

**MINUTES OF THE
CAPE COD WATER PROTECTION COLLABORATIVE
Governing Board Committee
April 29, 2015**

A meeting of the Cape Cod Water Protection Collaborative was held on April 29, 2015 at 9:00 a.m. in the Innovation Room of the Barnstable County Strategic Information Office in Barnstable, MA.

Members:

Barnstable	Mark Ells	Absent
Bourne	Linda Zuern	Present
Brewster	Sue Leven	Absent
Chatham	Florence Seldin	Present
Dennis	Vacant	Vacant
Eastham	Jane Crowley	Present
Falmouth	Rebecca Moffitt	Present
Harwich	Larry Ballantine	Present
Mashpee	Michael Richardson	Absent
Orleans	Sims McGrath	Present
Provincetown	Vacant	Vacant
Sandwich	David Mason	Present
Truro	Patricia Pajaron	Absent
Wellfleet	Curt Felix	Absent
Yarmouth	William Hinchey	Absent
County Appointee	Linell Grundman	Absent
County Appointee	Lindsey Counsell	Absent
Ex-officio member	George Heufelder	Absent
Ex-officio member	Paul Niedzwiecki	Present

Staff Present:

Andrew Gottlieb	Executive Director
Gail Hanley	Cape Cod Commission

Since the seven Board Members that were present did not constitute a quorum, no votes were taken on any agenda items. The meeting continued with presentations and general discussion of agenda items.

1. Minutes of March 11, 2015

No vote was taken. The minutes will be voted on at the next CCWPC meeting on May 13, 2015.

2. 208 Area-Wide Water Quality Management Plan Update

Paul Niedzwiecki, Executive Director of the Cape Cod Commission, said the 208 Plan has been filed. The Commission has completed the first round of sub-regional meetings, the second round starts next week, and the third round of meetings will begin sometime in June. They are in the process of designating Wastewater Management Agencies (WMAs), they will be submitting the designations on June 1st and the EPA is still on track to approve the Plan by September 15th. He said the Plan has provided a lot of good traction in other states on how to address the problem.

Gerry Potamis, Wastewater Superintendent in Falmouth, expressed concern about communities adopting WMAs and their obligations under WMAs in regard to permitting and updates could result in third-party lawsuits.

Andrew Gottlieb said an Administrative Consent Order provides a shield against that happening. He said with a permit, and even one in violation of an update, the likelihood of someone pursuing a lawsuit because of a non-update is so small and should not be a worry as an Administrative Consent Order would be a shield against that.

3. Report on Atmospheric Deposition Study by the Marine Biological Laboratory (MBL)

Executive Director Andrew Gottlieb said the MBL has been working under contract with the County on an Atmospheric Deposition Study and he invited Ivan Valiela today to provide a report on that study.

Ivan Valiela, Marine Ecologist at the MBL, with the use of PowerPoint slides presented the effects of recent lower rates of atmospheric nitrogen deposition on eutrophication in Waquoit Bay as a test case. He said the origin of the project comes from the findings that nitrogen loads to developed temperate regions decreased by about 50 percent since 2000 and its effect on estuaries that we are trying to protect. He said the cause of the decrease is attributed to emissions and decreased precipitation and said precipitation on Cape Cod has changed due to a shift in wind direction and rain—fewer southeasterly winds affect Cape Cod. He described the data source that is being used—2009 versus 2014— and said a significant amount of research and time intensive work is being done with the data they received. He explained their task/work plan and said they were charged to estimate the effects of lower atmospheric loads during decades when increased development took place, assess the differences in watershed delineations and look into category errors in the data source. Mr. Valiela asked for comments from the Board.

Chair Larry Ballantine inquired about build-out scenarios and the role of atmospheric deposition. Mr. Valiela explained how one source of nitrogen decreased and one source increased. He said local communities can control nitrogen loading but it cannot control atmospheric deposition. He said they would have to work closely with towns or the county to obtain data for a build-out.

Linda Zuern inquired about the cost of the study going forward and said she is not sure it's useful right now since they don't know what systems towns will be using. Mr. Gottlieb said the project has attracted more money from other resources. He said CCWPC has been very clear about the scope of the contract with MBL.

Florence Seldin inquired about the modelling that is being done in Waquoit Bay and asked if the data could be extrapolated to other areas and extended beyond Waquoit Bay. Mr. Valiela said based on the amount of money in the contract, it would keep the study in that one area. He said they could possibly train Cape Cod Commission staff with the protocols to do studies in other areas.

Gerry Potamis asked how the information compares with the land use information that the Commission already has. Mr. Valiela said they could have meetings with the Commission to make sure MBL is not duplicating the effort. He said they could develop a collaboration schedule with the Commission.

Florence Seldin inquired about the downside and the benefit to updating with 2014 data. Mr. Valiela said the benefit is that you have a much more current description of Cape Cod and the downside is that it takes a lot of effort. Mr. Gottlieb said the data is more updated. Sims McGrath asked if the 2014 data has different levels of detail than the 2009 data. Mr. Valiela said that the 2014 data would have more detail. Paul Niedzwiecki said the Commission would be willing to work with the MBL on this effort. Mr. Niedzwiecki said if we are moving toward adaptive management measures perhaps

looking at historical data over 10 years would allow them to make calibrations on deposition from that data. Jane Crowley said they would get so much more from the 2014 data, it would integrate an open space component that they don't have, and with fertilizer use they are just estimating. Mr. Valiela said the consensus appears to be with using 2014 data. Mr. Valiela said they will transfer from the 2009 data to the 2014 data.

Robert Duncanson, Director of Health and the Environment in Chatham, said based on the information presented if the nitrate component decreases but the ammonia component increases would that be considered the new norm. Mr. Valiela said that is dependent on wind shifts—nitrate can be determined for sure, ammonia is harder to predict because of wind shifts and dry deposition is hard to monitor.

Mahesh Ramachandran, Environmental Economist at the Cape Cod Commission, said in the last 20 years there has been a change in the global economy and it would be interesting to look into modelling this. Mr. Valiela said he would be willing to collaborate but it would cost more money.

Nate Weeks said there would be value in monitoring the analytical data from the Cape as it would work into the 208 Plan.

4. Report on the Impact of Water Quality on Property Values by the Cape Cod Commission

Mahesh Ramachandran, Environmental Economist at the Cape Cod Commission, with the use of PowerPoint slides presented his report on *Water Quality and Cape Cod's Economic Future: Nitrogen Pollution's Economic Impact on Homes and Communities*. He referred to a map illustrating areas of excess nitrogen watersheds and watersheds without excess nitrogen and described sources of nitrogen. He said reduced water quality on Cape Cod could result in eutrophication, algae blooms, loss of eelgrass, loss of fish habitat, shellfish closures, decaying algae, aesthetic impacts, tourism impacts, fewer jobs, reduced revenue and reduced property value. He said he based his research on the question: does increase in nitrogen concentration affect coastal property values and if so by how much? He said residents in the Three Bays study site were randomly selected to participate in the survey. He said the data overview consists of the study period from 2005-2013, single-family property sale prices, property attributes from assessment data, water quality data from 18 monitoring stations, and GIS parcel and embayment maps. He said as nitrogen levels increase sale of homes decreases. He described estimation results and said the main finding after accounting for other factors revealed that the property sale price was lower by 0.61% for every 1% increase in nitrogen compared to what the level sale prices would have been had the water quality not decreased. He said the water quality in the Three Bays area decreased by 15.8% between the years of 2005-2013 and if action had been taken in 2005 to reduce nitrogen discharge and if that action had resulted in 3% less total nitrogen by 2013, the average home price would have been \$16,662 to \$32,962 higher in 2013. He said in the Three Bays study area alone that represents a \$41-80 million sale value loss and Cape-wide loss could be in the hundreds of millions over the next 30 years.

Linda Zuern said in Buzzards Bay people are not buying because of the high cost of flood insurance. She asked who is losing the money as property taxes are still the same. Andrew Gottlieb said the individual homeowners lose the value of their homes. Jane Crowley said Eastham has experienced impacts because of private wells but yet they have seen an increase in values over the assessed value of homes.

Ed DeWitt, Executive Director of the Association to Protect Cape Cod, said in the Hatchville area of Falmouth values did go down because of the MMR but it changes when there is a solution to the problem.

Sims McGrath said assessed values can over predict trends; when assessments go up and down they do so in an exaggerated way. Mr. Gottlieb said a knowledgeable buyer would know the difference. Florence Seldin said no one knows for sure that value decreases for that reason; it's an interesting exercise but we can't say definitively that is the case.

5. **Budget Report** — This item was not discussed.
6. **Municipal Service Approval Report** — This item was not discussed.
7. **Member Reports** — This item was not discussed.
8. **Executive Director Report** — This item was not discussed.
9. **Adjourn**
The meeting adjourned at 10:50 a.m.

MATERIALS USED/PRESENTED AT THE APRIL 29, 2015 CCWPC MEETING:

- April 29, 2015 CCWPC Meeting Agenda.
- PowerPoint Slide Presentation: *Atmospheric Deposition Study* prepared by the Marine Biological Laboratory and presented by Ivan Valiela.
- PowerPoint Slide Presentation: *Water Quality and Cape Cod's Economic Future: Nitrogen Pollution's Economic Impact on Homes and Communities* prepared and presented by Mahesh Ramachandran.