Evaluate and compare fish advisory research for Neponset, Charles and Lower Mystic River, as well as identify a solution to create a standardized method for periodic testing practices.
Methods

- Identify communities located within the region of Neponset River, Charles River and Lower Mystic River
- Assemble fish advisory data collected for Neponset River, Charles River and Lower Mystic River
- Determine frequency of fish advisory data and evaluate how affective it is
- Determine methods of data collection for Neponset River, Charles River and Lower Mystic River
Methods

- Identify a solution for standardizing testing practices by comparing current methods of effective data collection; using Lower Mystic River’s current fish advisory project as a resource
- Report findings of fish advisory and how they affect the community
- Provide information to the public that is easily accessible to communities in the immediate surroundings of Neponset River, Charles River and Lower Mystic River as well as communities affected by fish advisory data from these locations
Affected Communities

- Neponset
  - Boston
    - South Boston
    - Dorchester
    - Mattapan
    - Hyde Park
  - Quincy
  - Milton

- Charles River
  - Boston
    - North End

- Lower Mystic River
  - Boston
    - East Boston
    - Charlestown
  - Chelsea
  - Everett
# Fish Advisory Data Matrix

<table>
<thead>
<tr>
<th>Water Body</th>
<th>Town(s)</th>
<th>Fish Advisory</th>
<th>Fish Species</th>
<th>Pollutant(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles River (between S. Natick Dam and Museum of Science Dam)</td>
<td>Boston, Canton, Dedham, Dover, Natick, Newton, Needham, Watertown, Waltham, Weston Wellesley</td>
<td>P1, P2, P3</td>
<td>Largemouth Bass, Carp, Carp, Largemouth Bass</td>
<td>PCBs, Pesticides</td>
</tr>
<tr>
<td>Charles River (between Medway Dam and S. Natick Dam)</td>
<td>Dover, Franklin, Medfield, Millis, Medway, Natick, Norfolk, Sherborn</td>
<td>P1, P5</td>
<td>All species</td>
<td>Mercury, Chlordane, DDT</td>
</tr>
<tr>
<td>Neponset River (between Hollingsworth and Vose Dam and Walter Baker Dam)</td>
<td>Boston, Canton, Dedham, Milton, Norwood, Sharon, Walpole, Westwood</td>
<td>P1, P2, P4</td>
<td>All species, American Eel, White Sucker</td>
<td>PCBs, DDT</td>
</tr>
<tr>
<td>Mystic River (between outlet of Lower Mystic Lake and Amelia Earhart Dam)</td>
<td>Arlington, Everett, Medford, Somerville</td>
<td>P6</td>
<td></td>
<td>PCBs, Chlordane, DDT</td>
</tr>
</tbody>
</table>
Fish Advisory Data Codes

- **P1 (all species)** Children younger than 12 years or age, pregnant women, women of childbearing age who may become pregnant, and nursing mothers should not eat any fish from this water body.
- **P1 (species)** Children younger than 12 years or age, pregnant women, women of childbearing age who may become pregnant, and nursing mothers should not eat any of the affected fish species (in parenthesis) from this water body.
- **P2 (species)** The general public should not consume any of the affected fish species (in parenthesis) from this water body.
- **P3 (species)** The general public should limit consumption of affected fish species (in parenthesis) to two meals per month.
- **P4** The general public should limit consumption of non-affected fish from this water body to two meals per month.
- **P5** The general public should limit consumption of all fish from this water body to two meals per month.
- **P6** No one should consume any fish from this water body.
Fish Advisory Data

- Neponset River
  - Between Hollingsworth/Vose Dam and Walter Baker (Lower Mills) Dam – Data provided by MA Dept of Public Health (DPH) and Bureau of Environmental Health (BEH)
    - Example of Advisory Sign
  - Between Walter Baker Dam and Mouth of Neponset River entering Dorchester Bay
    - Unable to find signage

http://www.mass.gov/envir/massbays/bhha_diadromous.htm
Fish Advisory Data

- Charles River
  - Upstream from Museum of Science Dam – Data provided by MA DPH and BEH
  - Between Museum of Science Dam and Mouth of Charles River entering Boston Harbor – No Data
    - No signage indicating Fish Consumption Advisory
    - No Harvest of River Herring, No Fishing in fish ladder

Images courtesy of David Finkenaur
Fish Advisory Data

- **Mystic River**
  - Between Lower Mystic lake and Amelia Earhart Dam – Data provided by MA DPH and BEH
  - Between Amelia Earhart Dam and Mouth of Mystic River entering Inner Boston Harbor
    - No signage indicating Fish Consumption Advisory
    - No Fishing Allowed sign posted at entrance to dam facility

Images courtesy of David Finkenaur
Frequency of Fish Advisory Data

- 1980s: First (and last!) major testing and compilation of fish advisory data

- 2005: Health and Human Services website last updated for freshwater bodies (including portions of Neponset, Charles, and Mystic Rivers)

- 2009: Massachusetts released fish advisory warning but only for Boston Harbor and “all other locations”, information not updated on website

- August 2013: Updated information placed online, but not on Health and Human Services website

- Current: Mystic River Watershed working to create advisory for Lower Mystic
Methods of Data Collection

- Currently, there is no standard method for data collection or dissemination of information to the public.
- Different locations may have different methods for collecting data and releasing information – some locations have no method in place for collecting data.
- Testing is often done randomly and typically only in locations that are previously known hazardous waste site cleanup areas.
Identify Solution

- Propose that all advisory data be compiled following the guidelines laid out in the EPA’s “Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories”.

- Ensure that all waterways have an advisory in place, and that timelines are put in place for future testing.

- Information should be made immediately available to the public and kept as up to date as possible.

- Date of latest information should be made clear and easy to see in order to avoid finding data only to realize it may be quite old.
It is important to analyze information as soon as it is gathered.

The hazardous combination of waterway contamination and unsafe food sources such as fish, shellfish, etc. makes it important to inform local communities in a timely manner.

Many people fish in the areas surrounding the Neponset, Charles, and Mystic Rivers where they enter Boston Harbor, and it is important to provide them with timely, relevant information on what, if anything, is safe to consume.
Provide Information to Public

- Create a single website to house all pertinent information regarding fish consumption advisory data that is easily accessible to the public.

- Ensure that data for both freshwater and estuarial/salt water areas are included and easily searchable.

- Create and install new signage along shoreline of waterways (specifically tidal areas of the Neponset, Charles, and Mystic Rivers) to provide physical on-site information regarding potentially unsafe aquatic species as well as hazardous chemicals/waste that may be in the area.
References/Acknowledgements


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