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CAPE COD  
COMMISSION

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## Minutes

Cape Wide Waste Management Agencies Meeting  
Wednesday, June 24, 2015 6:00 p.m.  
Monomoy High School, 75 Oak Street  
Harwich, MA

Paul Niedzwiecki, Executive Director of the Cape Cod Commission, welcomed everyone to the meeting. The presentation began with a video on the Section 208 Plan Update ([https://youtu.be/D6jks\\_nMKs](https://youtu.be/D6jks_nMKs)).

Mr. Niedzwiecki said that over the past few months the Commission held a series of meetings to discuss the designation of waste management agencies. At these meetings the allocation of nitrogen responsibility was reviewed with towns. The five principles of assigning nitrogen responsibility are:

1. assign responsibility at the subembayment level
2. start with unattenuated load and apply attenuation where available
3. calculate existing responsibility from existing attenuated nitrogen load
4. calculate future responsibility from unattenuated potential nitrogen load
5. data updates every five years with option and process for local modifications

Mr. Niedzwiecki presented an infographic which showed the allocation of subembayment watershed nitrogen responsibility by town. Swan Pond River, Popponesset Bay, Nauset and Wellfleet Harbor were used as examples. The graphic encapsulates the nitrogen problem, which towns share watersheds and the responsibility of each town. This information is also available in the subembayment viewer, a map based geo-spatial representation of the data, ([http://gis-services.capecodcommission.org/apps/JS\\_Developing/SplitsViewer/](http://gis-services.capecodcommission.org/apps/JS_Developing/SplitsViewer/)). To use the subembayment viewer, the user clicks on a town and the viewer displays the town's subembayments and how the subembayments are shared with neighboring towns. Subembayments can be analyzed further to see the nitrogen responsibility by contributing town.

Mr. Niedzwiecki said the information contained in the 208 Plan Update is included in the individual town subembayment reports. The town reports contain information about the subembayments at the town level. This information is the start of the plans for the 53 watersheds to be addressed in the 208 planning process.

Mr. Niedzwiecki introduced Erin Perry, Special Projects Coordinator at the Commission, who reviewed the next steps of the 208 process. She said on June 15, 2015 Governor Baker certified the Section 208 Plan Update. As part of the plan, the towns on Cape Cod were designated as waste treatment management agencies responsible for planning and implementing water quality plans in their watersheds. Towns need to develop watershed reports which would include scenarios that form the outer bounds of an adaptive management plan. This would include a collection or traditional scenario and a non-collection/alternative scenario. The plan suggests a twelve month time frame for developing the reports. She said many towns are in the process of creating these scenarios already. The scenarios included in the report can form a basis for an adaptive management plan, aide in discussions with neighboring towns and consider design load. Design loads are established by WMAs, define non-nitrogen leads and consider stormwater and fertilizers credits. A hybrid solution, the use of collection and non-collection approaches, will be the result of planning and achieve design load reduction.

Ms. Perry said the Commission has assisted towns with technical assistance and have prepared scenarios for impaired watersheds with input from stakeholders. If after the 12 month time frame, a WMA does not complete a report, the Commission will issue a default watershed report that will include the Commission created scenario. The Commission will also prepare an implementation report which will review what the WMAs accomplished over the 12 month period.

Ms. Perry said a watershed report template is included in the 208 Plan Update to serve as guidance for communities. The watershed report should include a description of the problem (MEP technical report status, TMDL status etc.), contributing towns, MEP restoration scenario, estuary and watershed information, freshwater sources, degree of impairment, areas of need, nitrogen management approaches and potential watershed scenarios.

Ms. Perry walked through the targeted watershed planning process. The first step is for a community to look at their nitrogen load, consider stormwater and fertilizer credits that can be applied to the nitrogen load and then adjust the load to incorporate local planning such as economic development, future growth and Title 5 failures. She said communities will use the design load when considering the collection and non-collection technologies identified in the traditional and non-traditional scenarios to develop a hybrid plan. She said the technologies chosen will vary between communities, as communities will choose what works best for their individual needs and areas. The Commission has developed decision support tools to assist communities in making these decisions. The collection scenario and non-collection scenario will form an adaptive management plan. Each adaptive management plan will have a monitoring program associated with it. The monitoring program will evaluate the effectiveness of technologies. The adaptive management plan will form the basis of a watershed permit.

Ms. Perry introduced Kristy Senatori, Deputy Director, who facilitated a panel discussion on watershed teams. She explained that watershed teams would provide an interdisciplinary approach to assist towns who may need additional help in

implementing the 208 Plan Update and the hybrid process. She said the goal of the watershed team approach is to assist WMAs in designing innovative and cost-effective plans. The team will work with town staff to develop plans that will achieve water quality goals, meet essential community needs and comply with permitting requirements. Teams can be comprised of a number of subject experts dependent on the communities needs. Teams can consist of expertise in the following areas: water resources, geographic information systems (GIS), land use planning, economic development, financial modeling, legal/regulatory, outreach and infrastructure.

Watershed teams will assist towns in developing plans by working together to develop an outline and create tasks and a schedule. The team will assist communities apply decision support tools (watershed tracker/calculator, WatershedMVP, financial models and scenario assessment models) created by the Commission. The team will review plans created, recommend appropriate engineering solutions and will evaluate the feasibility of hybrid plan components. Other areas of support the team can provide is working to define and evaluate public/private options and to assist in developing comparative costs. The Commission will also assist in the development of permitting strategies and developing targeted monitoring and adaptive management plans.

Ms. Senatori asked the panel to introduce themselves and speak a little about their areas of expertise.

Mr. Bob Ciolek, consultant to the Cape Cod Water Protection Collaborative, said that over the years communities have asked the Collaborative for assistance on how they could pay for the plans. He has worked with communities to review funding options, has reviewed CWMPs to provide feedback to town managers and reviewed completed plans at the request of boards of selectmen. He said there is no magic bullet but that following the 208 plan will result in significant savings.

Heather McElroy, Natural Resource Specialist and Planner at the Cape Cod Commission, spoke of her work on the non-traditional team at the Commission reviewing alternative technologies. She said that she can support towns as they consider types of technologies, where they can be applied, screening criteria, and regulatory considerations.

Jessica Wielgus, Cape Cod Commission Counsel, said her role has been to give thought to how the regulatory process can be streamlined. She can assist communities with reviewing the best options for working with other communities and considering the best method for intermunicipal cooperation.

Tom Cambareri, Cape Cod Commission Watershed Director, said the Water Resources Department has been working with the 15 towns in multiple areas under the overarching goal to protect and restore Cape Cod's water. The water resources department has worked extensively with the Commission's decision support tools creating conventional solutions for degraded watersheds. He said his staff is available to assist towns in using these tools, to evaluate previous work and to discuss other areas of water quality management such as groundwater and stormwater.

Patty Daley, Deputy Director, said she has been working on how to coordinate federal, state, regional and local planning processes to allow for a seamless review. She also has worked with build out and flow neutral regulations. She said she will work with communities to guide them through the regulatory process.

Scott Horsley, consultant to Cape Cod Commission, said he has been working with the Commission to develop the technology matrix, a compilation of alternative technologies, and developing non-traditional plans for 53 watersheds. He can assist towns evaluate technologies and develop hybrid watershed plans.

Ms. Senatori asked Mr. Horsley what technologies are the most appropriate to site on Cape Cod. Mr. Horsley said that there are a lot of choices for communities to choose from, oysters and shellfish show a lot of promise. Permeable reactive barriers and floating constructed wetlands also show promise and there are pilot projects for both technologies on Cape. He said eco toilets should also be kept in mind, especially for public facilities.

Ms. Senatori asked Ms. McElroy if she had any advice on restoration and remediation technologies, or if she could give advice to communities looking at those technologies. Ms. McElroy said the Commission convened a panel of local and national experts to review the alternative technologies in detail. The panel noted areas that needed more research, areas for pilot projects and technologies for piloting projects. She said as more information is obtained about these technologies it will be included in the matrix, which will be reviewed annually. She said the matrix will help guide communities make better informed decisions.

Ms. Senatori said that over 35% of Cape Cod's housing stock is seasonal homes. She asked Mr. Ciolek what advice he would give to communities on how to plan based on this reality. Mr. Ciolek said most communities have come to the conclusion that everyone who lives in the community benefits from healthy water quality as well as people who visit that community. He said if a community decided only those connected to a treatment facility should pay that could place the burden on less than half the town's households. He said that everyone in the community should pay but that the specifics can be discussed in the individual communities.

Ms. Senatori asked Ms. Wielgus how implementation of wastewater management plans would be different moving forward since the 15 towns have been designated as Waste Treatment Management Agencies. Ms. Wielgus said the main difference is that planning is being made on a watershed basis. She said towns working together on watershed reports with neighboring towns and looking at and implementing municipal agreements show affirmative action to state and federal regulators.

Ms. Senatori asked Ms. Daley what regulatory assistance would be provided to the towns. Ms. Daley said a good example of Commission regulatory assistance was the agencies work with the Town of Falmouth. Falmouth had a plan with two watershed plans they wanted to implement, the Commission adjusted the DRI review and worked with MEPA and MassDEP to successfully move the two plans forward. She said the goal of the 208

Plan Update is targeted watershed plans and targeted watershed review. In the past, CWMPs were reviewed as a development of regional impact and that is not the most effective or efficient review process. The Commission is now working on a Capital Development of Regional Impact review which will look at infrastructure planning projects and be a more supportive process overall.

Ms. Senatori asked Mr. Cambareri what advice he could give to towns on water quality management planning and working with neighboring towns. Mr. Cambareri said there is potential for regional economies of scale, solutions need to be looked at on a regional scale. He said discharge sites need to be considered, both existing and future and communities need to focus their efforts on the most severely degraded watersheds.

Ms. Senatori thanked the panelists and opened the meeting up for questions.

An attendee asked how Cape Cod can eliminate nitrogen from the region. Mr. Horsley said the region is looking at ways to recycle nitrogen. One example is using fertigation wells on golf courses, which can reduce the need for the purchase and use of commercial fertilizers.

An attendee said conventional treatment plants do not address contaminants of emerging concern and these contaminants will be enter the disposal sites and will remain in the sludge. He asked what advice the Commission can offer communities on how to deal with this issue. Mr. Cambareri said it is important for communities to look at where disposal sites are located. He said the Commission is cognizant of the issue and will work with towns in making informed decisions.

An attendee asked if all nitrogen sensitive watersheds have TMDLs and if nitrogen sensitive watersheds can receive additional nitrogen. Ms. Daley said that most but not all nitrogen sensitive embayments have a TMDL and the MEP project is close to issuing technical reports on those that don't. She said that planning is based on existing nitrogen load and communities will have to consider where and how they want to develop so as not to increase nitrogen load in these areas.

An attendee said they had notified the Commission of errors in the tech matrix and those errors have not been fixed. Mr. Horsley said that there have been 55 versions of the tech matrix as a result of new information and feedback. He explained they are more a difference of opinion than errors. Annual updates to the matrix will be made when more information becomes available.

An attendee asked why energy conservation and sustainable systems have not been addressed in more detail. Ms. McElroy said that there are opportunities moving forward as technologies are piloted and tested to see how they perform and about co-benefits.

Bill Hinchey, Yarmouth Town Manager, asked Mr. Ciolek how the 208 Plan Update will assist in securing funding from non-municipal sources. Mr. Ciolek said if communities implement the adaptive management programs, as recommended in the 208 plan, there could be a 20-25% cost savings. He said communities should work together on creating a

well funded lobbying effort because the federal and state governments will not give money easily and need to feel pressure from the Cape delegation and Cape residents. Mr. Ciolek said the Baker administration is aware of the water quality problem on Cape Cod and the state has already funded efforts water quality efforts, such as the 208 Plan Update.

An attendee said that the community needs to be more involved, that the reason alternative technologies were considered in Falmouth was due to the work of residents. Mr. Niedzwiecki said one of the major components of the 208 Plan Update was community engagement. The community engagement process is documented in chapter one of the plan. He said the 208 stakeholder process engaged 170 Cape residents and the plan was shaped by their input.

Mr. Niedzwiecki said Cape towns have been working to address the water quality issues for over ten years. The 208 Plan looked at the various hurdles the towns face working to fix the problem and lowered the barriers toward implementation. The 208 planning process has led to MEPA allowing towns to come forward with limited plans. This strategy allows communities to plan strategically and build only what is needed, which will cut costs for the town and taxpayers. The technical assistance of watershed teams will support communities throughout the planning process.

Mr. Niedzwiecki said the plan offers communities regulatory flexibility with the use of targeted watershed plans. He said it does not make sense for the Commission to review systematic municipal plans like it is a supermarket development. The Commission is developing a new process, which includes watershed teams working with towns which will allow for an expedited and easier review.

Mr. Niedzwiecki said MassDEP has yet to issue regulations around the watershed permit and this is an opportunity for the Cape to define what a watershed permit should look like. The use of targeted watershed permits will keep costs down.

Mr. Niedzwiecki said year round residents cannot afford to pay for an extensive sewer plan across the Cape. Planning for a smaller footprint, building only what we need and using alternative technologies can decrease the total cost. Collection systems can be built where they make the most sense and are cost effective.

Mr. Niedzwiecki said the state legislature acted last year to include up to 25% principle forgiveness to 0% SRF funds. He thanked the Cape delegation, Senator Wolf and former senate president Therese Murray, for working hard to secure the funds used for the 208 Update process. He said legislative reform has already occurred that will reduce the barrier to implementation that town leaders have been dealing with for almost a decade.

Mr. Niedzwiecki said that the Cape, Southeastern Massachusetts and Rhode Island have worked together through the Southern New England Partnership, which has resulted in a federal earmark that Senator Reed of Rhode Island added to the federal budget appropriating \$2 million to look at coastal restoration. \$750,000 of that money has come to Cape Cod to fund three projects. The state and Governor Baker have included an

earmark in the state budget of \$250,000 for four years to support a monitoring program on Cape Cod which is essential in evaluating alternative technologies.

Mr. Niedzwiecki said that the 208 Plan Update has reduced the cost of fixing the problem. The initial cost of fixing the problem, sewerage the entire Cape, was estimated to be between \$6-8 billion. The Regional Wastewater Management Plan Cape wide estimate was between \$4.6-6.2 billion. The current 208 plan has reduced the estimated cost to between \$2-3.8 billion by facilitating smaller footprints and recommending the broader use of remediation and restoration techniques, as relying exclusively on source reduction technologies increases the cost. Cost sharing amongst towns will result in lower costs for residents and more affordable scenarios.

Mr. Niedzwiecki showed a storymap (available on the Commission website <http://www.capecodcommission.org/208/tools/projects/>) of current projects and facilities across the Cape. He highlighted a few of these projects.

- Investigation of non-proprietary means of removing nitrogen in onsite septic systems: George Heufelder, Barnstable County Department of Health and Environment, runs the Title 5 testing program at Joint Base Cape Cod. This program mainly tests Title 5 systems that remove nitrogen, proprietary black box denitrifiers. As part of the 208 Plan Update, Mr. Heufelder looking at non-proprietary soil based technologies. Barnstable County is actively investing in this technology which could bring down costs significantly if successful.
- Gateway Marina Stormwater Best Management Practices: This project is one of the three projects funded by federal money. The project will intercept stormwater runoff from discharging into Hyannis Inner Harbor.
- Wellfleet Harbor Oyster Propagation Project: The Town of Wellfleet is looking at oysters to restore the natural system and address the harbor's nitrogen load.
- Orleans Water Quality Conceptual Plan: This is the new plan the Town of Orleans has been working on over the past year.

Mr. Niedzwiecki introduced Alan McClennen, Town of Orleans Selectman, to discuss the town's planning efforts. Mr. McClennen said that two years ago the town's wastewater management plan was defeated at town meeting. The town decided it was time to begin a planning process with substantial citizen participation much like the 208 process. The Orleans process lasted six months, involved over fifty stakeholders who met every two weeks with professional facilitators to discuss ways to use non-traditional and traditional approaches to solve water quality problems. During this process it was determined that the most cost effective plan is to use traditional technologies in the downtown area and a mix of non-traditional technologies (aquaculture, floating constructed wetlands, fertilizer bylaws and habitat restoration) in other areas of the town. Mr. McClennen said in the last 39 years the town has gone to town meeting with water quality planning efforts. Of those 39 times, 35 times there was a 60% margin to appropriate funds to solve Orleans' water problem. He said that since the start of the Orleans stakeholder meetings two town meeting articles on wastewater have passed unanimously. The first article was to spend resources on exploring non-traditional technologies and the second article was to fund the

beginning of the planning process.

Mr. Niedzwiecki thanked Mr. McClennen and opened the meeting up for questions.

An attendee asked if the Commission will assist towns with outreach and education efforts. Mr. Niedzwiecki said that outreach assistance can be accessed by towns through watershed teams. He said the Commission worked with the Town of Orleans during their stakeholder engagement process and helped them find outside resources.

An attendee asked if the five watersheds that were used as examples in the previous WMA meeting were prioritized as the most critically impaired watersheds that needed to be addressed first. Mr. Niedzwiecki said the five watersheds were chosen because they included the most number of towns and were the best examples to use in the subregional meetings. He said there is information in the plan about how communities can prioritize watersheds. He said all 53 watersheds cannot be addressed at the same time because of limited resources. Watershed prioritization needs to take into account level of degree of impairment/water quality and community consensus among other criteria.

An attendee asked when WatershedMVP will be made available to the public. Mr. Niedzwiecki said WatershedMVP can be found on the Commission's website. He said there are different levels of WatershedMVP- beginner, intermediate and advanced.

An attendee said that environmental justice needs to be addressed because the Cape has a large number of low income residents and many retirees. Mr. Niedzwiecki said that a large percent of the Cape's population have a fixed income. He said there are federal funds that can be used for capital wastewater projects in environmental justice areas.

An attendee asked for more information on the monitoring program. Mr. Niedzwiecki said monitoring is an appropriate economy of scale on a regional level. He said there are many organizations across the Cape that have been running monitoring programs but the funding is uncertain and the Cape cannot afford to have gaps in monitoring data due to lack of funds. The Commission is working with local agencies to fund monitoring programs and the goal is to begin ocean monitoring. The monitoring program also needs to include performance monitoring of technologies to determine their nitrogen removal rates and freshwater monitoring is very important.

An attendee asked if the use of aquaculture would be on a commercial scale only. Mr. Horsley said that it can be used both residentially and commercially.

An attendee asked if WMAs would address phosphorus or if that is an issue towns will deal with individually. Mr. Niedzwiecki said the 208 designation was specific to nitrogen so that is what the plan focuses on. He said phosphorus was kept in mind throughout the process. For instance, alternative technologies were looked at for how they treated phosphorus and contaminants of emerging concern and this information is included in the matrix.



He said the process the WMAs go through over the next 12 months will foster a phosphorus discussion. An attendee asked if phosphorus will be required in water quality monitoring. Mr. Cambareri said that it could be if there was a downgradient receptor such as a pond.

Mr. Niedzwiecki said the technology will be reviewed annually and a protocol will be established for the public to submit their concerns and questions.

Mr. Niedzwiecki thanked all the elected and appointed officials, stakeholders and members of the public who attended.