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CAPE COD
COMMISSION

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208 Area Wide Water Quality Management Plan Update Subregional Meetings

Agenda – Meeting 3

Meeting Goals:

- Define the process for convening towns within a watershed to reach agreement for a watershed approach to water quality.
- Illustrate and further develop the adaptive management / watershed permitting approach
- Understand the resources available to watersheds and municipalities, the impacts on homeowners, and affordability

- 1:00 Welcome & Review of 208 Goals
- 1:15 Introductions, Agenda Overview & Goals of Today's Meeting
- 1:30 Scenario Planning
 - *Sub-regional scenarios*
- 2:15 Regulatory, Legal, and Institutional
 - *Define the process by which we will convene towns within a watershed to formalize an enforceable agreement*
 - *Explore collaboration options using scenarios*
 - *Nitrogen allocation*
 - *Special Review Procedure for Targeted Watershed Planning*
 - *Adaptive management approach & watershed permitting*
- 3:15 Break
- 3:30 Implementation
 - *Description and discussion of Financial Model*
 - *Demonstration of user interface – Impact Analysis on Homeowners*
 - *Range of revenue options and funding sources*
- 4:30 Role of the Commission and 208 Process tools
- 5:00 Adjourn



Outer Cape Sub Regional Group



MEETING 3

Standing Sub Regional Meeting Topics

Scenario
Planning

Regulatory,
Legal,
Institutional

Implementation

Mtg. 1

One representative
watershed

Challenges & opportunities
associated with permitting the
watershed scenario

Adaptive
management plans

Mtg. 2

All shared
watersheds & TBL
model

Tools to support
intermunicipal cooperation

Monitoring

Mtg. 3

**Subregional scenarios
& TBL model**

Structures for permitting

**Financing &
affordability**

Standing Sub Regional Meeting Topics

Scenario
Planning

Regulatory,
Legal,
Institutional

Implementation

Meeting 3 Goals:

- Define the process for convening towns within a watershed to **reach agreement** for a watershed approach to water quality.
- Illustrate and further develop the **adaptive management/watershed permitting approach**
- Understand the resources available to watersheds and municipalities, the impacts on homeowners, and **affordability**

Scenario Planning

OUTER CAPE



TBL: BUILDING & EVALUATING WATERSHED SCENARIOS



Regulatory, Legal, and Institutional

OUTER CAPE

CURRENT

CWMP Joint MEPA/CCC Review: Projects Requiring Environmental Impact Report (EIR)

APPLICANT files:

- MEPA Environmental Notification Form (ENF)
- CCC DRI application

within 20-day MEPA comment period:

CCC and MEPA hold joint public hearing



MEPA issues certificate on ENF, scope of review.

CCC sends comment letter with recommended scope for review to MEPA

APPLICANT files Draft Environmental Impact Report (DEIR).

within 30-day MEPA comment period:

CCC and MEPA hold joint public hearing



CURRENT

CWMP Joint MEPA/CCC Review:

Projects Requiring Environmental Impact Report (EIR)



MEPA issues certificate on DEIR and issues to be addressed in FEIR.

CCC sends comment letter regarding DEIR adequacy to **MEPA**



APPLICANT files Final Environmental Impact Report (FEIR).

within 30-day MEPA comment period:

CCC and **MEPA** hold joint public hearing



MEPA issues certificate of adequacy of FEIR

CCC sends comment letter to MEPA and may scope DRI issues.



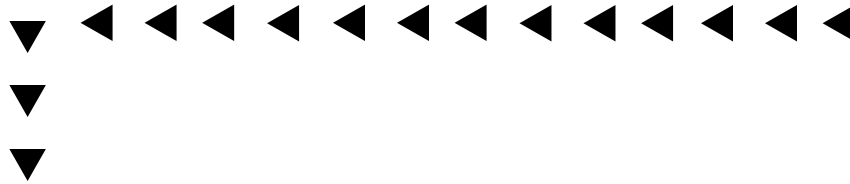
CURRENT

CWMP Joint MEPA/CCC Review: Projects Requiring Environmental Impact Report (EIR)



within 45 days:

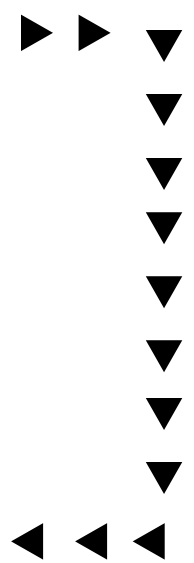
CCC formally begins
DRI review process.



CCC issues DRI
Staff report

Within 90 days:

CCC holds public hearing



Within 60 days:

CCC issues DRI
decision

PROPOSED SPECIAL REVIEW PROCEDURE

FOR ALL "PROJECTS" UNDER THE 208 PLAN

- 1. Consultation with CCC**
-> Review 208 requirements and provide decision support tools
- 2. WATERSHED ASSOCIATIONS ARE FORMED**
-> Designated by the Secretary as Citizens Advisory Committee
- 3. WATERSHED MANAGEMENT PLAN DEVELOPED**
(N, Phos, CECs, etc.)
-> TWMP, CWMP, Nutrient Remediation Projects
-> Submitted to MEPA/CCC under SRP
- 4. PUBLIC HEARING PROCESS**
- 5. FINAL REVIEW DOCUMENT** (one document – compliance with MEPA and 208 – considered the MEPA FEIR and CCC DRI)
- 6. SECRETARY ISSUES CERTIFICATE OF FEIR ADEQUACY & CCC ISSUES DRI APPROVAL**



REQUIREMENTS OF CLEAN WATER ACT / EPA

208 plan requirement:

- State must designate one or more waste management agency (WMA)

WMA must be able to:

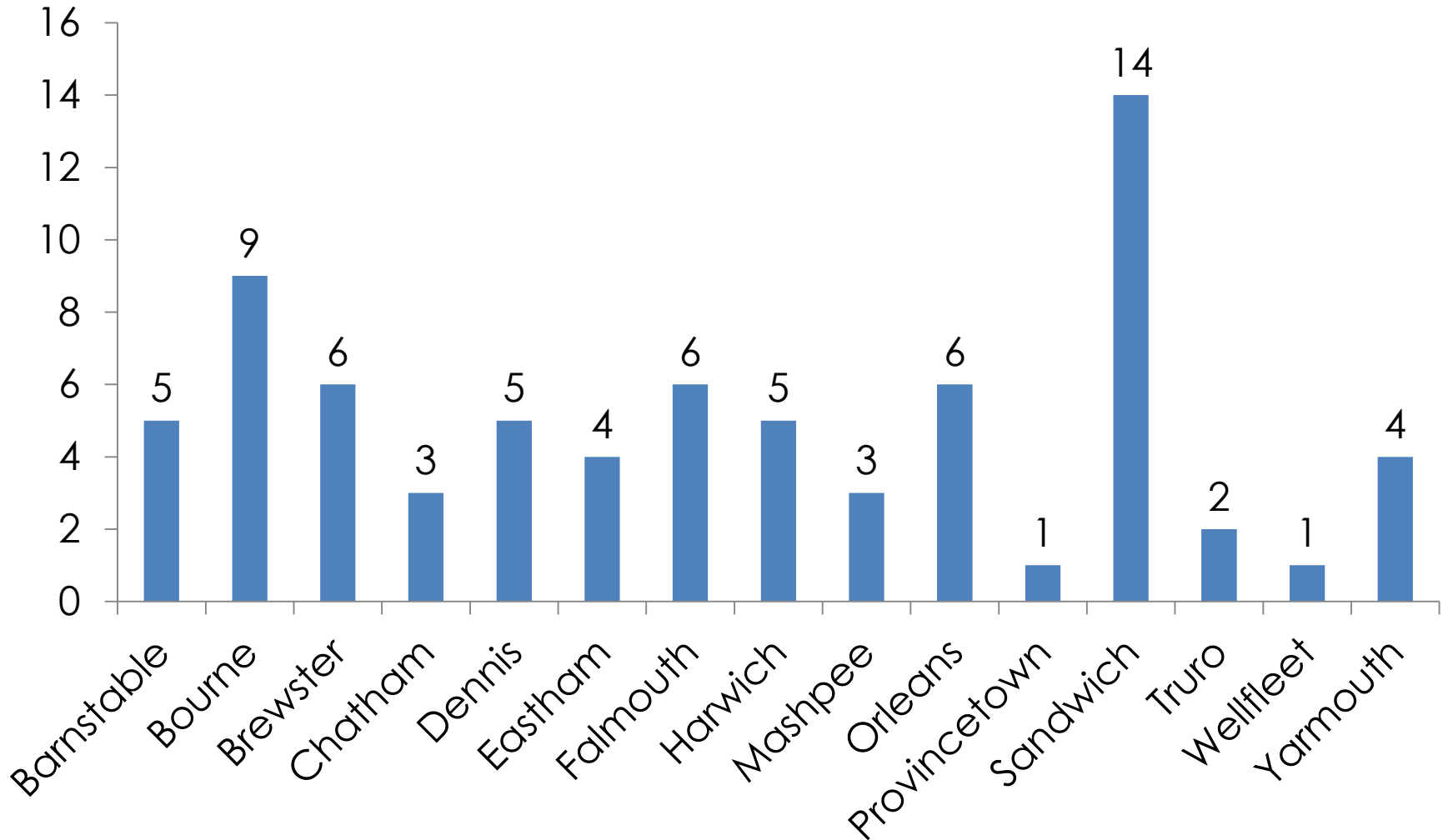
- Carry out plan
- Manage waste treatment
- Design & construct new, existing works
- Accept/utilize grants
- Raise revenues
- Incur indebtedness
- Assure each town pays its costs



WHAT EXISTING ENTITIES OR ORGANIZATIONS COULD ACT AS A WMA?

- The 15 Towns
- Bourne Recreation Authority
- Bourne Water District
- Buzzards Bay Water District
- North Sagamore Water District
- Barnstable Fire District
- Centerville-Osterville-Marstons Mills Water District
- Cotuit Fire District
- Hyannis Fire District
- West Barnstable Fire District
- Mashpee Water District
- Dennis Water District
- Sandwich Water District
- Tri-Town Septage Treatment, Orleans Brewster Eastham Ground Water Protection District

HOW MANY AGREEMENTS MIGHT BE NECESSARY?



Intermunicipal Agreements

Federal/Municipal public-public partnerships

Independent Water and Sewer Districts

Water Pollution Abatement Districts

Independent Authority

Regional Health District

How could each model be applied to Wellfleet Harbor?

INTERMUNICIPAL AGREEMENTS

What is it?

Written agreement between municipalities to perform services or activities

Authority:

M.G.L. c. 40 § 4A

What it does:

Allows towns to contract with each other/other government units (RPA, water/sewer com)

Types:

1. Formal contract
2. Joint service agreement
3. Service exchange arrangements

Key Considerations:

- Modified authority enables Board of Selectmen rather than Town Mtg.
- Max. 25 years
- Establishes maximum financial liability of parties
- Components:
 - Purpose, term of agreement
 - Method of financing
 - Responsibilities
 - Costs of services
 - Indemnification
 - Insurance
 - Alternative dispute resolution
 - Personnel property

FEDERAL/MUNICIPAL PUBLIC-PUBLIC PARTNERSHIPS

What is it?

Shared service agreement

Authority:

Section 331 National Defense Authorization Act - United States Code 10, c. 137 §1226

What it does:

Authorizes DoD Secretary to enter into intergovernmental support agreements with state/local governments

Examples:

Towns may seek to utilize capacity from wastewater facility on Joint Base Cape Cod

Key considerations:

- Must serve best interest of the state/local government and military
- Provides mutual benefits not achieved on own
- Benefit may be monetary or in-kind
- May be entered into on sole source basis
- May be for a term not to exceed 5 years
- Towns enter into partnership agreement with JBCC

INDEPENDENT WATER AND SEWER DISTRICTS

What is it?

Independent public instrumentality for establishing shared water/sewer systems

Authority:

M.G.L. c. 40N §§ 1-25

What it does:

One or more municipalities may join to form a regional water and sewer district

Requirement:

Town meeting vote required to establish/operate

Key considerations:

- Special unpaid district planning board for two or more towns forms to study advisability, construction and operating costs, methods of financing, issues report
- May submit proposed agreement for town meeting vote which shows:
 - Number, composition method of selection of members of board
 - Municipalities to be within district
 - Method of apportioning expenses
 - Terms by which town is admitted or separated from district
 - Detailed procedure for preparation/adoption of budget

WATER POLLUTION ABATEMENT DISTRICTS

What is it?

District designated by Mass DEP for one or more towns (or designated parts) established for the "prompt and efficient abatement of water pollution"

Authority:

Massachusetts Clean Waters Act (M.G.L. c. 21, §§28-30, 32, 35, 36).

What it does:

Creates district responsible for abatement plan

Types:

1. Town voted district
2. DEP voted district

Key considerations:

- Adopt bylaws/regulations
- Acquire, dispose of and encumber real/personal property
- Construct, operate and maintain water pollution abatement facilities
- Apportion assessments on the member municipalities
- Issue bonds and notes, raise revenues to carry out the purposes of the district
- Member municipalities may then impose assessments on residents, corporations and other users in the district
- If town fails to pay its share, state may pay it for them out of other funds appropriated to that town

INDEPENDENT PUBLIC AUTHORITY

What is it?

Could create separate legislative entity

Authority:

Mass. Legislature

What it could do:

Create construct that provides for funding mechanisms outside town meeting

What it could potentially do:

- Plan, build, finance, own and operate certain wastewater collection treatment, disposal and septage management assets and programs
- Research, develop, own and operate non-traditional wastewater treatment assets and programs
- Provide services for residential WW systems
- Plan and protect drinking water resources on Cape Cod through protection plans and policies
- Develop and enforce policies and procedures governing customer metering, billing and collection systems

REGIONAL HEALTH DISTRICT

What is it?

Regional Board of Health

Authority:

M.G.L. c. 111 §27B

What it does:

Has all the powers and duties of boards of health/health department of a town
Includes wastewater regulatory powers of Board of Health

Who may belong:

One or more towns

Key considerations:

- Can form by votes of two or more boards of health and their respective town meeting to delegate some/all of its legal authority to regional board
- Estimate budget each December, assessor then includes this amount in the tax levies each Board may order treasurer to pay town's share of cost/expense of the district
- Reimbursement from Commonwealth for "initial capital outlays"
- Subj. to appropriation – Requires matching funds from town
- HB 3822 – proposes removal of town meeting requirement

Implementation

Finance &
Affordability

FINANCE MODEL COMPONENTS

Affordability Module

Revenue Module

Finance Module

AFFORDABILITY MODULE

PURPOSE:

- Establish existing wastewater liability by watershed and by town and the resulting household burden to achieve TMDLs

This module can...

- Identify traditional EPA affordability criteria
- Establish town financial capability to finance wastewater costs
- Identify wastewater payments by other communities as a benchmark



REVENUE MODULE

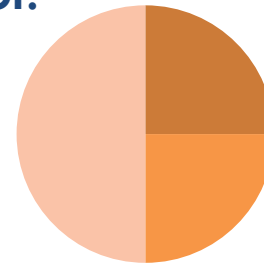
PURPOSE:

- Provide macro level revenue sources to finance Cape wide wastewater solutions.

This module can...

- Provide revenue sources to finance watershed, a combination of watersheds, and town wastewater solutions.

The initial macro-level revenue plan consists of:



■ Federal Construction Grant Funding

■ State Financing (Multiple Revenue Sources)

■ Local Financing, with 0-2% SRF Financing



FINANCE MODULE

PURPOSE:

- Identify costs to a town, watershed, or region by engineer solution.

This module can...

- Compile a financial plan that can be adapted to meet EPA affordability criteria
- Account for existing and new costs:
 - Wastewater
 - Capital Replacement



POSSIBLE REVENUE SOURCES



POSSIBLE REVENUE SOURCES

Motor Fuel Tax: 5 cents/gallon

A state-wide five cent increase would generate approximately \$138.5 million in revenue annually.

Cape-Wide Survey: **13.7%** of people thought this was a good or great way to fund wastewater projects.

Earmark a portion of expected gaming proceeds

If 25% of the revenue was targeted as a new environmental grant fund it could annually generate over \$115 million.

Cape-Wide Survey: **71.1%** of people thought this was a good or great way to fund wastewater projects.

POSSIBLE REVENUE SOURCES

Earmark a portion of an internet sales tax

Extending the sales tax would produce approximately \$335 million in new revenue to the Commonwealth.

Cape-Wide Survey: **32.2%** of people thought this was a good or great way to fund wastewater projects.

Rededicating local option meal and room occupancy tax

Excise taxes would result in annually collecting approximately \$18.8 million.

Cape-Wide Survey: **42%** of people thought an increase in this tax is a good or great way to fund wastewater projects.

POSSIBLE REVENUE SOURCES

Septic system installation tax (\$200), pump-out tax (\$20)

In the Commonwealth of Massachusetts, there are about 686,000 septic systems in MA (approximately 120,000 of which are on Cape Cod). Based on the suggested excise amounts, the statewide annual revenue total would be approximately \$3.9 million.

Increase in property tax on boat ownership

Option 1: Lifting the valuation cap of \$50,000 thereby increasing the tax paid by those boat owners.

Option 2: Increasing the tax rate from \$10 to \$25 per \$1,000 in value.

POSSIBLE REVENUE SOURCES

Embarkation excise tax

Ferry Tax

1,499,853 yearly Cape Cod ferry passengers. For each additional \$0.50 excise tax added to each ticket, approximately \$749,927 in revenue would be generated.

Flight Tax

184,804 yearly flight passengers. If a \$1.50 excise tax were added to each ticket purchased, a total revenue of \$277,206 would be annually generated.

MA Excise Tax: Millage on water consumption of 1-3 mills/gallon

A 1 mill charge would result in annual revenue of \$81.9 million based upon annual household water usage of 65 gallons per person per day.

POSSIBLE REVENUE SOURCES

What's already happening?

- Environmental Bond Bill:
Principle Forgiveness
- SNECWRP:
Funding available for FY14
- Water Infrastructure Bill



All materials and resources for the Outer Cape Sub Regional Group will be available on the Cape Cod Commission website:



<http://watersheds.capecodcommission.org/index.php/watersheds/outer-cape>

PROPOSED SPECIAL REVIEW PROCEDURE

FOR ALL "PROJECTS" UNDER THE 208 PLAN

Watershed Association/ Citizens Advisory Committee

10 members appointed by the Secretary:

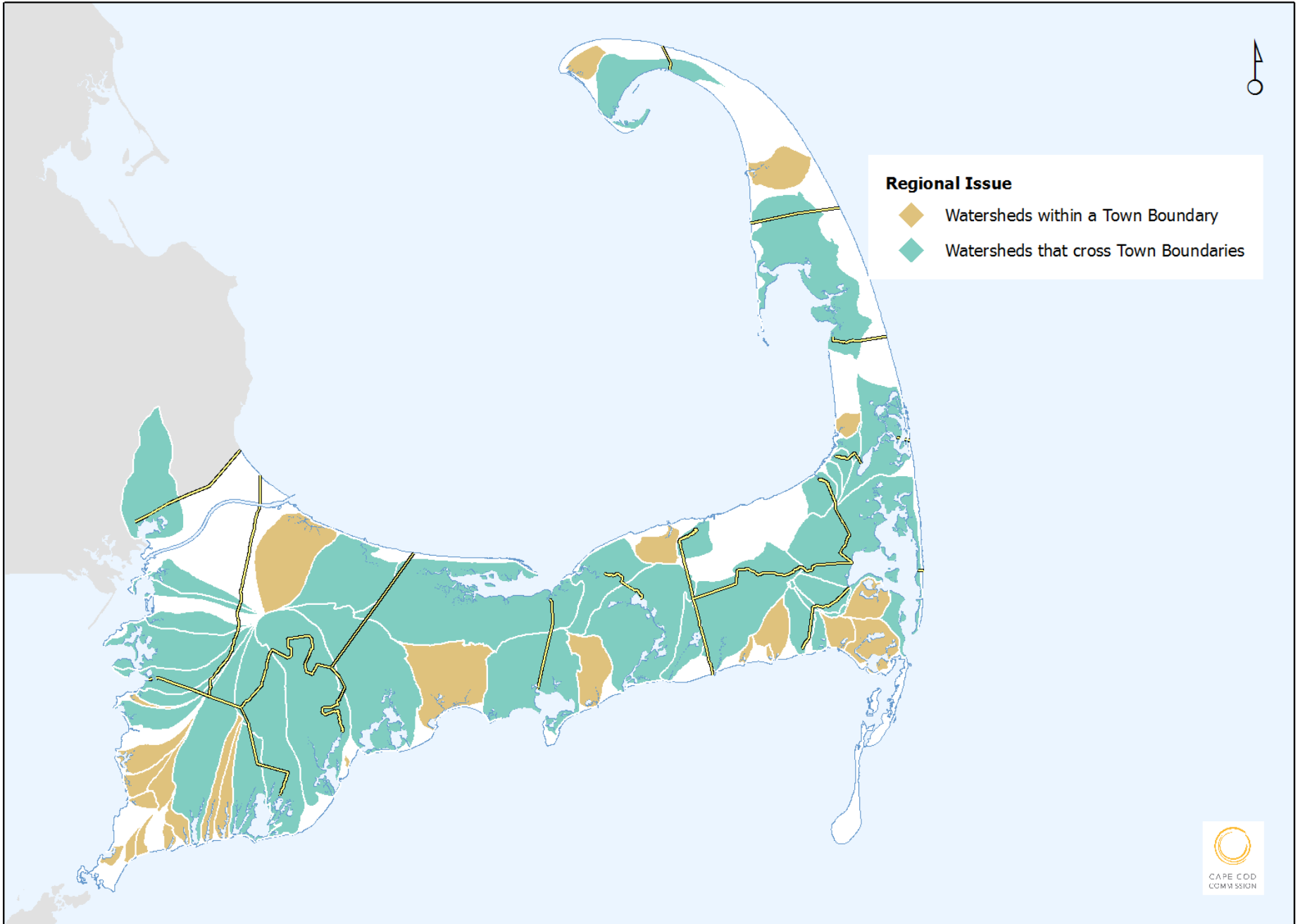
1. Elected
2. Appointed
3. WQAC
4. JBCC or National Seashore
5. CCC
6. Business
7. Real Estate
8. Environmental
9. Alternative Technology
10. Proponent

Special Review
Procedure

Outer Cape Sub Regional Group



MEETING 3

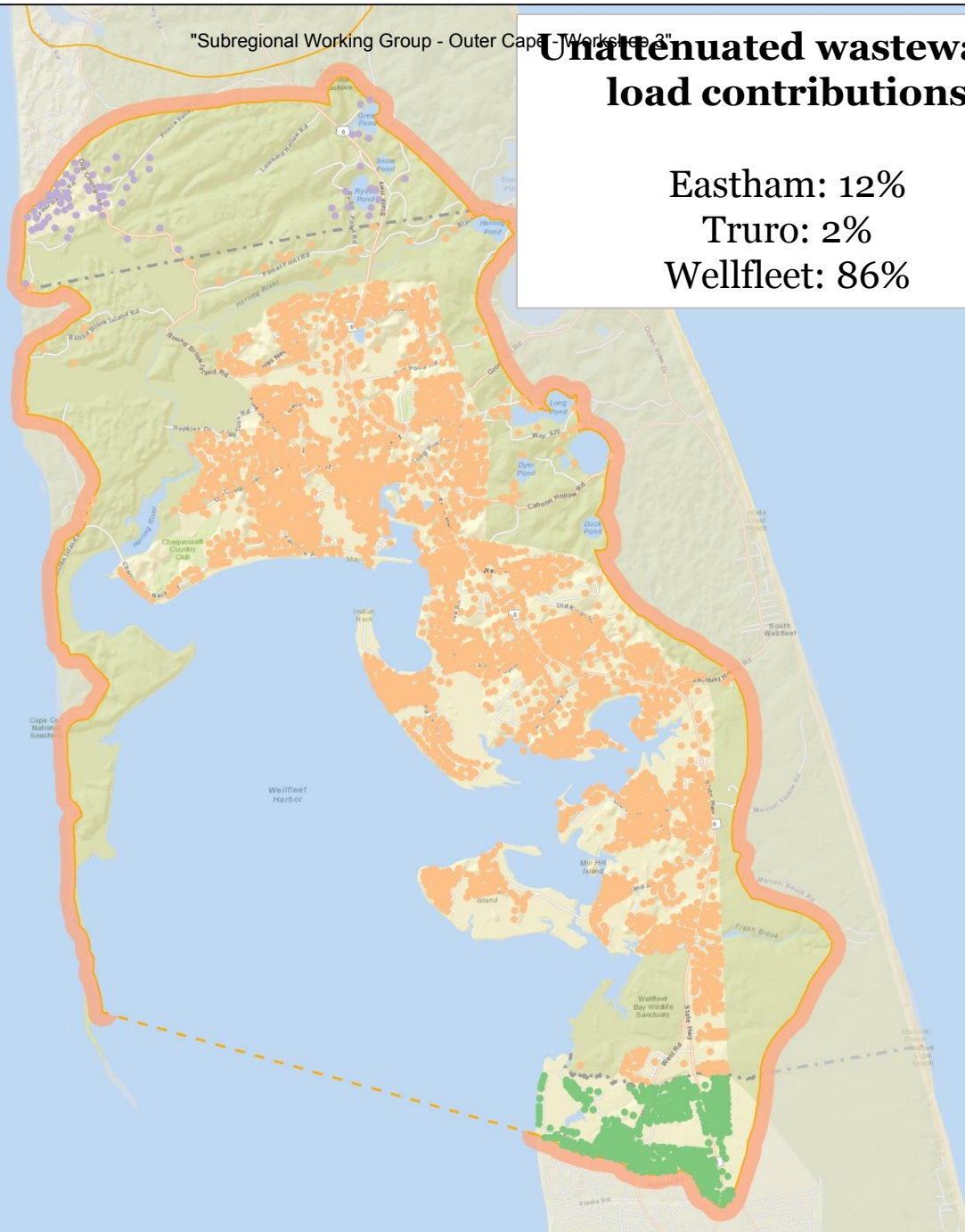


Unattenuated wastewater load contributions

Eastham: 12%

Truro: 2%

Wellfleet: 86%



**Cape Cod 208 Area Water Quality Planning
Outer Cape Sub Regional Group**

Meeting Three

May 13, 2014

1 PM – 5 PM

**Gestalt International Study Center
1035 Cemetery Road, Wellfleet, MA 02663**

Meeting Summary Prepared by the Consensus Building Institute

I. ACTION ITEMS

Working Group

- Provide feedback on the Consensus Building Institute's draft meeting summary
- Send additional ideas for funding sources and revenue opportunities to fund nitrogen abatement projects to the Cape Cod Commission
- Submit additional ideas and feedback regarding the proposed Special Review Process

Consensus Building Institute

- Draft meeting summary
- Contact Working Group about next steps

Cape Cod Commission

- Provide the updated technology matrix
- Send the Herring River project's cost data to the Working Group
- Send date and details of July Tabletop exercise to the Working Group
- Factor Title 5 costs into TBL model
- When ready, share model and calculations for the TBL analysis
- Provide information about the Water Infrastructure Bill on the Commission's website
- Include nonresident households in financial model
- Confirm oyster bed construction and monitoring costs

II. WELCOME AND REVIEW OF 208 PLANNING GOALS

Ms. Stacie Smith, Facilitator from the Consensus Building Institute, welcomed the group members to the third meeting of the Outer Cape Sub Regional Group, briefly reviewed the meeting agenda, objectives, and meeting ground rules; led introductions; asked the group to send her feedback on the meeting notes; and emphasized that this meeting would require a high level of input from the group.

Mr. Paul Niedzwiecki, Cape Cod Commission Executive Director, reviewed the timeline of the 208 Process with the Working Group. The initial 208 draft is due to MassDEP on June 1st. The Commission will hold a tabletop exercise in July to provide the working groups with a hands-on method to test out the models and collaborative tools. After integrating comments received by Mass DEP and any input from the July session, the Commission will release the draft 208 Plan on August 1st, and the public will have 90 days to comment on the draft. The Commission will then have 60 days from November 1st to January 1st to review the comments and submit a revised proposal to the DEP.

Mr. Niedzwiecki described the meeting topics. Similar to the first two meetings, this third meeting covered the three overarching topics: scenario planning; regulatory, legal, and institutional interactions; and implementation. For the scenario planning discussion, the group would review the subregional watershed scenarios and the Triple Bottom Line tool. During the regulatory, legal, and institutional interactions discussion, the group would provide input on a draft Special Review Process, review possible models for collaboration and discuss how those mechanisms do or do not meet the needs of the Cape towns. Finally, the group would learn about the affordability, revenue, and financial models supporting the 208 Plan.

Meeting three goals included:

- Define the process for convening towns within a watershed to reach agreement for a watershed approach to water quality.
- Illustrate and further develop the adaptive management / watershed permitting approach
- Understand the resources available to watersheds and municipalities, the impacts on homeowners, and affordability

III. SCENARIO PLANNING: Subregional Scenarios

Mr. Niedzwiecki presented a map of the Cape's watersheds using the 208 Scenario Viewer, showing several scenarios, which used traditional and nontraditional approaches to manage nitrogen in the watersheds. Maps associated with each scenario illustrated the geographic extent of the scenario footprints (see presentation¹). The first scenario represented a maximum collection footprint of a sewer system (light blue on map), assuming treatment within the watersheds. This approach does not benefit from economies of scale. The second scenario showed a centralized scenario with credit given for fertilizer and stormwater reduction (dark blue on map) with a reduced footprint area. For areas without MEP reports, the Commission assumed nitrogen reduction levels of 25% and 50%, presenting collection footprints for both. The third scenario showed an array of nontraditional approaches for different areas of the Cape. Mr. Niedzwiecki pointed out specific technologies for Wellfleet Harbor that were selected by screening parcels and matching landscape characteristics with specific technologies.

¹ <http://watersheds.capecodcommission.org/index.php/watersheds/outer-cape>

Members had the following questions and comments about the scenarios. Responses from Mr. Niedzwiecki, Ms. Smith, or other Commission staff are *italicized*.

- Is the centralized scenario indicating that there is no need for sewerage in certain areas? *This map showed watersheds with MEP reports. We did 25% and 50% reduction scenarios for areas with no MEP reports. MEP reports for the North side are not finalized, though since MEP prioritized areas of concern, nitrogen levels are probably less there.*
- Does the 25% reduction scenario have a bearing on what we should do without the MEP report? *This is just an academic exercise until the MEP is complete.*
- If the plan is due soon, how can we move forward without the MEP reports? *We will rely on the work that is currently underway and on alternative measurements. We should also get Wellfleet's MEP report sometime this summer, so there may be time to incorporate Wellfleet's data before the final plan.*
- Will the report be completed on time? It has been delayed before. *The DEP noted that it has put pressure on the University of Massachusetts to complete the reports.*
- What about Truro? Those MEP reports are not close to completion. *The DEP member noted that it will look at alternate means for addressing Total Maximum Daily Loads (TMDLs) there. The Commission has also put pressure on UMass to finish the report. It will be able to plug in numbers to the model once it gets them. The MEP reports were also prioritized, so the places without them are less problematic areas with less nitrogen.*
- How are you calculating the 25% and 50% reductions? *The data are based off of watershed MVP, land use, available water records, and assumptions based off of water use. Algorithms run this data to determine the 100% level. The Commission is trying to prepare for whatever reduction level the TMDL mandates and creating suggestions given existing information and best estimates.*
- Does the nontraditional scenario assume a 25% or 50% reduction? *The non-traditional scenarios for areas without MEP reports were designed to achieve a 25% reduction.*
- Were these the best options chosen by the model? *Yes. In the tabletop exercise, you will go through the technologies to play with these options.*
- What is a PRB? *It stands for permeable reactive barrier. These can be more controversial because of variable costs but are still a promising technology. There is a pilot in Falmouth. These could have big cost savings.*

Mr. Niedzwiecki and Erin Perry, Special Projects Coordinator from the Cape Cod Commission, reminded the working group that triple bottom line (TBL) analysis is a decision support tool communities can use to evaluate their policies and infrastructure investment options from social, environmental, and financial dimensions, with community values and input actively changing the model.

Mr. Niedzwiecki reiterated that using the TBL is a four-step process:

1. Choose a watershed and create scenarios – In this step the user will select the watershed in which they want to deploy nitrogen reduction technologies as well as the suite of technologies they want to deploy.

2. Define the community goals – In this step, a sliding scale is used to indicate the level of importance given to twelve criteria
3. Test Performance – A graph is produced that indicates, among other outputs, the nitrogen reduction target, the timeframe in which the target would be achieved, and the amount of nitrogen that would be reduced over a specified timeframe given the suite of technologies the user included in the scenario.
4. Compare and Decide – After creating several scenarios of various nitrogen reduction technologies, the model will create a daisy chart that can be used to compare and contrast the tradeoffs associated with each scenario. The more color present in each segment of the daisy chart, the better that suite of technologies meets the community goals selected in step two. Red bars indicate negative values. The number in the middle of the daisy chart indicates that scenario's overall score.

They walked the group through sample TBL scenarios for the three subregional scenarios, reviewing the graphs and the following twelve adjustable value factors that make up the model. Comments about the factors from Mr. Niedzwiecki and Mr. Jay Detjens, Geospatial Architect for the Cape Cod Commission are in *italics*.

1. Development build out timeframe
2. Min. % TMDL goals achieved in 20 years: *This factor will not work for this region, as it does not have a TMDL.*
3. Min. % of properties in watershed increasing in value
4. Min. % of high quality habitat created in watershed
5. Min. % of GHG emission reduction from watershed sector: *This factor might be more relevant in places with treatment systems. The Outer Cape is fairly green already, so the goal might be 0 emissions.*
6. Min. % new jobs created in watershed: *Many technologies, including ecotoilets, would create new jobs. We want to give value to solutions that do this.*
7. Min. concentration reduction of phosphorous: *Some remediation strategies can also work for phosphorous. This factor uses hard numbers, not a percentage. We might want to set this at a level that is consistent with what we know about badly damaged water bodies out here.*
8. Min. % of properties (number) with gain in property value
9. Min. % of the value of the property value gain experienced
10. Min. extent that the scenarios drive development to areas best suited for growth: *This goal should be prioritized and new growth driven to areas that makes sense.*
11. Max. per property wastewater management cost by town: *This looks at the acceptable cost of treatment. The EPA suggests an affordability level equating to 2% of median income for wastewater.*
12. Max. % of additional wastewater management cost as total property values by towns

Members had the following questions and comments about the TBL analysis. Responses from Mr. Niedzwiecki, Mr. Detjens, or other Commission staff are *italicized*.

- What is the build out timeframe? *This is the number of years before the town reaches its maximum build-out allowable under current zoning. Users can change this based on their zoning and build out predictions.*
- For the minimum percentage of high quality habitat created in the watershed factor, how are you judging habitat quality? *It comes down to the specific scenario. You will know what can grow and other qualities about a constructed wetland, and you will have to look at net gains.*
- I am confused as the goal is to reduce nitrogen on land but improving aquatic habitat involves a lot of estuary work. *Habitat creation is an ancillary benefit as reducing nitrogen benefits these habitats.*
- Is habitat on the TBL measured in acres? *Yes and remember this is based on your goals, so you can put in your goals without knowing a specific scenario.*
- Creating new jobs is an important criterion. I am glad it is included.
- For phosphorous reduction, does the model use an average number? *Yes, it is a watershed average for pounds of phosphorous, which affects freshwater quality.*
- How do the housing value factors differ? *Some look at individual properties, and the average price increase while others look at the whole region. These are evaluated in the model based on different inputs, either tax or real estate sources.*
- Is the maximum per property wastewater management cost per town done on a per year basis? *Yes.*
- Title 5 costs are not factored in to this. People think their wastewater costs are zero, but they are not. This should be factored in. *Yes, we should calculate and identify the number of non-Title 5 complaint systems.*
- What about the non-Title 5 septic systems? *We do not have records for things like cesspools. This assumes people have ordinary septic system for now. We are setting the planning at about 30,000 feet at the moment. The towns will have to look at specifics later.*

- This model shows Wellfleet spending \$5 million per year on nitrogen projects, but our total town budget is about \$20 million. This represents a large increase in our budget just for water quality management. We have a lot of non-permanent residents to target for funding. Our permanent residents cannot afford this. *This is a place to start the community discussion. We will need to figure out how to spread costs. This is also a raw starting estimate. You are also setting this as a goal and can set your own levels.*
- New alternative technologies will not reduce the costs of Title 5 construction and maintenance. This cost will go on top of that. *Yes, this gets into the complicated issue of how to spread costs. We are just presenting a process to allow communities to vet these questions and deal with them upfront and reduce costs.*
- Does the additional wastewater management cost factor only include year round residents or everyone? *It just counts year-round residents. Barnstable shifted taxes to take less from year round residents. It was difficult at first but eventually successful. This approach could be considered by other areas.*
- Why include cost we are willing to pay? We are trying to drive this strategy to a least cost approach for reducing nitrogen, and externalities are not included in direct costs, so I am a bit confused. *We are asking if there is a level at which you would be willing to pay to solve a problem and finding the price point. We need to look at the Title 5 costs that are not incorporated right now. A better technology at the same cost is a 'zero-cost' solution.*
- Is this 2% median household income level assessed value per year? This is a lot of money .5% might be a better goal. *It is the collective value of the watershed.*
- How do factors 11 and 12 work together? *11 works on tax assessments and 12 is a community qualifier. The final scenario takes both constraints into account.*
- How were the costs for technologies calculated? *This comes from the technology matrix. The Commission will send out the newest version.*
- In Wellfleet, the Herring River project has a big cost associated with it. What percentage is it in this model? I would feel more comfortable if these costs were already displayed in this model. *The Commission will get this information to you. Hopefully, the federal government will help pay for the Herring River project, which is a route we could follow for other projects.*

IV. REGULATORY, LEGAL, AND INSTITUTIONAL INTERACTIONS: Structures for Permitting

Kristy Senatori, Deputy Director at the Cape Cod Commission, introduced the Regulatory, Legal, and Institutional interactions segment of the agenda. She commented that the objectives during meeting three are to discuss which models could be used for the 208 process and apply the collaboration models discussed last time to the watershed.

Ms. Senatori noted that the filing a Comprehensive Wastewater Management Plan (CWMP) through a joint Cape Cod Commission and Massachusetts Environmental Protection Act (MEPA) review currently presents a barrier to nitrogen management plans, as the review process is

lengthy and imperfect. After reviewing the current filing process, Ms. Senatori reviewed a new, streamlined six-step "special review" process based off lessons learned from the Herring River Project, through which all 208 projects could be submitted.

The six steps include:

1. A consultation with the Commission to review 208 requirements and get support in using decision support tools
2. Forming Watershed Associations, which would be designated by the Secretary of the Executive Office of Energy and Environmental Affairs (EEOEA) as Citizen Advisory Committees. The Secretary would appoint/approve 10 members to the associations. A suggestion for those that might be included:
 - a. An elected member
 - b. An appointed member
 - c. Water Quality Advisory Committee (WQAC) member
 - d. Joint Base Cape Cod (JBCC) or National Seashore member
 - e. Cape Cod Commission representative
 - f. Business member
 - g. Real Estate member
 - h. Environmental member
 - i. Alternative technology member
 - j. The project proponent
3. Developing a watershed management plan for submission to MEPA and the Commission under the Special Review Procedure (SRP). These plans could cover nitrogen, phosphorus, contaminants of emerging concern (CECs), and other water quality issues addressed through Targeted Watershed Management Plans (TWMPs), CWMPs, and Nutrient Remediation Projects.
4. A public hearing process
5. The submission of a single Final Review Document in compliance with both MEPA and 208 requirements, considered the MEPA Final Environmental Impact Review (FEIR) and the Commission's Development Impact Review (DRI).
6. The issuance of a certificate of FEIR adequacy the Secretary and DRI approval from the Commission

Members provided the following feedback and questions about the proposed Special Review process. Responses from Ms. Senatori, Mr. Niedzwiecki, or other Commission staff are *italicized*.

- Is this similar to the process used by the Herring River Project? *Yes, it is modeled after that.*
- How long would it take to go through the permitting process to implement a technology within the existing timeframes? *It is difficult to tell. It could take years, but there can be many revisions, and the process can get unwieldy. Because CWMPs are comprehensive they get complicated; this process could go more quickly.*
- Could you go through the local town permitting process for nitrogen projects? *Yes, but if you want access to grant money or the state revolving loan, you need to go through the MEPA process. Falmouth put \$2.5 million aside for alternative projects, so it does not need CWMP approval, but this money comes from the tax base. The town will not get*

federal money, but it was a quick process. The SRP process will also be streamlined. For the Herring River Project, the draft was submitted in June and the project was finalized by January. The 208 process needs to start solving nutrient related problems quickly so we need to be able to permit quickly.

- *Does this process include nutrient crediting? Yes, it could use a different regulatory path, with water quality decisions coming from advisory committees.*
- *There is still some concern from the scientific community about the technology matrix and that the reduction targets might be too high. Also, with sea level rise, salt marshes might not work. How is the Commission working to get scientific consensus in the room? That is great question. We are on version 37 of the matrix, and the Environmental Protection Agency (EPA) and advisory panel have reviewed it. We have no vested interest in these numbers and are flexible about adjusting them. The confidence in these technologies will need to be considered by the communities, and pilot programs will be an important part of this process. The selection of technologies will narrow as a result of this process, and real data from pilots will guide the decisions. Ideally, this process will be funded federally.*
- *Is salt marsh construction different than restoration, and does it really take about 30 years for it to work? Yes, we are talking about restoration, but some processes work more quickly. The TBL analysis includes information about how long technologies take to begin working, and the restoration will have a stacked impact. It is not immediate, but sewerage is not immediate either because of ground water travel time. PRBs could have the lowest cost and most immediate impact. Shellfish projects are also already having a quick impact.*
- *For the Mayo River project, should we not measure the immediate results? There will not be an immediate impact. Though on the Cape, there are smaller water systems, so it can take shorter time periods to improve water quality. It could be the federal government's best testing area.*
- *After the Massachusetts Water Resources Authority (MWRA) came into effect, it took about 30 years for sturgeon return to Charles River.*
- *The results will not be seen tomorrow. The CCC deserves credit for getting this process started and helping to catalyze the process in Eastham to treat water. Everyone knows that none of these technologies will look the way they do on paper; they may be better or worse. We need to think about where to prioritize investments and resources, and this is where adaptive management comes in. The bottom line result is testing if the water quality is improving.*
- *We have a taskforce working on Mayo Creek and the permitting is what we are grappling with. Would this SRP be best to do in a targeted or broader process? There seems to be community interest and activism around moving forward with smaller projects. A watershed association alone could manage the process for smaller projects. We have to envision small-scale activities in this process, as they are the most likely to come forward first and have support. We want suggestions about how to expedite the permitting process*

- Ms. Smith noted that part of question involves the scale of the collaborative group. Does the full watershed association pick a smaller piece, or can the small group spearhead a project before moving to the larger group? The SRP needs to figure out how to work on permitting with other agencies as well. *We need to classify the kinds of projects which will interact with the same agencies that will need to expedite permitting.*
- For Mayo Creek, I am not sure what permitting we need to do for that. *Another 208 recommendation should emphasize providing skill-sets like monitoring, data collection, and technical assistance on permitting projects like this at the regional level.*
- I am hoping we will get new regulations for oysters soon. *If we can negotiate with regulators as a region, we can get more concessions for projects like aquaculture. This may be a next step to work with partners to expedite this process.*

V. IMPLEMENTATION: Financing and Affordability

Mr. Niedzwiecki introduced the Working Group to a financial model with three modules for understanding the financial components of the 208 Plan, noting that the Commission has worked for over six months to create an extensive model that can predict household costs associated with the different watershed scenarios. The three modules developed analyze affordability, what the Cape can afford; revenue, where the Cape can find money; and finance, how can the Cape best spread the costs.

Mr. Niedzwiecki reviewed the affordability module. The module can identify traditional EPA affordability criteria, establish town financial capability to finance wastewater costs, and identify wastewater payments by other communities as a benchmark. The revenue module is meant to provide macro level revenue sources to finance Cape wide wastewater solutions and is capable of analyzing revenue sources to finance a watershed, a combination of watersheds, and town wastewater solutions. The Commission is aiming to fund 25% of the costs with federal grants, 25% with multiple state revenue sources, and 50% locally with 0-2% SRF financing. The finance module identifies costs to a town, watershed, or region by engineering solution, establishing existing wastewater liability by watershed and by town and the resulting household burden to achieve TMDLs, and compiles a financial plan that can be adapted to meet EPA affordability criteria, accounting for existing and new wastewater and capital replacement costs.

Working Group members had the following questions about the financial modules. Responses from Mr. Niedzwiecki are *italicized*.

- Do we get credit if we already removed nutrients from storm water? *The module will let you put in this information.*

Mr. Niedzwiecki walked the group through several possible revenue sources for funding nitrogen mitigation programs, including:

- A 5 cents/gallon motor fuels tax

- Earmarking a portion of expected gaming proceeds
- Earmarking a portion of internet sales
- Rededicating local option meal and room occupancy tax
- Septic system installation tax (\$200), pump-out tax (\$20)
- Increase in property tax on boat ownership
- Embarkation excise tax for ferry service
- Embarkation excise tax for flights
- MA Excise Tax: Millage on water consumption of 1-3mills/gallon

Mr. Niedzwiecki noted that some of the revenue sources, such as gaming proceeds and the Internet tax, were not politically viable in the foreseeable future, but the Commission is trying to explore every possible source of revenue and would appreciate feedback from the Working Group. Mr. Niedzwiecki also reviewed existing and possible new funding sources in progress. The Environmental Bond Bill has allocated approximately \$4 million, but these would sit under the total bond cap, so the governor would need to be engaged to move on these. Southeast New England Coastal Watershed Restoration Program (SNECWRP), sponsored by the EPA, will provide \$2 million in federal funds to southeast New England in 2014 (about \$500,000 in technical assistance will come directly to the Cape) for nitrogen remediation, and next year the total budget should expand to \$5 million. This is the first allocation of federal funds for dealing with nitrogen on the Cape and mirrors funds that go to other areas like Chesapeake Bay. Finally, the Water Infrastructure Bill in the state house will likely move ahead and could move SRF funds beyond 0% to allow for principle forgiveness. Information about this progress of this bill will be made available on the Commission's website. More information about all potential and current funding sources is available on the meeting presentation PowerPoint².

Members had the following comments and questions about potential funding sources. Responses from Mr. Niedzwiecki or other Commission staff are *italicized*.

- I do not think the motor fuel tax is a good idea
- Towns seem to have avoided local option meal and room occupancy taxes. *Politically these taxes have proven difficult. It could possibly be framed in the 208 context, but only 42% of polled Cape citizens supported this, and the Chamber of Commerce opposes it. Moreover, there is a risk of towns appropriating the funds for other uses. Barnstable uses this tax but recently redirected the funds for road maintenance rather than water quality.*
- The septic system pump out tax could discourage people from servicing their systems. *Yes, it may set up negative incentives even if servicing is mandated. We are presenting all options; some may not be the best for the Cape.*
- Some towns already collect ferry taxes. *This would raise those fees.*

² <http://watersheds.capecodcommission.org/index.php/watersheds/outer-cape>

- How many people would be missed from the water millage tax because of private well usage? *There could be a proxy fee, but it is still an issue.*
- Could we collect road tolls? *There is a proposal for a third bridge that would be privately financed and charge a toll. A certain percentage could be dedicated to the Cape for wastewater, but there are a lot of ifs.*
- We could lobby to charge money for the other bridges too.
- The Army Corp might want money if the Cape did this. *The Commission has looked at this and giving free passes to all residents and charging less for traveling during off peak hours. People were very unhappy about this proposal.*
- What about using CPA funds and taxing transfer fees? Chatham is doing this. *Yes, we are looking into expanding the existing transfer tax, but it will not generate a ton of money.*
- The millage tax seems to make the most sense, as it is directly related to the problem, encourages conservation, and could generate a lot of money. Will this get traction? *Probably, some predictable groups are opposed, but the mill tax will likely rise to the top of the proposals. We need to avoid sending all of the money generated to Boston.*
- Another option is a federal restoration proposal. *Yes, we are watching this play out in the Chesapeake, but we have a junior congressional team, and it is hard to get money with such a junior team.*

Mr. Niedzwiecki walked the group through the user interface of the financial model, analyzing costs for Wellfleet, Truro, and Eastham. The user inputs technologies to determine their construction, monitoring, and maintenance costs. The fees can then be allocated on a user fee, watershed, or town basis. Credit can be put into the model to account for off-Cape contributions from state and federal sources. The user can look at the affordability of the plan using an index with a bar set at 2% of median household income or set a customizable affordability level, since the 2% level is likely too high. Working Group members will have the chance to go through the model and scenario planning during the tabletop exercise.

The group discussed fair ways to allocate municipal responsibility for the nitrogen load. Mr. Niedzwiecki suggested that towns that have already installed sewer systems could get debt repayment from federal grants, so they do not feel like they wasted money. Participants advocated using past projects, such as Herring River, as templates for future allocation and implementing a nitrogen load tax. Mr. Niedzwiecki noted that this tax could be difficult to collect, as houses would need to be metered to generate specific household fees. While precise, this is also expensive. Group members commented that it could be possible to meter a subset of houses, but noted that estimated costs couldn't work on an individual level. Others supported the adoption of a progressive tax system for collecting wastewater fees. Mr. Niedzwiecki suggested using nitrogen loads from the MEP reports as proxies for municipal responsibilities. He added that it could be important to develop a formula to account for attenuated loads to factor in the filtration effect of ponds. Members from Wellfleet and Eastham noted that their contribution to the problem (86% and 12% respectively) seemed high, while members from Truro commented that their town has additional water quality issues

besides nitrogen that it needs to manage as well.

The Working Group also considered the best way to collaborate among the towns. Mr. Niedzwiecki emphasized the large number of shared watersheds among the towns, with Sandwich having 14 shared watersheds. Existing fire and water districts could potentially handle the implementation of the 208 process given the jurisdiction of the problem. He also suggested that the country government operates at an efficient scale to monitor and store data on nitrogen projects. The group also brought up the potential of using intermunicipal agreements between towns (see meeting presentation for further information on collaborative agreements³).

In addition, working group members had the following comments and questions about the financial model and related issues. Responses from Mr. Niedzwiecki or other Commission staff are *italicized*.

- Does this model use real data? *Yes.*

³ <http://watersheds.capecodcommission.org/index.php/watersheds/outer-cape>

- The oyster costs seem high even if monitoring is included in the cost. We do not spend that much on our oyster beds. *We will look at the monitoring protocol and stock costs.*
- We have to monitor whatever we do, right? Why are monitoring costs variable here? *Yes we do. Monitoring costs depend on the technology used. There will be monitoring stations and tests for specific technologies to test their effectiveness. Adaptive management costs also influence these monitoring costs.*
- We could just use sentinel stations, right? *You have to study the effectiveness of each technology along with this overall water quality to understand what is working and not working.*
- We might just need to monitor a representative portion of a technology after it is proven. *Yes, after they are tested, this could be possible.*
- We need to decide how much money we want to spend on monitoring. *If we know a lot about a technology, we can construct a responsible but manageable monitoring program.*
- The state should pay part of the costs because of Route 6, right? *Yes, at least for stormwater mitigation. The state could also provide loans and loan forgiveness*
- If restoration is paid for by grants, costs are lowered.
- What are the numbers in box in the little gray box on the model input sheet? *It is the numbers of year round residents.*
- Is the per household cost based off of units or households? *It is just households.*
- This could be a problem because nonresident residences need to be included and will probably pay more. *The model is still in progress. We will be able to use all of these in July at the Tabletop exercise, and we will have more specific numbers at that point.*
- Until the MEP is released, is this just academic exercise? *Yes, this is just for demonstration purposes.*

VI. PUBLIC COMMENTS

No public comments were provided.

APPENDIX ONE: MEETING PARTICIPANTS

Category	Name	Title
Local Elected Official	John Morrissey	Selectman, Wellfleet
Appointed/Committee	Charles Harris	Water Management Committee, Eastham
	Joanna Buffington	Board of Health, Eastham
	Joseph Buteau	Truro Energy Committee
	Curt Felix	Wastewater Committee, Wellfleet
Town Staff	Gloria McPherson	Town Planner, Provincetown
	Charleen Greenhalgh	Town Planner, Truro
	Patricia Pajaron	Health Agent, Truro
Business/Real Estate	Tracey Rose	Real Estate Agent, Thomas D. Brown Real Estate Agency
Federal and State Partners	Sophia Fox	Highlands Center, Project Manager, National Park Service
	Brian Dudley, Dave Johnston	Mass Department of Environmental Protection
	Mary Jo Feuerbach	U.S. Environmental Protection Agency

Sheila Lyons
 Dan Milz
 Bill Worthington
 Ed Nash