

## York River Study Committee / ORV Subcommittee Meeting

### Topic: Water Quality

Tuesday, March 7, 2017, 12:30 – 2:00 PM

York Public Library Community Room

#### Meeting Notes

Attendees: Karen Arsenault, Jean Demetracopoulos, Thom Kearns, Joan LeBlanc, Jack Murphy, Chuck Ott, Judy Spiller, Beth Walter, and Jenn Hunter (York River Study Committee)

Teri Dane (Maine DMR), Angela Brewer (Maine DEP), Kristin Feindel (Maine DEP), Leslie Hinz (Town of York), Priscilla Cookson (York conservation commission, YRSC advisor), Carol Donnelly (York resident, YRSC advisor), Paula Sewall (York resident, YRSC advisor)

Materials distributed: agenda, data packet from DMR, summary of requirements from EPA watershed-based plan for 319 funded projects

Meeting goals: The York River Study Committee has organized a series of meetings on specific topics to gather and share information to help characterize watershed resources and develop management plan actions and recommendations. Experts and others interested in topics are asked to provide input and share ideas and information in these meetings. The Study Committee hopes to use available data to better characterize water quality, and is using this meeting as an opportunity to learn from state experts on what data are available and how they can be used or interpreted.

#### Water quality data sets, monitoring programs, and water quality reports for York River:

- Teri Dane, Maine Department of Marine Resources, Shellfish Sanitation Program  
Information packet from Teri: [P90 Scores and Pollution Source Survey for York River](#)

Teri gave an overview of the shellfish program including required actions to classify shellfish growing areas. There are 7 active monitoring stations in the York River. Each is sampled 6 times per year at random times. Sections of the York River have conditional approval, with closures from May to November due to marina/boat activity. Other York River areas are classified as prohibited/closed. Shoreline surveys are required every 12 years. Shoreline surveys look for graywater/blackwater discharges that are not connected to leach fields or treatment plants and undocumented or illegal overboard discharges (OBDs)/household wastewater discharges that would lead to a mandatory closure area. The last shoreline survey was done in 2009 and resulted in some additional open areas (still conditionally approved). In 2014 the “conditional approval” was extended for York River areas, to increase amount of area to be harvested. In 2015, MDMR conducted hot spot survey work (house to house surveys looking for pollution sources) with DEP from Route 1 to Sewall’s Bridge at the request of the town shellfish commission. Several were identified. When pollution sources are identified in these surveys, DMR submits a form to the town CEO to investigate if there is a problem or not. Towns report fixes to Brent Lawson, the State CEO/plumbing inspector who reviews the remediation. DMR follows up with towns regarding unresolved problems.

Teri walked through the information/data packet she distributed. MDMR started using a new method – the membrane filtration method – to analyze fecal coliform levels. A fecal coliform P90 score below 31 is required for areas open to harvest without needing depuration. P90 scores are calculated for each sampling location from 30 data points over 5 years. All York River sites (conditionally approved and prohibited areas) had P90 scores below 31. It is the shoreline survey findings, not the fecal coliform sampling, that keep some areas prohibited to harvest. Teri noted that the site WB16 that is west of Route 95 was deactivated in 2015. DMR collects temperature and wind data when sampling. Tidal stage and salinity are determined back at the lab when the samples are processed. Teri will send the full historic data set to Jenn for the York River Study. She cautioned against comparing all data over time because of the change in protocols for measuring fecal coliforms. The different methods result in different scores.

➤ Angela Brewer, Maine Department of Environmental Protection, Marine Unit

Angela indicated there is little water quality data available for York River, beyond the DMR shellfish program data. There are no large wastewater discharges to the river. One permitted discharge (former Bosn's Landing site, now York River Landing) exists. Some general water quality data that exist for the marine waters include some turbidity, chlorophyll, and nitrogen concentration data collected by DEP from four sites in 1996 and by WNERR from four sites in 2006. DEP intends to do some York River sampling at several sites along the estuarine gradient from head of tide down to the mouth of the river this summer, with periodic sampling in the June to September timeframe. The York River estuary is generally thought to have good water quality and will serve as a "reference" water for DEP to compare to other estuaries. DEP will deploy data sondes for a couple of weeks to measure temperature, salinity, pH, and dissolved oxygen (DO). Variability with tidal cycle will be measured. Some instances of non-attainment for DO are likely because of sediment oxygen demand. Data will help establish a baseline for a natural system. The sampling program details are still being developed. Exact sites are still being determined. Nutrient grab samples will occur too – those sites are still being determined, and could include some tributary sampling in more developed or less developed areas for comparison. Post-rainfall event sampling is possible too. Angela offered to meet again with the group in late April to further discuss plans and ideas.

Angela noted that she quickly reviewed the state 305b report (assessment report) and the 303d list of impaired waters and that York River was previously listed for fecal contamination from boat discharges. There is a statewide bacteria TMDL for Maine waters that includes portions of the York River that don't meet standards for the state shellfish program. There are no dissolved oxygen impairments for the York River, which indicates good water quality for the river.

Angela noted her group is working to fulfill the data request from Beth Walter and would like to talk to her after the meeting to get more information on what data are needed.

General discussion and comments:

- The upcoming WNERR diadromous fish survey includes some water quality monitoring at two head of tide sites, using sondes to look at turbidity, salinity, temperature, and depth. Angela will check with WNERR to discuss site selection and see about adding DO to their monitoring.
- It was noted that Scotland Bridge area and Cider Hill Creek area both have some scheduled infrastructure maintenance and repair work occurring this summer and you might want to avoid sampling in the immediate vicinity during those repairs.

Considerations for York River management plan:

➤ Discussion by Kristin Feindel, Maine Department of Environmental Protection, Watershed Management  
Kristin discussed the state's nonpoint source (NPS) pollution priority waters list that is eligible for section 319 grant funds. A river needs to be on the list with an approved watershed management plan to be eligible to receive funding. York River was on the NPS list earlier but is no longer. Factors contributing to whether a marine waterbody is on the list include information from the Maine Healthy Beach program, known nonpoint sources versus point sources that are impacting water quality, documented impairments from nonpoint sources, etc. The "conditionally approved" rating for shellfish harvest for the York River is due to marina impacts not a watershed NPS pollution source. She cited some guidance from EPA that includes 9 elements for a watershed-based plan to be eligible for 319 funding. These are known as the "a through i" elements. We might want to consider addressing all the elements in our plan. She is willing to provide additional guidance or assistance as we move forward, and will share examples from other watershed plans.

General discussion and comments:

- In thinking about the watershed-wide buildout, at what levels of impervious cover would we expect to see water quality problems? Kristin indicated research shows that level to be in the 7-10% range.

- The 2005 Nonpoint Source Pollution management plan developed by WNER and the York Rivers Association provides some very useful information and assessment of some NPS pollution sources. It includes information and recommendations from detailed surveys that were done.
  - York middle school students have collected water quality data over time. We should share data with them to affirm their efforts to collect years of data.
  - Nutrient levels in estuary systems are growing and we don't know to what extent it may be a problem for the York River. Algae blooms like those noted in the York River last summer can indicate rapidly increasing nutrient levels.
  - If a local long-term monitoring program is developed for the York River, the state has a Volunteer River Monitoring Program that could provide some assistance.
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Additional topic information (post meeting)

Maine Shellfish Area Growing Classification Program: <http://www.maine.gov/dmr/shellfish-sanitation-management/programs/growingareas/index.html>

Membrane filtration method and P90 scores: [http://www.maine.gov/dmr/shellfish-sanitation-management/programs/growingareas/documents/wqlab\\_transition.pdf](http://www.maine.gov/dmr/shellfish-sanitation-management/programs/growingareas/documents/wqlab_transition.pdf)

From Kristin Feindel:

- Sample 9-Element Watershed Based Plans: <http://www.maine.gov/dep/water/grants/319.html>  
Under "Watershed-Based Plans," see the "Nine Element Watershed-based Plan - 2 examples."
- "Model My Watershed": <https://app.wikiwatershed.org/>  
It is an online mapping and modelling tool that may be helpful to quickly calculate land use type percentages and estimate pollutants (though not bacteria). You can select the York River watershed since it is a HUC12 watershed.