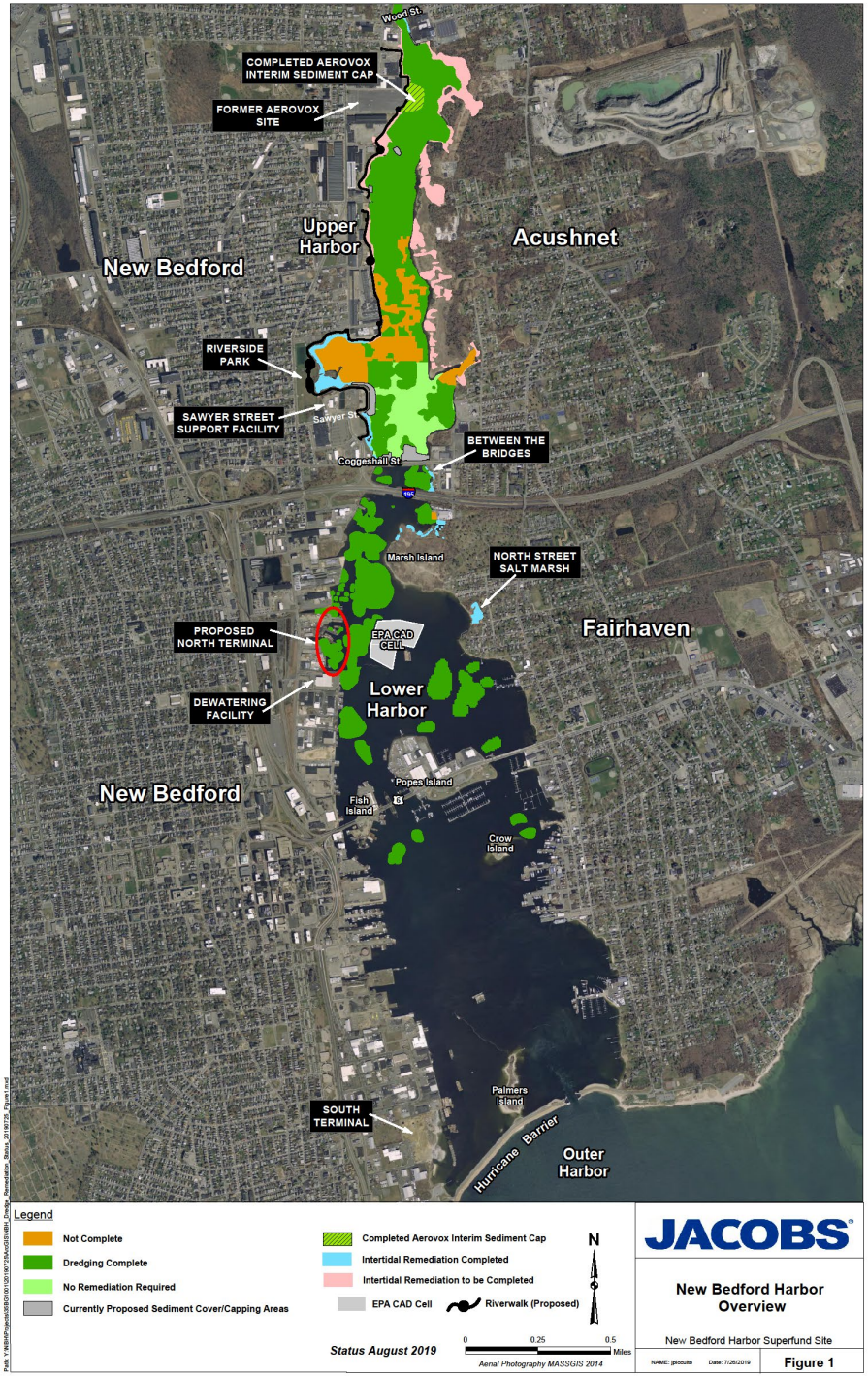
New Bedford Harbor Superfund Site



Project Status: November 2019

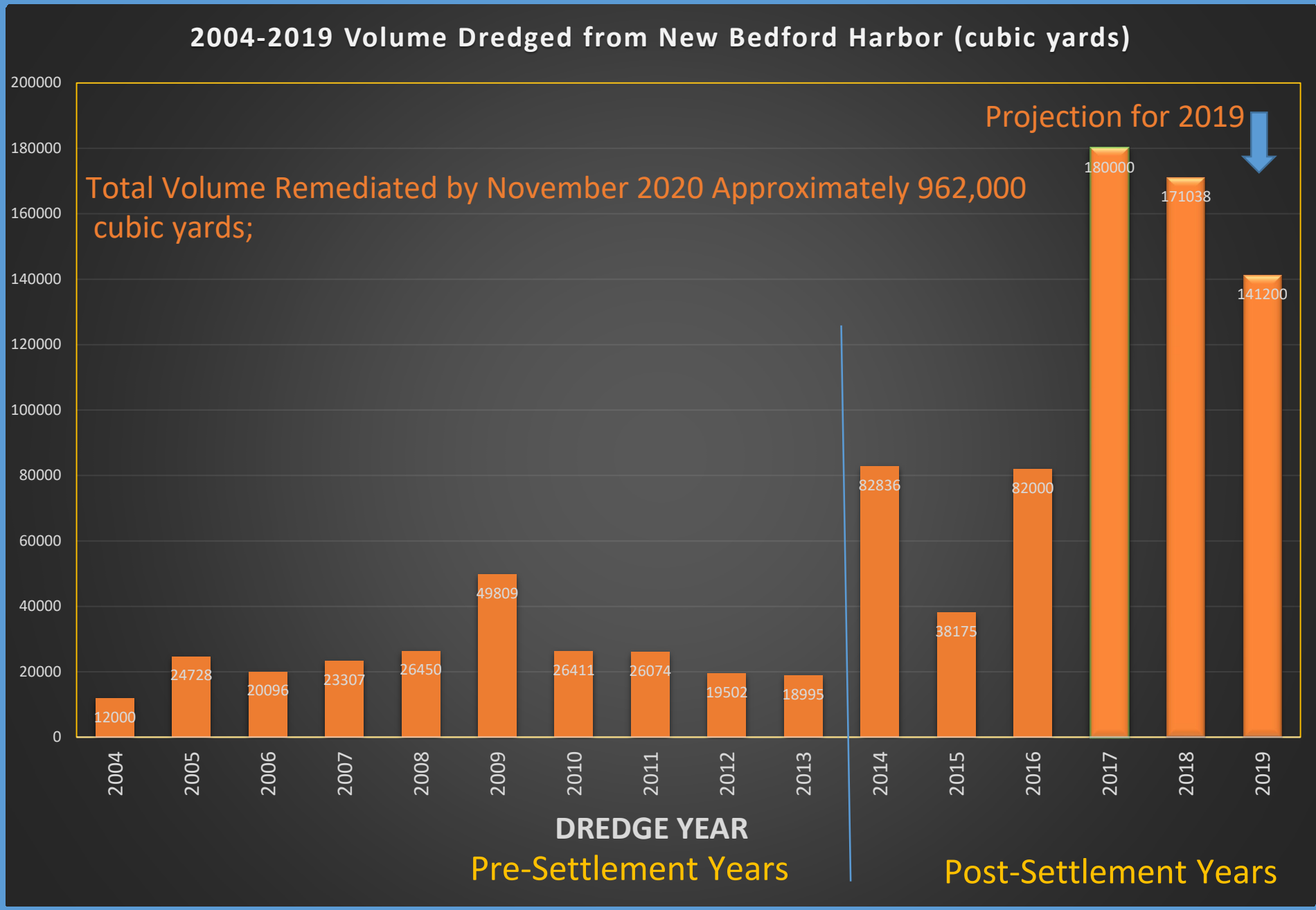
Subtidal Dredging:

Lower Harbor: Substantially Complete

Upper Harbor: Dredging about 91% complete by areal extent

Intertidal:

Approximately 45% complete by volume.


2004-2019 Volume Dredged from New Bedford Harbor (cubic yards)
Projection for 2019
Total Volume Remediated by November 2020 Approximately 962,000 cubic yards;
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
12000
24728
20096
23307
26450
49809
26411
26074
19502
18995
82836
38175
82000
180000
171038
141200
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
DREDGE YEAR
Pre-Settlement Years
Post-Settlement Years

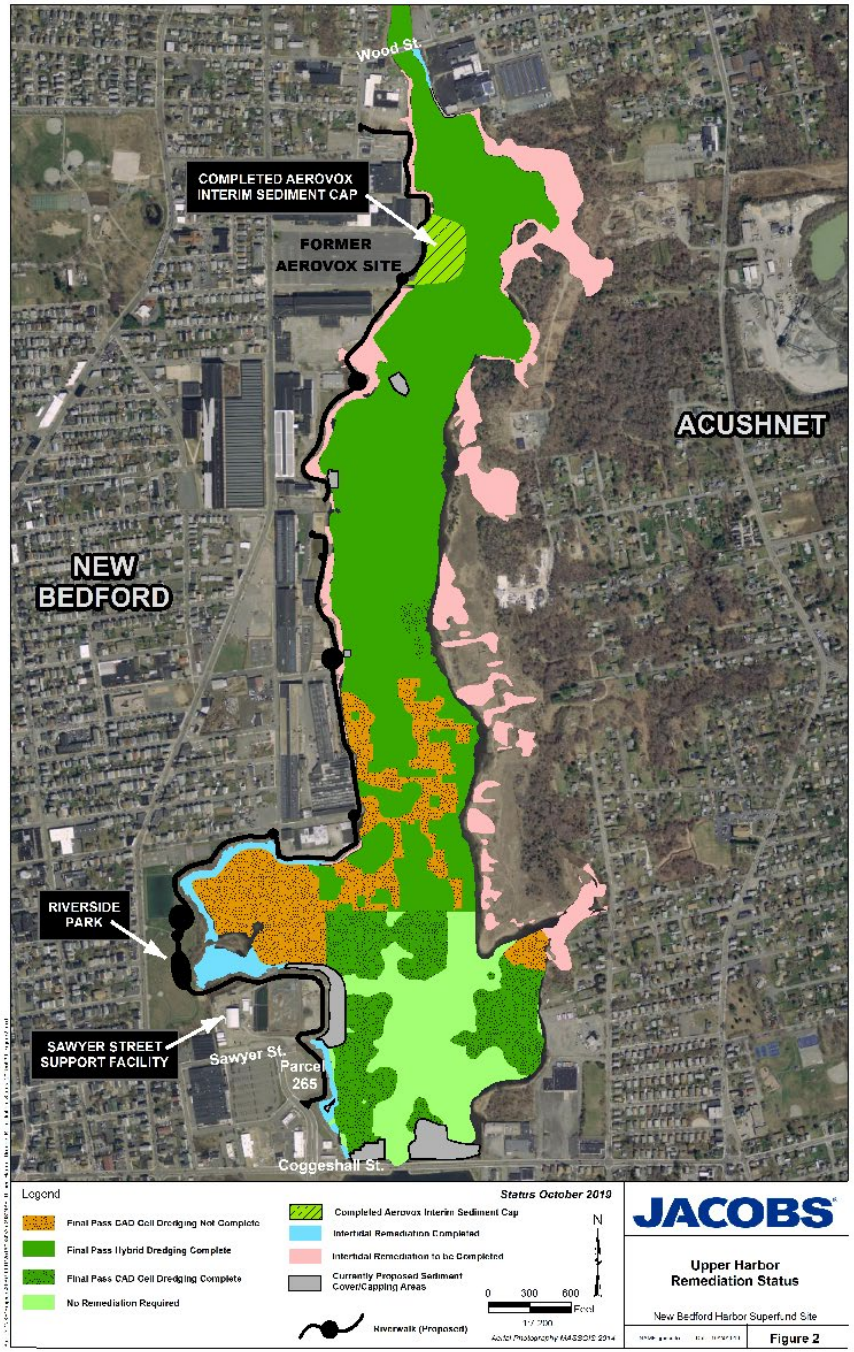
Highlights of Progress 2019 (so far)

- Subtidal Dredging in Upper Harbor presently 90% complete
  - "Hybrid Dredging" followed by off-site disposal is complete;
  - Mechanical Dredging in Upper Harbor with placement in LHCC started September 2019;
  - Demobilization of equipment and decontamination of Dewatering Plant on Hervey Tichon Boulevard and Sawyer Street complex started
- Aerovox Interim Cap Completed April 2019
  - Protects the Upper Harbor from recontamination from the adjacent Aerovox Site until complete source control is achieved by the responsible party under MassDEP authority

Subtidal Dredging Upper Harbor

Subtidal Surface Weighted Average PCB Concentrations in Upper Harbor

2004	300 ppm (estimate)
October 2017:	150 ppm (approx.)
June 2018	75 ppm (approx.)
November 2019	23 ppm (approx.)
Projected 2020	Roughly 4 ppm



Hybrid Dredging Now Complete: Pipeline, Desanding, Dewatering In Decommissioning

August 2019 Video Just Prior to Completion of Hybrid Dredging at NBH

Mechanical Dredging in Upper Harbor followed by transport, transloading, and placement in the Lower Harbor CAD Cell will be ongoing for the next few months

Aerovox Interim Sediment Cap completed in April 2019

Decontamination and Demobilization of Hybrid Dredging Equipment

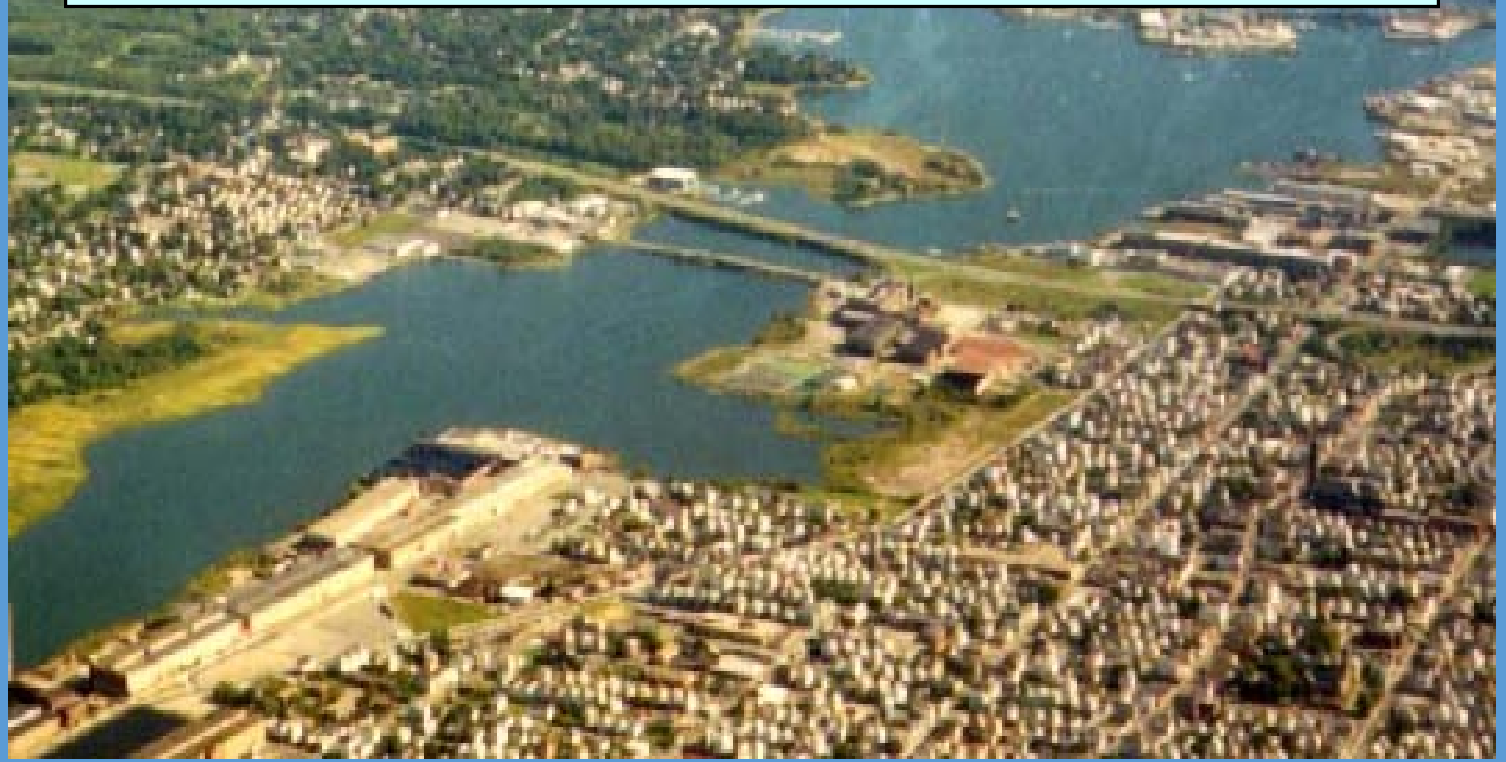
Partial Interior Photo of the Hervey Tichon Avenue Dewatering Facility, now undergoing Decontamination

Air monitoring

- Ongoing monitoring during remedial activities
- Data posted to NBH website at epa.gov/nbh/
- Revised Ambient Air Monitoring Plan dated April 2018
- Revisions to Plan Coming in 2020

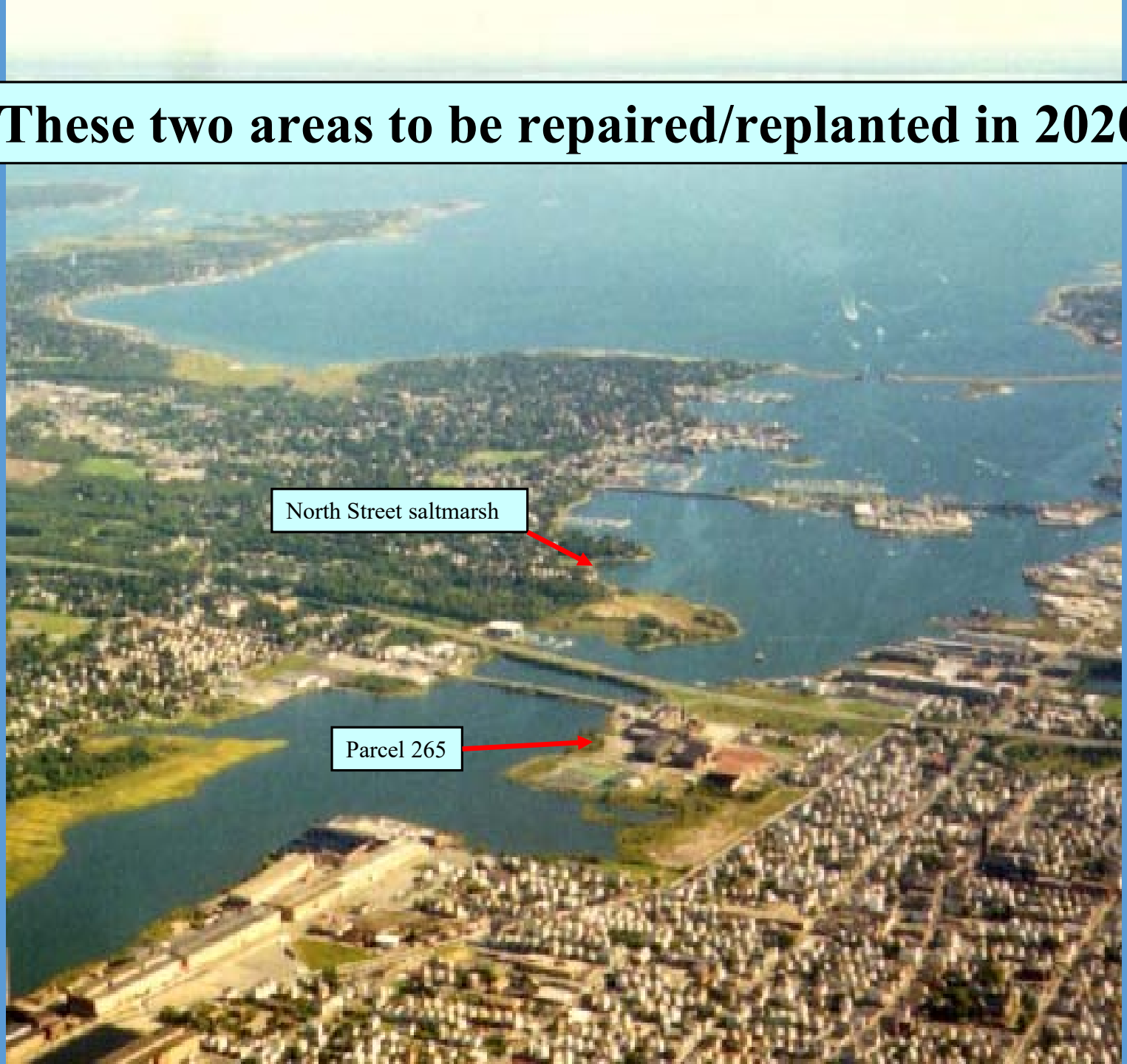
David Dickerson
US EPA
Interidal (Shoreline) Cleanup
Subaqueous Capping

Update on Intertidal/Shoreline Cleanups

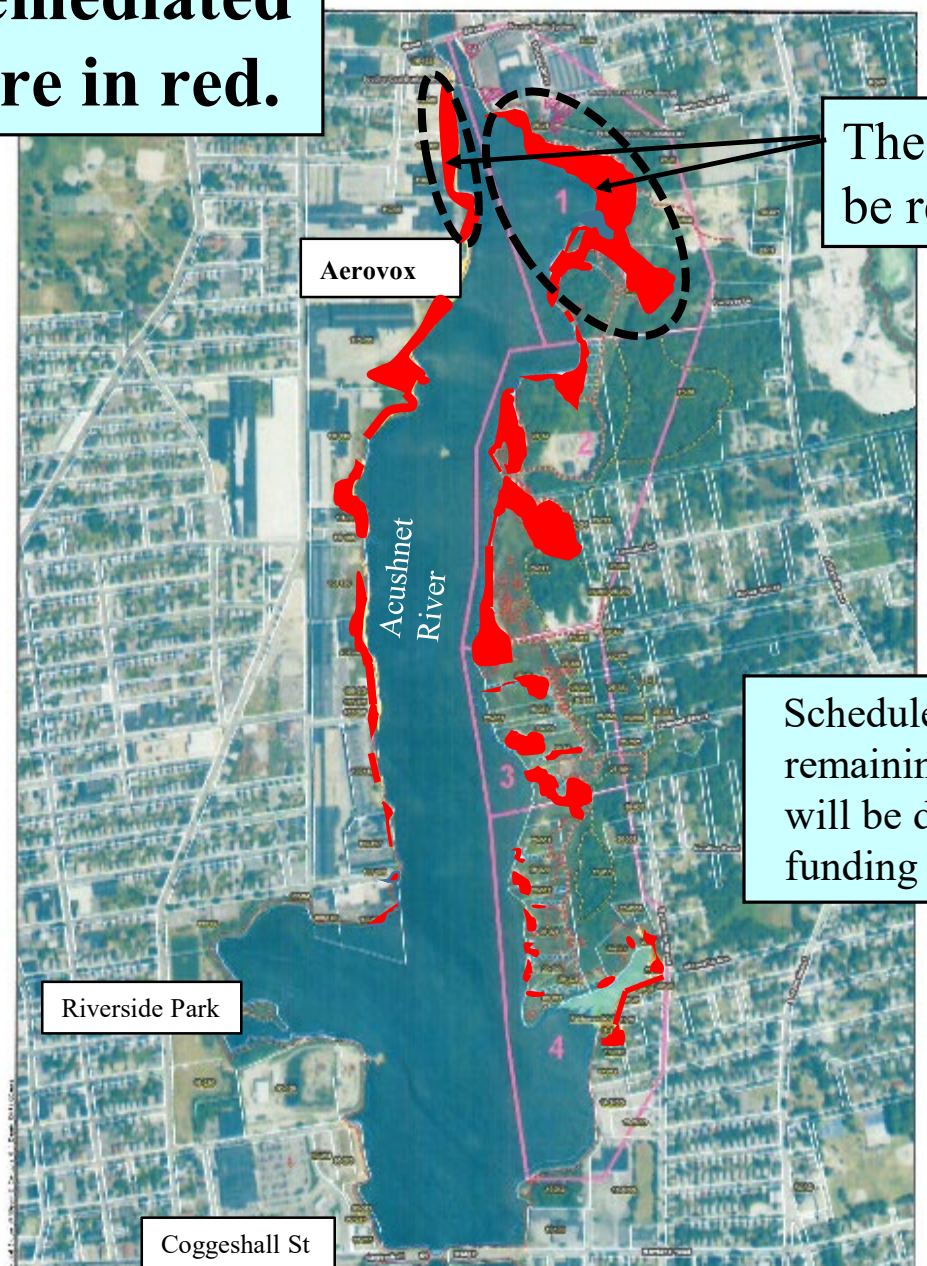


Five shoreline cleanups 2016 - 2018

These two areas to be repaired/replanted in 2020:



Remaining shoreline areas to be remediated are shown here in red.

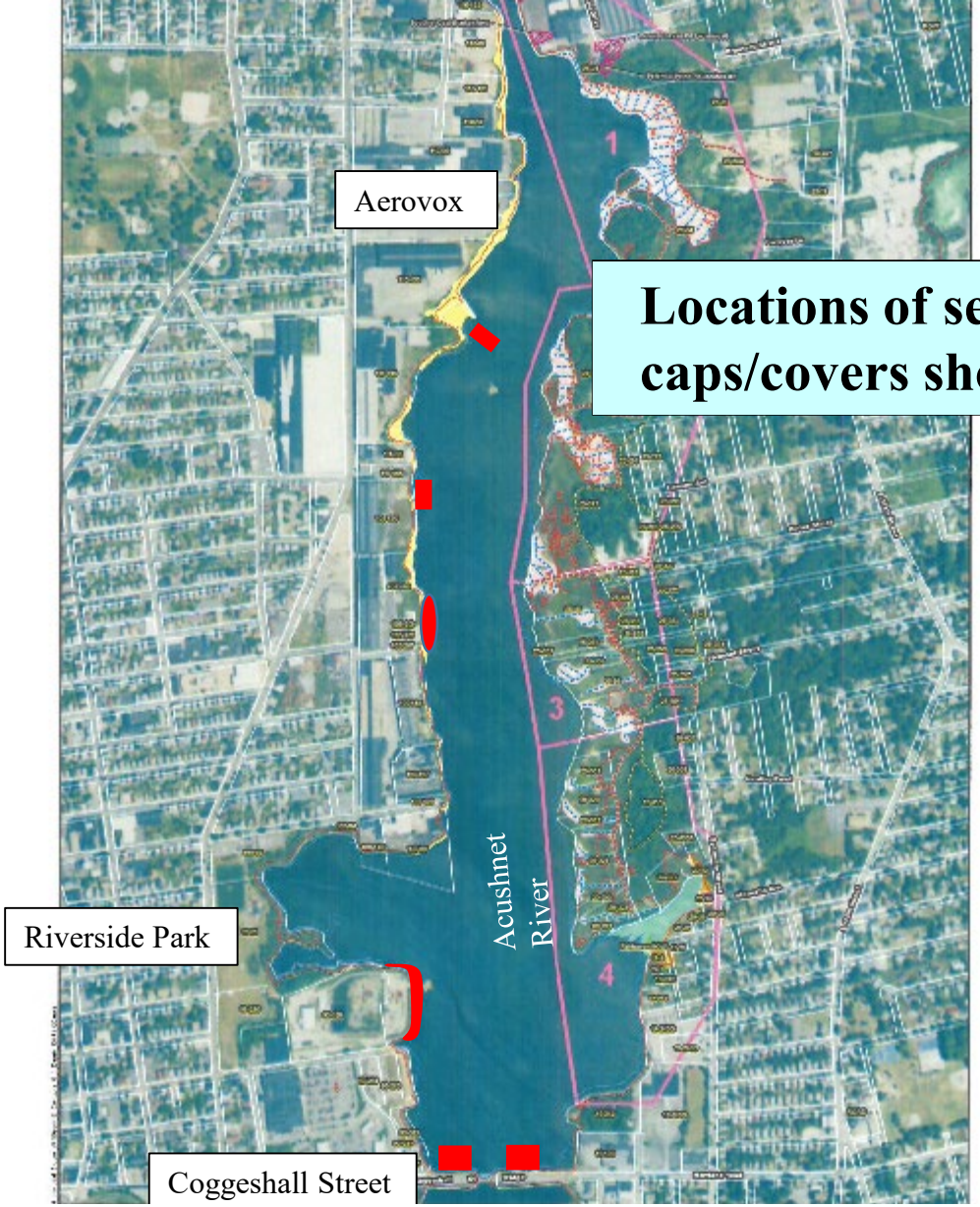


These two areas will be remediated in 2020.

Schedule for remediation of remaining shoreline areas will be dependent on funding from EPA HQ.

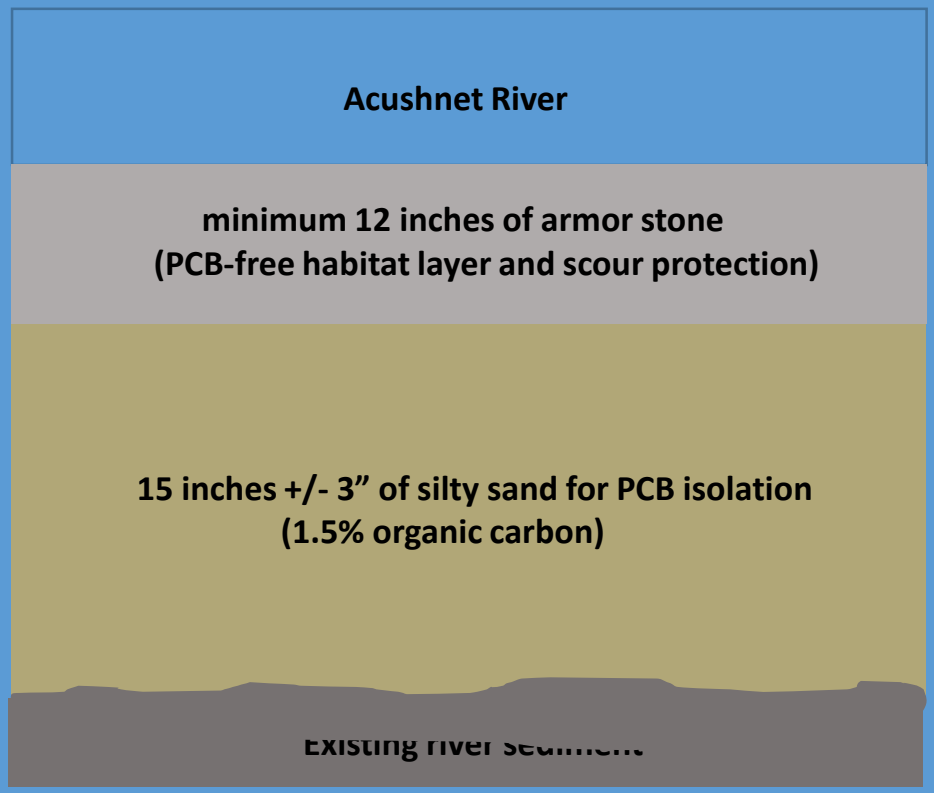
Sediment Caps/Covers in the Upper Harbor

Where dredging is infeasible due to infrastructure, or where not cost-effective due to deep contamination.



Locations of sediment caps/covers shown in red.

Two layers evaluated for upper harbor sediment caps



ZaNetta Purnell,
Kelsey Dumville

OUTREACH COORDINATOR UPDATE

- Cooperative agreement with the City of New Bedford
- Fourth Year of the Outreach Coordinator Program
- CEDC – Community Economic Development Center
- Bilingual/trilingual outreach
- Goal: gain knowledge of fishing community in New Bedford Harbor

OUTREACH MATERIALS

Important Information about Eating Seafood from New Bedford Harbor

Why should I worry about eating fish out of New Bedford Harbor?

As a result of historic dumping in the harbor, there are levels of a contaminants called PCBs (polychlorinated Biphenyls) in fish and shellfish that pose a risk to human health.

What are PCBs and why do I care?

PCBs are a known cancer causing agent. Accumulation of PCBs in an individual's body over a number of years can lead to cancer and a number of other health effects. Fish and Shellfish in New Bedford Harbor have been sampled by the Massachusetts Department of Environmental Protection since 1979 when state regulations put a prohibition on fishing/shellfishing in certain areas of the harbor.

PCBs belong to a broad family of man-made organic chemicals and were manufactured from 1929 until they were banned in 1979.

What has been done to inform people?

EPA has been working with the state and City of New Bedford to clean up the PCB contamination in New Bedford Harbor since the early 1980's. EPA coordinates regularly with the city and state and makes efforts to reach community members in a variety of ways. A Community Involvement plan, finalized in 2015, outlines EPA's most recent efforts at outreach and can be found here http://www2.epa.gov/new-bedford-harbor

How Can I Learn More?

Please visit our website

http://www2.epa.gov/new-bedford-harbor or contact

Kelsey O'Neil, EPA Community Involvement Coordinator at

617-918-1003 or oneil.kelsey@epa.gov

Can I eat any fish out of New Bedford Harbor?

EPA has recommendations on how much seafood should be consumed for different ages and populations. To see those recommendations please contact the individuals below or visit our website at http://www2.epa.gov/new-bedford-harbor/fish-consumption-regulations-and-recommendations

***Please also see maps on back page.

Will I be safe from PCBs if I follow the EPA recommendations?

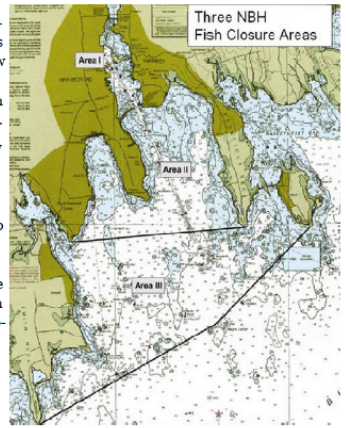
Yes. The only way to avoid PCB contamination from New Bedford harbor is to avoid catching and eating fish out of the harbor. PCBs will not be removed from fish or shellfish through any cooking process. PCB's build up in your body over time and can lead to long term health effects.

Can I fish if I throw the fish back?

Yes. Catch and release is a welcome activity in New Bedford Harbor.

Since 1979, Massachusetts regulations have prohibited eating fish and/or shellfish caught in certain areas of New Bedford Harbor. The tables on this page show Massachusetts regulations and U.S. EPA recommendations for eating fish, shellfish and lobster caught in three fish closure areas around New Bedford Harbor.

EPA's seafood consumption restrictions do not apply to seafood caught beyond the boundaries of the Site by the New Bedford area commercial fishing fleet. Exposure to PCBs is linked to infant development problems in children whose mothers were exposed to PCBs before becoming pregnant. Meal advice for PCB-contaminated fish is intended to protect children from developmental problems. PCBs also cause changes in human blood, liver, and immune function of adults. In addition, PCBs cause cancer in laboratory animals and may cause cancer in humans.



*More stringent recommendations for pregnant woman, nursing mothers, children under 12 or woman who may become pregnant can be found on EPA's website at http://www2.epa.gov/new-bedford-harbor/fish-consumption-regulations-and-recommendations#Recommendations

CLOSURE AREA 1*

If you catch…	then…
Any shellfish, lobster, or fish, including bottom feeders	Do not eat it

CLOSURE AREA 2*

If you catch…	then…
Fish:	
Black sea bass	Eat no more than one meal per month
All bottom-feeding fish including:	
Eel	Do not eat it
Flounder	Do not eat it
Scup	Do not eat it
Tautog	Do not eat it
All other fish	U.S. EPA has no data yet so we cannot make a recommendation
Lobster	Do not eat it
Shellfish (clams, quahogs, mussels etc.)	Eat no more than one meal per month. **Exception** -- Shellfish caught in Clarks Cove: eat no more than one meal per week

CLOSURE AREA 3*

If you catch…	then…
Fish:	
Black sea bass	Eat no more than one meal per month
Bottom-feeding fish:	
Eel	U.S. EPA does not have adequate data so cannot make a recommendation
Flounder	U.S. EPA does not have adequate data so cannot make a recommendation
Scup	Do not eat it
Tautog	Eat no more than one meal per month
All other fish, including all other bottom-feeders	U.S. EPA has no data yet so cannot make a recommendation
Lobster	Do not eat it
Shellfish (clams, quahogs, mussels etc.)	There are no eating restrictions

OUTREACH CHECKLIST

*Fill out one of these sheets every time you do outreach, if you go to more than one location, please fill out one sheet for each location. If no one is fishing at the location at the time of the visit, please note that.

Today's date:

Your Name:

Time/Hours of outreach:

Location (Circle one, or write location/event):

1. Slocum Street	2. Howland Street	3. Hedge St/ Oxford St	4. Bridge St/Fairhaven Bridge	5. Union Wharf, South St, Center St.	6. Hurricane Barrier (Fairhaven)
7. Ft. Phoenix	8. Rodney French Blvd	9. Ricketson St.	10. Ft. Rodman/ Ft. Taber	11. Sconticut Neck	12. Oaklawn St
13. Padanaram St	14. Ricketson Point	15. Homer's/ Leonard's Wharf	16. Pope's Island	17. Washburn St/ Kilburn St	18. Coffin Ave

FISHING FEEDBACK

Was there anyone fishing at this location?

☐ No ☐ Yes

If yes, about how many people were fishing? _____

Did you speak to anyone?

☐ No ☐ Yes

If yes, about how many people did you speak with? _____

What languages did people speak at this location? (Check all that apply)

☐ Portuguese ☐ Spanish ☐ Mayan ☐ Vietnamese ☐ English

☐ Creole (Haitian/Cape Verdean) ☐ Other: If known, what language? _____

Did you hand out any of the flyers?

☐ No ☐ Yes

If yes, about how many did you hand out? _____

SEAFOOD CONSUMPTION QUESTIONAIRE

DATE:
NAME:
LOCATION:

*This information is anonymous, none of the answers will be associated with your name or any family member/friends you may be fishing or eating fish with. Please answer ONLY based on fish caught and eaten from New Bedford Harbor.

QUESTION	NOTES
Do you fish in the Harbor?	☐ YES ☐ NO
Where do you usually fish? (Use map as a guide)	
What type of fish do you typically catch? (Check all that apply)	☐ Black Sea Bass ☐ Flounder ☐ Scup ☐ Tautog ☐ Eel ☐ Lobster ☐ Shellfish ☐ Other:
Are you eating the fish you catch from the harbor?	
Does anyone else eat the fish that you catch from the harbor? If yes, who? (friends/family?)	
If you do eat seafood and/or shellfish from the harbor, how often would you estimate you eat it as a meal?	☐ 1x a Week ☐ 2 x a week ☐ 1 x a month ☐ 2 times a month ☐ Every couple of months ☐ A few times a year
How many months a year do you normally fish? Only during the summer months, or year round?	
If you catch a lot of fish, do you freeze it and eat it year round?	
Do you have any concerns about the potential health effects of consuming seafood from the harbor? Why or why not?	
Any additional notes from interview?	

Looking Ahead…

Dave Lederer, USEPA

Projected for Rest of 2019

- Complete Subtidal Dredging in Upper Harbor
  - Remainder of subtidal material remaining in Upper Harbor to be dredged and placed in the Lower Harbor CAD Cell;
  - Timing depends on weather near end of the year; may slip to Spring 2020
- Continue to Demobilize/Decontaminate Dewatering Plant;
- Complete work plans for all intertidal zones and subaqueous caps in Upper Harbor.

Projected for 2020

- Install subaqueous caps in Upper Harbor;
- Complete Decontaminate/Demobilize Dewatering Plant
- Continue demobilization from Sawyer Street complex
- Begin intertidal zone EZ-1, January 2020, replanting complete in 2021;
- Begin intertidal zone WZ-1 Summer 2020 (depending on progress in EZ-1); replanting 2021;
- Five Year Review

Beyond 2020 (continued)

Future Activities

- Completion of Upper Harbor Intertidal Cleanup (shoreline)
  - East Zone-2 through EZ-5 on Acushnet/Fairhaven shoreline,
  - West Zone 2 through WZ-5 on the New Bedford shoreline
- Capping of the Lower Harbor CAD Cell;
- Demobilization/Cleanup of the Sawyer Street complex;
- Seafood monitoring and continuation of seafood advisories
- Aerovox Interim Cap: Assess further after MassDEP cleanup at adjacent Aerovox Site

Beyond 2020 (continued)

- By the end of 2020, we are projected to have completed over 90% of the total volume to be addressed by the project
- Timing of remaining cleanup work beyond 2020 will be dependent on funding levels available to the project year by year from EPA's Superfund program.

Questions?