



Town of

Orleans
Massachusetts

Orleans Water Quality Advisory Panel

Water Quality and Wastewater Planning

Program Status Update

July 13, 2016

Agenda

- 1. Approval of Meeting Summary of April 20, 2016 and June 15, 2016**
- 2. Tri-Town Septage Facility Decommissioning and Demolition Update**
- 3. Status of Public-Private Partnership Options Evaluations**
- 4. NT Technology Demonstration Project Update**
- 5. Monitoring and Modeling Plan (AMP) Update**

Break

- 6. Revised Consensus Agreement: Discussion and Approval**
- 7. Amended CWMP Document: Review and Submission Plans**
- 8. Proposed Summer OWQAP Meetings**
- 9. Warrant Agenda for Fall Town Meeting: Discussion**
- 10. Other Items**
- 11. Public Comment**



Tri-Town Septage Facility Decommissioning and Demolition Update

❖ Decommissioning Plan

- Workshops Held on June 13, 2016 and July 6, 2016
- Developed Draft Work Plan
- Meeting held with MassDEP on June 22, 2016
- Final Work Plan Submitted on July, 12, 2016
- On-going Coordination with Operating Staff

❖ Design Phase

- Preparing for Field Investigations (Hazardous Materials Assessment; Environmental Site Assessment (ESA); and Equipment Inventory)
- Beginning Preparation of Contract Documents for Demolition



Tri-Town Septage Facility Decommissioning and Demolition Update (cont.)

❖ Next Steps: Coordination and Permit Meetings

- Orleans Site Plan Review Committee
- Orleans Conservation Commission
- MassDEP
- NPDES Stormwater Permit
- Natural Heritage Endangered Species Program
- Cape Cod Commission
- Old King's Highway Regional Historic District Committee
- Massachusetts Historical Commission

❖ Schedule

- Decommissioning – June 2016 thru August 2016
- Contract Documents – June 2016 thru November 2016
- Bidding – November 2016 thru February 2017
- Town Meeting Appropriations (Brewster, Eastham & Orleans) – May 2017
- Demolition – September 2017 thru February 2018



Status of Public-Private Partnership Evaluations

- ❖ Working with proponent of near-term large scale Downtown development to move project forward
- ❖ Consider needs/options of a range business and residential owners
- ❖ Engaging Selectmen, residential and business community, Planning Board, FinCom, Health Department, Selectmen, engineering team
- ❖ Addressing zoning needs, issues and opportunities
- ❖ Engaging outside privatization consultant to identify, define and evaluate potential ownership, management, operational, financing, permitting, phasing, residential development and other issues
- ❖ Develop allocations of capital and operating costs to downtown properties based on value of centralized system, water usage.
- ❖ Timeframe: Recommend best option and next steps in late August



NT Technology Demonstration Project Update: Shellfish/Aquaculture

❖ Conservation Commission

- RDA hearing held on June 21, 2016 with Approval to Proceed (negative determination) Granted.
- Requested Project Report by December 31, 2016

❖ Installation

- 138,000 2-inch Oysters in 560 Bags Installed on June 22, 2016
- 60,000 1-inch Oysters in 240 Bags Installed on June 27, 2016



NT Technology Demonstration Project Update: Shellfish/Aquaculture (cont.)

❖ O&M

- Flipped Bags on July 5, 2016

❖ SMAST Monitoring

- Collected Baseline Samples Before the Oyster Installation
- Establishing Eight Monitoring Stations
 - Total Nitrogen (particulate organic and inorganic nitrogen, and dissolved organic and inorganic)
 - Dissolved Oxygen
 - Chlorophyll-a
 - Turbidity/clarity
 - Soluble Reactive Phosphate



NT Technology Demonstration Project Update: Shellfish/Aquaculture (cont.)

❖ Schedule

- O&M and Monitoring through October, 2016
- Draft Monitoring Report by January 31, 2017
- Planning/Decision Making in February 2017 for Summer 2017 Program

❖ Next Shellfish Working Group Meeting

- July 27, 2016 at 4:00PM
- Skaket Room of Orleans Town Hall
- Frequent project updates to be distributed



NT Technology Demonstration Project Update: Shellfish/Aquaculture (cont.)

❖ Next Steps – Summer/Fall 2016

- Quanset Pond – Initiate Development of Work Plan (ie. Baseline Monitoring, and Conduct Viability Study to Optimize Tray Size, Planting Density and Installation Logistics)
- Town Cove – Planning for Quahog Population Survey as First Step in Demonstration Project Design
- Existing Growers – Continue Discussion to Expand and Optimize Production from Existing Grants



NT Technology Demonstration Project Update (cont.)

Permeable Reactive Barriers (PRB)

Eldredge Park

- ❖ Underground Injection Control Permit and MassDEP Review
- ❖ Mark out Monitoring Well and Injection Point Locations
- ❖ Install Monitoring Wells and Collect Baseline Groundwater Samples
- ❖ Application of Food-grade Carbon Substrate through Direct-push Tooling
- ❖ Groundwater Sampling for Performance Monitoring

Town Landfill (Town Cove)

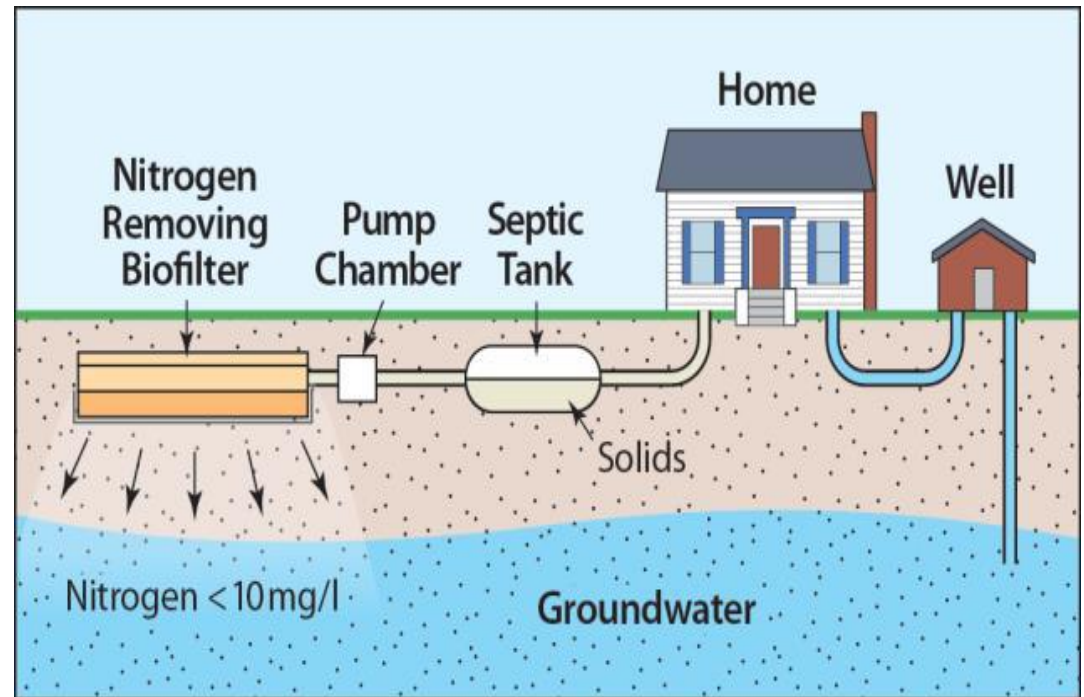
- ❖ Underground Injection Control Permit and MassDEP Review
- ❖ Design Occurs Summer 2016
- ❖ Meeting with GHD, DPW and DEP to integrate PRB studies and design to address dioxin issue along with nitrates



NT Technology Demonstration Project Update

Floating Constructed Wetlands (FCW)

- ❖ Evaluating Horizontal On-Site PRBs (Nitrogen Removing Biofilter (NRB) as Alternative to FCW
- ❖ Meeting Held with Barnstable County Board of Health on June 28, 2016
- ❖ Potential Demonstration Project in Orleans
- ❖ Consider Town subsidy to home owners to “pilot” demo systems with cooperation with the County



Conceptual schematic of Nitrogen Removing Biofilter (NRB).
Source: The New York State Center for Clean Water
Technology, June 2016

Monitoring and Modeling Plan (AMP) Update

❖ **SMAST Scope of Work / Priorities and Schedule**

❖ **Water Quality Monitoring for MEP Compliance**

- Ongoing coordination with SMAST and other WQ monitoring programs
- Planning data base integration and management

❖ **Water Quality Monitoring for NT Project Baselines**

- SMAST technical and monitoring support for Lonnie's Pond demo project
- Developing scope, budget for Quanset Pond demonstration project
- Nauset Estuary – support of increased monitoring program
- MEP compliance and MEP model recalibration – Nauset and Pleasant Bay data gap analyses (in conjunction with PBA)

❖ **Ponds**

- Working with SMAST to review and integrate new water quality data
- Developing scope, schedule and budget for Ponds Management Plan for Fall Town Meeting approval (See draft document for comment)





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Break

Consensus Agreement Status Update: Discussion and Approval

❖ **Comments & Suggestions Received**

- Changed Title
- See Revised red-line version for additional changes

❖ **Discussion & Agreement**



Amended CWMP Document: Review and Submission Plans

❖ **Supplement to Existing CWMP**

- Description of Current Plan and Changes from Original CWMP
- Summary of Financial Plan and Public-Private Partnership Evaluation
- Schedule for Implementation
- Regulatory Requirements
- Summary of Technical Memoranda with Technical Memoranda in Appendix

❖ **208 Submission Requirement: Orleans has met submission requirements to Cape Cod Commission for 208 Plan submittal to USEPA**

❖ **Draft ACWMP Submitted to Town on June 30, 2016 and Resent on July 12, 2016**

- Over 100 pages and 30 Appendices
- Update through the Fall



Proposed Summer OWQAP Meetings

❖ **OWQAP Meetings**

Summer OWQAP Workshops - Town Hall at 19 School Road

- August 10, 2016, 9:00 am to Noon
- September 14, 2016, 9:00 am to Noon

❖ **Public Information Activities - Status Reports on NT Demonstration Projects**

❖ **Work Group Meetings**

- Contact AECOM Project Manager for schedules



Warrant Agenda for Fall Town Meeting: Discussion

❖ **FY 2017 Remaining Funding Approval**

- November 2016 to June 2017 – Fall 2016 Special Town Meeting

❖ **Scope of Work and Associated Cost to be Developed over the Summer**



Other Items and Public Comment

❖ Public Comments and Questions





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Thank You