

Meeting Minutes

To George Meservey, Director of Planning & Community Development
Michael Domenica, PE, Program Manager

CC Betsy Shreve-Gibb, AICP, AECOM Project Director

Subject **Town of Orleans, MA
Water Quality and Wastewater Planning
MassDEP Meeting Regarding Regulatory Conformance of the Preliminary Draft
Amended Comprehensive Wastewater Management Plan**

Project Number 60476644

From Thomas Parece, P.E., AECOM Project Manager

Date and Time April 3, 2017, 3:30 pm

1. Attendees and Affiliation

Brian Dudley, MassDEP	Michael Domenica, Water Resources Associates
Alan McClennen, Town of Orleans, MA	Betsy Shreve-Gibb, AECOM
George Meservey, Town of Orleans, MA	Thomas Parece, AECOM

2. Background and Purpose of the Meeting

The Town of Orleans submitted a preliminary Draft Amended Comprehensive Wastewater Management Plan to the Massachusetts Department of Environmental Protection (MassDEP) and the Cape Cod Commission (CCC).

The purpose of the submittal of this interim document is to provide a mid-course review and “calibration” with the MassDEP CCC and potentially other agencies with respect to the modifications being proposed as a result of the intensive planning and engineering re-evaluation of the approved 2010 CWMP undertaken by the Town of Orleans. This “re-engineering” has been in response to the Commission’s 208 Plan guidance and it focus on the potential benefits of non-traditional technologies, adaptive management and watershed based water quality management, particularly with the goal of achieving affordability of wastewater management for Cape towns.

The Town has made substantial investments in this adaptation of the CWMP and will continue to invest heavily given the critical importance of its water resources to the Town, the Cape and state. The interim review is vital to confirming the usefulness of work done to date and directing the continued investigations and evaluations that will be conducted over the next year to finalize this document.

Specifically, Orleans requested an interim review to provide project-specific discussion and regulatory feedback related to the following important components of the proposed plan:

- The scientific and technical bases provided in the document for the use of Non-Traditional (NT) technologies including PRBs, shellfish/aquaculture and on-site horizontal PRBs, particularly in reference to the regulatory requirements for permitting of these technologies for TMDL and other MassDEP requirements;

- Potential proposed modifications to the approved CWMP to expand the use of NT technologies and correspondingly reduce the use of traditional collection and treatment systems in certain parts of Town. The Town is evaluating the use of STEP/STEG systems and the use of multiple effluent disposal sites employing publically and privately owned sites;
- The proposed approach to water quality studies and analyses needed to confirm compliance with promulgated and pending TMDLs, water quality standards and other regulatory requirements and
- Suitability of the overall plan and its individual components, especially NT projects, for SRF financing, zero-percent loans, debt-forgiveness and other state financial support.

The minutes reflect the project-specific discussion and regulatory feedback on the Preliminary Draft CWMP.

3. Minutes

A. Amended Comprehensive Wastewater Management Plan

- Update and associated evaluations of the Approved Comprehensive Wastewater Management Plan (CWMP) are making positive progress.
- The Amended Comprehensive Wastewater Management Plan (CWMP) must be linked backed to the approved CWMP.
- Need to tie all of the components of the plan together.
- Compliance could be at the subwatershed level (e.g. Lonnie's Pond – Yes; Little Pleasant bay – No) but must address nitrogen at the source.
 - Source reduction must be emphasized.
 - Non-traditional technologies are not the sole means of compliance
 - Source Reduction following US EPA National Policy.
- Other regulatory agencies (non-MassDEP) are OK with in water body treatment and therefore don't require source reduction.
- The approved CWMP is Plan B (fall back position).

B. Traditional Technologies

- Downtown Area – OK since it is the same as Phase 1 of the approved CWMP.
- Meetinghouse Pond Area – Requires 100 percent nitrogen removal therefore collection system required.

C. Effluent Disposal

- Do not need to have a design prepared but do need to have a hydrogeological assessment completed.
- OK to have multiple effluent disposal sites for reach the required capacity.
- Wick Wells may require chlorine addition to result in chloride residual at the wick. Note: This was not required by MassDEP at Linden Ponds, Hingham, MA.
- Wastewater disinfection may not be required.

D. Non-Traditional Technologies

- Lonnies Pond
 - Uptake at 0.28 gm N/oysters – OK with MassDEP. OK to use value as documented and it is not required to reduce the value as part of contingency/factor of safety.
 - Long Term Viability of shellfish is the concern.
 - Sediment Denitrification – No credit for N uptake at this time, more information/data needed. Don't include as part of the solution.
 - No credit for nitrogen removal using quahogs until their viability is shown via a demonstration project.
- PRBs
 - Demonstration project showing positive results but it is still too early to confirm viability with only two data points. Still need more data.
 - Can be considered as source reduction if it is relatively close to the nitrogen source and is an integral part of the program.
- NRBs
 - Testing at Barnstable County Test Site showing a reduction down to about 8 mg/l.
 - Need to have more data points in order to set the approval treatment level.

E. Watersheds

- 5 shared watersheds with 3 impaired. Need to run TMDL model once all of the proposed effluent disposal sites/capacities are established.
 - Little Namskaket - Confirm MEP N-load threshold
 - Namskaket - No TMDL. USGS and SMAST reports documented no impacts caused by fresh water. No impact from Tri-town Septage Treatment Facility effluent disposal.
 - Nauset – TMDL will be issued but not prepared yet. Will required nitrogen load reduction from collection, shellfish, PRB, etc. Expect 55 percent reduction from septic systems. Expect collection system to be the primary component.
 - Pleasant Bay – TMDL issued. New breach has occurred. CADMUS report has considerable data but it is not consistent regarding bioactive nitrogen vs. total nitrogen. Meetinghouse Pond is compliance strategy - Refer to Approved CWMP.
 - Rock Harbor - TMDL will be issued but not prepared yet. Timing is not critical. Pending Cedar Pond evaluations/planning
- Need to show load reduction using traditional technologies with non-traditional technologies.

F. Contingency Plan

- Need to have a plan with proven technologies if non-traditional technologies don't work = Link back to approved CWMP
- Required, Proven reliable backup = Approved CWMP

G. Schedule

- Schedule of 22 years vs. Figure 2.3 of the approved CWMP.
- Phasing / adaptive management in 5 year cycles. Use 5 year cycle per 208 Plan (wiring diagram).

- Watershed permits to have compliance schedule.

H. Community Partnerships

- Pleasant Bay Alliance
- Meetings with Key Stakeholders (e.g. Town Board of Selectmen)

I. Affordability

- Check on recently updated WERF Affordability Metrics.

J. Conclusions

- Good document.
- Need better integration with the approved CWMP
- Show compliance at watershed level.