

# **Town of Orleans**

## **Water Quality & Wastewater Planning**

### **Program Status Update**

September 5, 2015

The following is an update of the various on-going projects, issues and tasks related to water quality and wastewater management planning in Orleans. Additional information, comments or questions can be directed to Mike Domenica at [mdomenica@threebayswater.com](mailto:mdomenica@threebayswater.com).

#### **I. Engineering Consultant Procurement**

On July 22, 2015, a Request for Qualifications (RFQ) to provide water quality and wastewater management planning and engineering services was published by the Town in the Massachusetts Central Register and in the Cape Codder newspaper. A pre-submittal briefing was held on July 29, 2015, to respond to questions and provide clarifications on the procurement. Table 1 is a list of the firms requesting the RFQ and the firms that sent representatives to the pre-submittal briefing.

Seven Statements of Qualifications (SOQs) were received on August 12, 2015. The prime consultants submitting SOQs were:

- AECOM
- GHD
- Horsley – Witten
- Lombardo Associates
- Tetra Tech
- Weston & Sampson
- Wright - Pierce

On August 24, 2015, the Town's three-member selection team met to report on their evaluation of the seven submittals and decide on the top rated firms, which would be invited to meet with the selection team to discuss the project, their qualifications and their proposed approach in more detail. As a result of the selection team's review and discussion, the following three firms were invited to interview for the project:

- AECOM
- Weston & Sampson
- Wright – Pierce

The three interviews were held on Thursday, September 3, 2015 in the Nauset Room of Town Hall. The total rating scores of the three firms were revised using on the scores of the selection team for each firm based on their interviews.

Subsequent to the three interviews, it was decided that an additional two firms would be interviewed – GHD and Horsley-Witten Group. These interviews will be held on Tuesday, September 15, 2015 at 9:00 and 11:00 AM at Town Hall. References of the firms still deemed to be competitive after all interviews will be checked before a recommendation to the Selectmen is made by the selection committee.

Subsequent to the acceptance of the recommended firm by the Selectmen the Town will enter into negotiations for a detailed scope of services, budget and schedule. The intent of the Town is to finalize a contract and issue a Notice to Proceed (NTP) by October 1.

## II. OWQAP Web Site Update

The Town's web site for the Orleans Water Quality Advisory Panel will remain the site where program information, meeting schedules and agendas, meeting minutes, reports, status memoranda and other program information is stored for documentation and stakeholder review.

The web site has been modified to reflect the program projects and activities being undertaken over the next phases of the program. Additional site modification will be made as appropriate to update the libraries and information to reflect program needs.

## III. Aquaculture Technical Memorandum

The Technical Memorandum and its appendices, completed last year summarizing the evaluations of aquaculture as a potentially viable non-traditional nitrogen management technology for the Orleans watersheds, have been added to the following folder on the OWQAP web site:

<http://www.town.orleans.ma.us/water-quality-advisory-panel/pages/shellfish-aquaculture>

This TM also includes a summary of the results, conclusions and resulting future directions derived from the Aquaculture Forum on June 8, 2015 at the Snow Library.

## IV. Utility Surveying Project

The final drawings and data bases from the survey of utilities in downtown Orleans have been completed and delivered to the town. A final check for conformance to the scope of services is being conducted.

## V. Town Center Planning Study

The draft scope of work for the downtown planning study was reviewed by the Board of Selectmen and revisions to the scope were made in accord with the comments and suggestions. The final project scope of work will be reviewed at the meeting of the Board on September 16. Procurement will proceed, pending consideration of the benefit of including this scope of work in the scope of services to be undertaken by the wastewater engineering consultant currently being procured. It is possible that the selected consultant will have the needed expertise to complete the downtown planning

work in conjunction with other planning and engineering tasks necessary for that part of the Consensus Plan implementation. This approach, if feasible, would provide assurance of integration of the two projects, which is very important, as well as project cost savings.

#### VI. Nauset Boundary Condition Monitoring Study (SMAST)

Three field surveys have been scheduled for Nauset inlet during flooding tides. In addition an initial field reconnaissance was conducted with the Town Harbor Master, who has been assisting in the project. To date two (2) surveys have been completed, one in July and one in early September (9-1-15). The final survey is scheduled for the week of September 14<sup>th</sup>. Contracting delayed the start of the effort, but all samples will fall within the contracted window which ends September 30. Chemical analysis of the field samples is on-going. The project will be completed on time and on budget.

#### VII. Cedar Pond Water Quality Management (SMAST)

The Cedar Pond Management Plan was completed by SMAST in July 2013. The goals of the plan are to:

- Restore water quality and create a sustainable system
- Restore the herring fishery,
- Protect the adjacent Atlantic white cedar swamp
- Restore nitrogen attenuation for Rock Harbor Creek

In development of the plan, SMAST staff collected: a) sediment cores and incubated them to evaluate sediment nutrient regeneration, b) flow and water quality information for the stream outlet (Cedar Pond Creek), c) continuous dissolved oxygen, chlorophyll, temperature, and water level data within the pond, and d) in-pond water quality profiles and nutrient data.

CSP-SMAST staff also reviewed citizen-collected cormorant counts and developed associated nutrient loads.

To attain the above goals the plan recommends a step-wise adaptive management approach to reduce salinity to a goal of 1-4 ppt and restore water quality through the following steps:

- a) Reinstall boards at outlet (monitor water levels and salinity before and after board replacement)
- b) Reduce or eliminate cormorant population over the pond
- c) Consider pumping of deep salinity water (monitoring data will determine benefits)
- d) Monitor and evaluate water quality to complete future evaluation of options to address sediment nutrient loads

The Water Quality Task Force and Orleans Board of Selectmen approved plan and recommended steps. MassDOT has indicated that it does not object to reinstallation of

the boards as facilitated by the Massachusetts DMF. The Town has filed a permit application with Conservation Commission to reinstall boards. The Orleans Conservation Commission approved permit for board installation. Funding for monitoring the monitoring program is already in place.

Subsequent to the approval by the Conservation Commission 10 citizens appealed the permit approval to the DEP. Accordingly, DEP has conducted a site visit and collected input/testimony regarding the appeal. The Town is awaiting the DEP decision

A meeting with Eversource was held to discuss Eversource options for elimination of the cormorants on their power lines. Several options were identified and discussed, including burying of the power lines in enclosed conduits along the Route 6 right-of-way. Over the last several weeks, the Town, in cooperation with the U.S. Department of Agriculture, commenced a cormorant dispersal program that has proven to be less than successful. The Board of Selectmen agreed to terminate the effort at the September 2 board meeting. Efforts to resolve the problem will focus exclusively on requiring Eversource to remove the power lines to a location that is suitable.

#### VIII. Stormwater Management Program Status

Greenseal Environmental has completed the field work for the survey of the Meetinghouse Pond area. Plans will be drafted in the next few weeks, reviewed by Town staff and forwarded to AMEC consultants for use in defining locations, design requirements and cost estimates for priority stormwater projects for flooding and water quality remediation. A more complete summary of the stormwater efforts of the Town is contained in the recent report of the Public Works Director to the Board of Selectmen.

#### IX. Fertilizer Study Update (SMAST)

The purpose of this effort is to determine fertilization nitrogen loads for the ~200 houses within the Town of Orleans not built at the time of the MEP analysis. To date, the number of units and their locations has been identified and the survey of each site using a standard approach begun. The approach is directly comparable to that used previously for the data in the MEP Reports. More than half of the homes have been visited, some multiple times. For each home, if no one answers on the second or third visit a survey is left with a stamped envelope for its return to SMAST. More than half of the field work is completed with the final surveys set for the week of September 14<sup>th</sup>. Data analysis and synthesis of results is underway. It appears that direct interviews and home owner mailed surveys will cover about half of the units, with staff observations on all sites.

#### X. Namskaket Vegetation Survey Update (SMAST)

Field work to map plant community changes in upper Namskaket Marsh since the prior survey in 1995 was commenced in July. The baseline survey was reviewed prior to conducting new data collection. An initial site visit was conducted with staff from the 1995 project and the staff conducting the new data collection to ensure comparability. Field work (plant and salinity) was completed by mid-August. Conversion of field

observations to mapping is well underway. The project will be completed on time and on-budget.

#### XI. Grant and Loan Funding Initiatives

##### a. State Clean Water Fund – SRF financing application

An application for acceptance into the state's Clean Water Agency's State Revolving Fund (SRF) program was submitted in July. Entry in this program will not affect remaining planning or design activities, but would position the Town, assuming other criteria are met, for construction funding, including zero-interest loan financing.

##### b. EPA PRB Technical Assistance Grant request

The Town applied for grant funding through EPA Region I to pay for hydrogeologic studies related to determining the technical feasibility of one or more demonstration projects for permeable reactive barriers (PRBs) for use in the Lonnie's Pond, Paw Wah Pond and Town Cove watersheds. Accompanied by Town staff and its consultants, EPA staff conducted site visits to these locations on August 25. EPA staff appeared particularly impressed by the merits of the Paw Wah Pond and Lonnie's Pond sites. Notification of awards to study these sites should be forthcoming the next few weeks. EPA grants would allow the town to proceed with investigations and planning for multiple PRB sites using the current Town FY 2016 wastewater budget.

#### XII. DOT coordination

A letter requesting DOT permission to access the southeast sector of the Routes 6 and 6a interchange was sent to Mary-Jo Perry on August 6. A request for additional information has been received. The Town is responding to that request and anticipates permission to be granted by the time a notice-to-proceed is given to the wastewater consultant currently being selected.

#### XIII. OWQAP meeting plan

The next meeting of the Orleans Water Quality Advisory Committee will be held on Wednesday, September 16 at 9:30 AM in the Nauset Room of Town Hall. The agenda for the meeting will be posted. Additional quarterly meetings are proposed, pending discussion and agreement by the WQAP members for the following dates:

Wednesday, November 18, 2015

Wednesday, January 20, 2016

Wednesday, March 16, 2016

**Table 1**  
**Firms Requesting RFQs**

1. CHA (Clough Harbour Associates)
2. AECOM
3. Green International
4. GHD
5. CME Engineering
6. Wright-Pierce
7. VJ Associates
8. Dewberry
9. Geosphere
10. Woodard & Curran
11. Environmental Partners
12. CDR McGuire
13. Construction Journal
14. Tetra Tech
15. FST (Fay, Spofford & Thorndike)
16. Weston & Sampson
17. CDW Consultants
18. Tighe & Bond
19. Nitche Engineering
20. Fuss & O'Neill
21. Beta Group
22. Cappaccio
23. Horsley-Witten
24. Beals & Thomas
25. H50 (Orenco)
26. ARUP

**Firms Attending Pre-Submittal Briefing**

1. AECOM
2. FST
3. Horsley-Witten
4. CHA
5. Tetra Tech
6. Fuss & O'Neill
7. Weston & Sampson
8. Orenco Systems
9. GHD
10. Coastal Engineering
11. Terra Systems
12. MT Environmental
13. Wright – Pierce
14. ARUP