

ORLEANS WATER QUALITY ADVISORY PANEL

PROGRAM STATUS UPDATE AND MEETING MINUTES

[final draft]

for the meeting of:

Wednesday, January 20, 2016

8:30 AM – 12:00 PM

Orleans Town Hall, Nauset Room

19 School Road, Orleans, Massachusetts 02653

This meeting was the third of six planned meetings to be held by the OWQAP in FY 2016. The purpose of the meetings is for the OWQAP to review and advise on the activities of the Town and its consultants related to implementation of the Consensus Plan for wastewater and water quality management as developed by the Panel in FY 2015.

WELCOME AND INTRODUCTION OF PANEL

The following documents were distributed to participants:

- Meeting agenda (Revised)
- Orleans Water Quality Advisory Panel, Stakeholder Workshop, dated January 20, 2016
- Orleans Water Quality Advisory Panel Stakeholder Workshop, Non-Traditional Technologies Breakout Groups
- Orleans Water Quality and Wastewater Planning, Water Quality Monitoring and Modeling Workshop , Goals and Agenda
- Meeting Minutes for December 2, 2015

All meeting documents and presentations for the Town of Orleans Water Quality Advisory Panel are located here:

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

Alan McClennan, chairman of the Orleans Board of Selectmen, called the meeting to order at 8:30 AM. Panelists introduced themselves and their respective affiliations.

Attachment A is a list of the panel members and liaisons present at the meeting.

The next meeting of the Orleans Water Quality Advisory Panel will be on Wednesday, February 17, from 9:00 AM to 12:00 Noon.

1. APPROVAL OF MINUTES

The panel voted unanimously to accept an amendment to the December 2, 2015, minutes proposed by Jeff Eagles. After discussion of the panel's policy regarding distribution and referencing of materials prepared by panel members, the panel voted to accept the minutes of December 2, 2015, with Gordon Smith voting in opposition.

2. MEETING SUMMARY AND PROGRAM UPDATE

On January 20th, the Orleans Water Quality Advisory Panel (OWQAP) met with AECOM, the town's engineering consultant, to review the projects AECOM has underway as part of our ongoing wastewater planning efforts. AECOM provided an update on plans to curtail operations at Tri-Town, demonstrated their new financial planning tool, outlined plans for a monitoring and modeling program, presented their current thinking on collection, treatment, and disposal efforts, and summarized the results from the downtown planning effort. AECOM also presented an aggressive schedule of public meetings to continue to communicate their efforts to the town.

Tri-Town Septage Plant Transition

Orleans, along with Eastham and Brewster, has decided to allow Tri-Town's permit to expire at the end of the year and is moving ahead with plans to demolish the plant next year. Tri-Town currently plans to receive septage from septage haulers through the end of this October, although they may need to curtail operations sooner if any equipment breaks down or if any of the current staff move on to other jobs.

AECOM is developing plans to demolish the Tri-Town plant and we expect to ask Town Meeting for funds to complete the demolition design this year and to demolish the plant next year. Any potential savings of delaying demolition until a new plant is constructed would have been eroded by the costs of mothballing the existing plant. Taking into account costs for security, surveillance, utilities, insurance, and inflation, the selectmen are recommending that we move ahead with demolishing the plant.

AECOM also considered the suggestion that the plant be used as a transfer station until a new facility comes online. A transfer station at Tri-Town would not be competitive because the septage marketplace is very price sensitive. In addition, any continued operations at Tri-Town would require the three towns to renegotiate and extend the inter-municipal agreement and potentially delay any other use of the site. It has been stated at previous meetings that the septage market is very volatile due to the limited capacity for treatment of facilities on Cape Cod and the potential need to haul septage off-Cape at significantly higher costs upon the closure of the Tri-Town plant.

Financial Plan Update

A key goal for this year's effort is to provide a clearer view into what our proposed wastewater solutions will cost, how we will allocate those costs, and what steps we can take to keep these solutions as affordable as possible. AECOM demonstrated their new financial modeling tool which will help Orleans understand and present these costs. Some of the comparative financial

aspects will be presented at the February 10th Board of Selectman meeting, (for those who may want to view personally or on Ch. 18).

The new financial model takes into account the multiple cost and revenue components, different categories of users, options to allocate those costs by user category, and financing options. The financial team will be able to easily understand the impact of grants or debt-forgiveness options. Most important, it will allow the town to test and optimize different scenarios and to evaluate the affordability of the proposed solutions.

The next steps are to work with the engineering teams and incorporate updated capital and operating cost estimates and to test revenue generating options and resulting user costs with the financial model. The town will then be in a position to develop much more reliable financial estimates and evaluate affordability as we move forward.

Developing a Monitoring and Modeling Program

Orleans is taking steps to expand its water quality monitoring programs, both to update our current water quality goals and to measure the effectiveness of any solutions we eventually build. Our current goals, the Total Maximum Daily Loads (TMDL) of nitrogen allowed in our waters, were set by the Massachusetts Estuaries Project years ago. Since then, the dynamics in Town Cove have changed and the additional break in the barrier beach now allows more waters into Pleasant Bay.

To begin this process, OWQAP was scheduled to meet on February 10th to look at our existing monitoring efforts and conduct a “gap analysis” for moving forward. The goal will be to understand what we’ve been doing up to this point, to assess what information is currently available, and to agree on what we need to do in the future.¹

The result will be a five-year monitoring work plan defining what monitoring we need to have in place, who will be responsible for which components, and how much they will cost. This overall plan will build on the work now being done by various agencies and volunteer efforts. It will set a strategy for monitoring our freshwater ponds as well as our saltwater estuaries.

Collection, Treatment, and Disposal System Update

Considerable work is underway to provide more specific information about the collection, treatment, and disposal systems called for in last year’s consensus agreement. AECOM has updated maps for both Downtown Orleans and for Meetinghouse Pond, identifying where it would be appropriate to use conventional gravity sewers and where it would be more cost effective to use smaller diameter low pressure solutions, so called “STEP/STEG” designs, which continue to utilize septic tanks.

¹ This meeting was postponed subsequent to the January 20, OWQAP meeting due to the schedule of competing meetings during the week of February 10, as well as the need to prepare various summaries and evaluations of existing data before the water quality monitoring workshop. These summary documents will be prepared and distributed for review before the date of the rescheduled workshop.

The town is also working to identify sites for effluent from the proposed new plant at the Tri-Town and for the proposed smaller facility in East Orleans. The town had planned to consider the Exit 12 cloverleaf, but the Department of Transportation has not allowed Orleans to evaluate the site. The Town is appealing this decision through the Governor's office due to the recent initiative by the Governor to promote the joint use of state land by municipalities for beneficial public uses. The town is now also considering other locations, among them at the edge of the current Tri-Town site, inside the Little Namskaket watershed. This site is owned by the Town of Orleans, like the Exit 12 cloverleaf site it would not contribute freshwater flow to the Namskaket watershed, and it was tested and approved by DEP, MEPA and the Commission under the CWMP. Under the revised Consensus Agreement plan it would need to receive only about 20% of the flow planned under the CWMP. AECOM is further evaluating suitability of this site.

In East Orleans, the town has begun to evaluate the former Hubler property at 223 Beach Road. AECOM has put in place monitoring wells and taken initial soil borings. Their plans to evaluate the site are continuing, but the initial results so far are very positive.

Downtown Planning Study Update

On December 15th, AECOM conducted a workshop to review the initial results from the downtown planning study now underway. The study focuses on the downtown and village center areas and builds upon the 2006 Comprehensive Plan and the 2009 Village Center Plan. AECOM also conducted an economic and market analysis which highlighted some of the current challenges facing Orleans. In particular, AECOM highlighted issues with wastewater, the lack of affordable housing, and inadequate parking.

The initial workshop supported vision statements developed in 2006 and 2009, both of which called for the Orleans Village Center to be a vibrant commercial and community center for the town. The plan envisions a higher year-round residential density in Village Center as an essential component of a more vibrant Orleans. To draw people year round, the workshop attendees called for an anchor facility, such as an educational institution, an arts center, a movie theatre, or the like. They also called for a variety of housing to support an emerging workforce and an aging senior population. This ongoing conversation is being furthered on February 4th at both an Orleans Citizen Forum during the day and an AECOM workshop in the evening.

Alternate Technology Demonstration Projects

Last year's consensus agreement also called for Orleans to launch demonstration projects to test the effectiveness of non-traditional technologies to reduce nitrogen in our waterways. The panel broke into separate groups to review possible projects for aquaculture and shellfish propagation, floating constructed wetlands, and permeable reactive barriers.

Aquaculture and Shellfish Propagation

The top projects being considered are to increase the amount of oysters and quahogs in the existing grants at Little Pleasant Bay and to construct an oyster reef demo, possibly in Quanset Pond. (The AECOM team may also consider the option of building a reef at Pochet; propagating oysters in Arey's Pond; and seeding quahogs in Town Cove, Mill Pond, and Lower River.)

Floating Constructed Wetlands

In evaluating sites for floating constructed wetlands, the engineering team considered possible use conflicts, utilities, ease of access, transferability of results, the ability to quantify results, land ownership, and the depth of surface water. The team also eliminated fresh water ponds and large water bodies, at least for the initial demonstration project.

At the top of the list, the team is considering Lonnie's Pond and Quanset Pond. They are also considering floating constructed wetlands in Namequoit River, Pah Wah Pond, and Pocket Neck.

Permeable Reactive Barriers

The AECOM engineers presented an overview of the two PRB technologies being considered. The alternative, a system that employs a narrow trench filled with wood chips/mulch or similar material, may prove impractical, due to the depth of groundwater flow currently being determined. For example, a PRB at Main Street and Tonset Road might need to be 50 feet deep. The other alternative to develop a PRB using injection wells may be more appropriate for Orleans.

PRBs will be sited based on suitability, permitting requirements, the ease of locating monitoring wells, and the potential for removing nitrogen. The top sites being considered are Main Street at Tonset Road, South Orleans Road at Eldredge Park Way and Tonset Road, Gibson Road on Town Cove, and at the Town Landfill

Upcoming Meetings

Wastewater issues appear to be a hot topic in Orleans over the next few weeks:

- On February 4th, from 3 to 4:30, the Orleans Citizen's Forum will host a discussion of the downtown planning effort at the Orleans Council on Aging;
- Also on February 4th, from 6:30 to 8:30, will be the second workshop for the downtown planning effort, also at the Orleans Council on Aging. This will be a joint meeting of the Board of Selectmen, the Planning Board, the Board of Health, the Water Quality Advisory Panel, the Board of Water & Sewer Commissioners, and the Architectural Review Committee;
- On February 9th, from 1 to 3, the Orleans Water Quality Advisory Panel will meet at the Orleans Town Hall for a presentation from the Cadmus Group on their Pleasant Bay Water Quality Data. The Cadmus presentation can be found on:

<http://www.town.orleans.ma.us/water-quality-advisory-panel/pages/fy-2016-owqap-meetings>

- Also on February 10th, beginning at 6:30, the Board of Selectmen will discuss the reset plan for Orleans, public-private partnerships, and Todd Thayer's proposed plans for his 15 acre parcel in downtown Orleans;
- On February 17th, from 9:00 to noon, the Orleans Water Quality Advisory Panel will meet, continuing their plan to meet monthly until Town Meeting.
- On February 18th, at 6:30 PM a joint meeting of the Board of Selectmen and the Orleans Finance Committee will review and discuss the financial planning being completed by AECOM for the Amended CWMP.

PUBLIC COMMENT

There was no public comment.

ADJOURNMENT

The meeting was adjourned at 12:15 PM.

The next meeting of the Orleans Water Quality Advisory Panel will be on Wednesday, February 17, from 9:00 AM to 12:00 Noon.

Attachment A

Orleans Water Quality Advisory Panel Member Attendees

OWQAP Meeting of January 20, 2016

Alan McClennen	Selectman
Sims McGrath	Selectman
Dave Dunford	Selectman
Doug Fromm	Orleans CAN
Joy Cuming	Orleans Community Partnership
Judith Bruce	Former CWMP Committee
Jim McCauley	Orleans Pond Coalition
Gordon Smith	Orleans Taxpayers Association
Ed Daly (Alternate)	Former Peer Review Committee
Ginia Pati (Alternate)	Orleans Water Alliance
Ted Foot (Alternate)	Orleans CAN
Jim Robertson (Alternate)	Orleans Pond Coalition

Liaisons

Virginia Iannini	Brewster Conservation Committee
Sue Levin	Town of Brewster
John Kelly	Tri-Town Board of Managers
Carole Ridley	Pleasant Bay Alliance
Brian Dudley	MA DEP
Patty Daley	Cape Cod Commission
Suzanne Phillips	Orleans Shellfish & Waterways
Joshua Larson	Orleans Finance Committee
Steve Phillips	Orleans Conservation Committee
John Meyer	Orleans Water and Sewer Board
Elizabeth Migliore	Orleans Conservation Trust
Judy Scanlon	Orleans Water Quality Task Force
Sandy Bayne	Town of Eastham
Carolyn Kennedy	Orleans Water Quality Task Force