



FRESHWATER QUALITY INDICATOR  
RI DEM (235 Promenade St, Providence) Room 340C  
December 15 from 10:00 AM – 12:30 PM

## MEETING NOTES

### What are our indicators? How will they be developed?

The group reconfirmed its plan to start the freshwater work with rivers and streams, leaving lakes and ponds for later analysis.

#### Fish consumption

- Denise pointed out that there is no fish tissue data for the Wood-Pawcatuck system.
- Alicia said that researchers at Brown University may be exploring fish tissue analysis. She also suggested that the group could identify fishing areas in their watersheds and identify the species of fish being caught. This information could help target analyses in the future.
- Resources mentioned included an old ESS study on pan fish and a HEALTH study on mercury in fish. There is a study of mercury in fish in Yawgoo Pond.
- The state integrated reports identify areas that are not assessed. We can highlight these gaps.

#### Recreational Uses

- We can highlight monitoring at freshwater beaches and the need for more frequent monitoring.
- MA and RI use different indicators for recreational uses. RI uses Enterococci<sup>1</sup> and MA uses both E. Coli and Enterococci<sup>2</sup>
- The Charles River studies highlight difference in primary and secondary recreation (? Where are the studies?)
- How are POTWs treated in state assessments when looking at recreational uses?
- According to earlier presentation by Connie Carey, in RI, salt water beach closures are difficult to include in the state assessment. The assessments are done for waterbodies and the beaches are often a small percentage of the waterbody.

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<sup>1</sup> <http://www.dem.ri.gov/pubs/regs/regs/water/h2oq10.pdf> “Non-Designated Bathing Beach Waters Geometric Mean Density: 54 colonies/100 ml; Designated Bathing Beach Waters Geometric Mean Density: 33 colonies/100 ml; Single Sample Maximum\*: 61 colonies/100 ml \* Criteria for determining beach swimming advisories at designated beaches as evaluated by Health.”

<sup>2</sup> <http://www.mass.gov/dep/service/regulations/314cmr04.pdf> “at bathing beaches as defined by the Massachusetts Department of Public Health in 105 CMR 445.010: where E. coli is the chosen indicator, the geometric mean of the five most recent samples taken during the same bathing season shall not exceed 126 colonies per 100 ml and no single sample taken during the bathing season shall exceed 235 colonies per 100 ml; alternatively, where enterococci are the chosen indicator, the geometric mean of the five most recent samples taken during the same bathing season shall not exceed 33 colonies per 100 ml and no single sample taken during the bathing season shall exceed 61 colonies per 100 ml”;

## **Habitat**

- According to the RI CALM, when nutrient data and biological assessment do not agree, RI scientists rely on the biology for the final use analysis.
- RI does not have a targeted fish community assessment similar to the report Tammy brought to the last meeting (now posted on the web site). The Alan Libby report is old.
- Fish community studies integrate water quality and flow.
- Elizabeth Herron pointed out that Watershed Watch volunteers make note of streams with flow concerns. To her knowledge, these data are not used by DEM in the water quality assessments.
- Are macroinvertebrates being sampled outside the rotating basin studies? We really need data collected more frequently than every 5 years.
- Our assessment can be used to recommend what could/should be available for assessments.
- Linda Green said that in MN and VT, volunteers look at aesthetics as part of volunteer water quality sampling. The collected data are used in state assessments.
- We need to define what we mean by habitat. RIDEM's assessment is based on in-stream condition.
- River buffers are important components of habitat. Should we highlight buffer conditions? Alicia pointed out that buffers are complicated in urban areas and recommended that the group keep the habitat assessment focuses on fish communities.<sup>3</sup>
- The MA study looked at the % of fluvial species. RIDEM's Alisa Richardson has looked at river fish vs. lake fish in the Hunt. We are unsure how extensive her studies are.
- We could also look at # or % native species.
- And miles of fish passage.

## **Conclusion:**

For our 2012 report, we will look at recreational uses, habitat and fish consumption, basing our analysis on RI and MA integrated reports.

The group agreed to compile the state assessments for habitat, but do additional work on fish communities/habitat.

## **Next steps/issues/follow up**

- We need to refine our message and ask for presentations to decision makers.
- We need to identify a location/time/audience for MA presentations.
- Denise will research fisheries studies in RI
- Meg will continue to work with MA and RI staff to get assessments in electronic format. (Rick McVoy provided the Blackstone and Taunton assessments in late December. Connie Carey has said that we can have the RI assessments in January)

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<sup>3</sup> We can mention the value of buffers in our report. Margherita Pryor mentioned that she has a watershed report looking at buffers in 2 areas. We could also look at DEM wetland permits, assessing impacts on buffers.

- We should check with Alisa Richardson on the extent of her research looking at river/lake fish in RI streams.

**Issues from previous discussion:**

Do we want to look at nutrients as a separate water quality parameter? If yes, are we looking at nutrients (combined)? or looking at N and P separately?

-- We will base our assessment on the state assessments.

Toxic algae: Do we include this in our assessment? if yes, how?

-- This is primarily an issue for lakes although Sue Kiernan pointed out that the Ten Mile River did have toxic algae.

Differences between RI and MA assessments

-- We did not discuss this in depth.

**UPCOMING MEETINGS**

**January 4 from 1:00 PM – 4:00 PM in RIDEM room 200 C1. Therese Beaudoin from MA DEP will be our guest and will present on the MA assessments.**

**January 11 from 10:00 AM – 12:30 PM in RIDEM room 200 C1.**

**WORKSHOP January 26 from 9:00 AM - 1:00 PM at the Warwick Sandy Lane Library.**