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CAPE COD  
COMMISSION

(508) 362-3828 • Fax (508) 362-3136 • [www.capecodcommission.org](http://www.capecodcommission.org)

## 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



# Upper 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

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UPPER CAPE



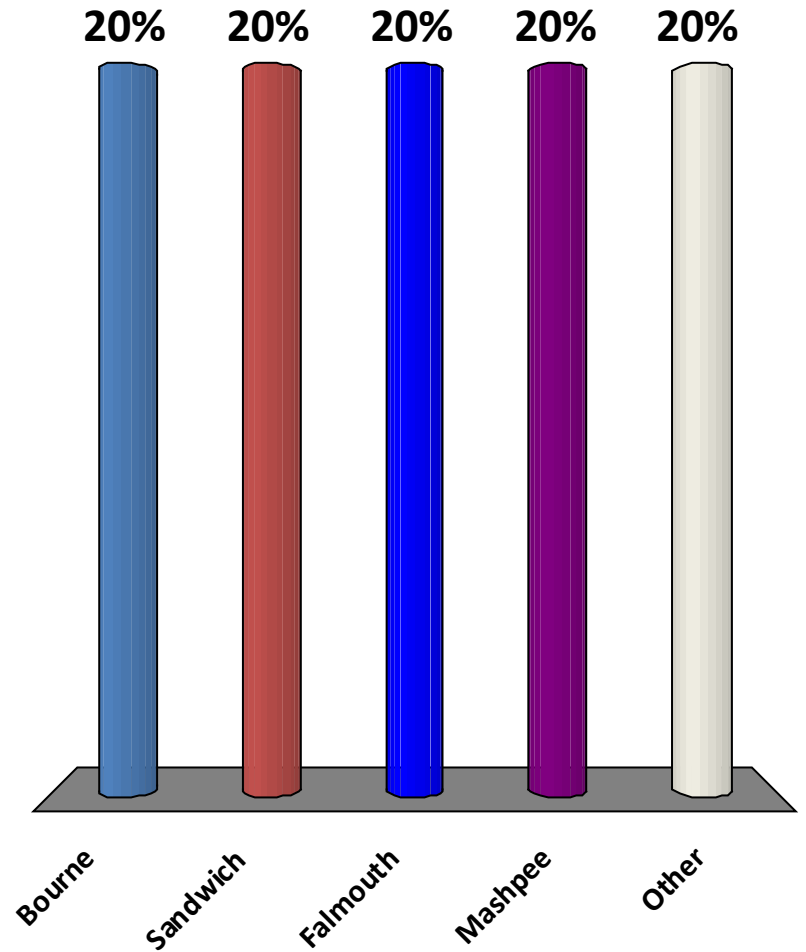
# Regulatory, Legal, and Institutional

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UPPER CAPE

# FROM WHAT TOWN DO YOU HAIL?

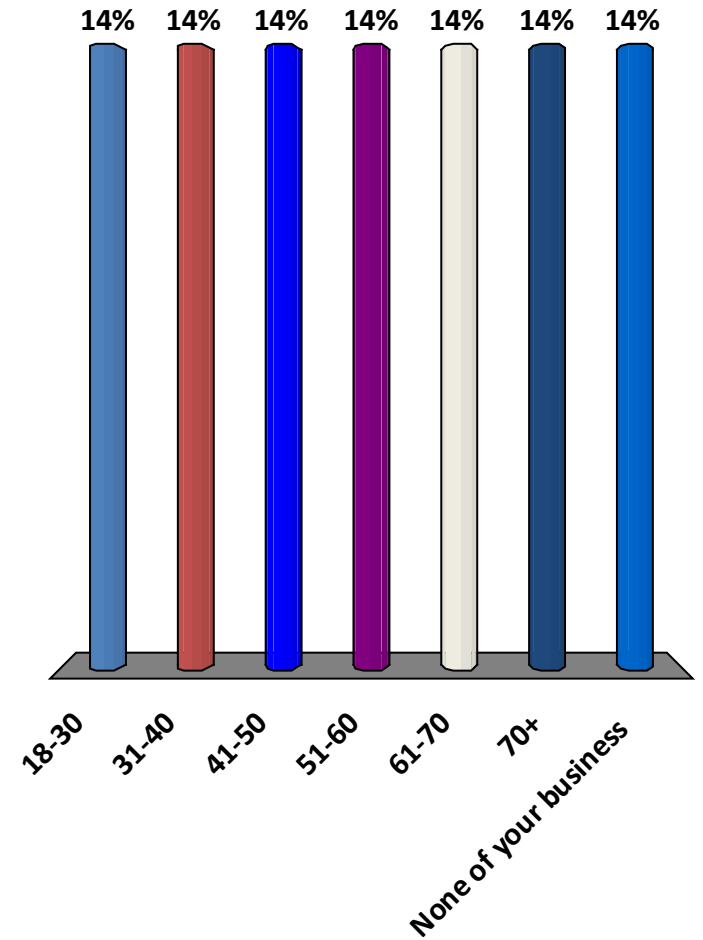
- 0 Bourne
- 1 Sandwich
- 2 Falmouth
- 3 Mashpee
- 4 Other





# HOW OLD ARE YOU?

- 0 18-30
- 1 31-40
- 2 41-50
- 3 51-60
- 4 61-70
- 5 70+
- 6 None of your business



**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.



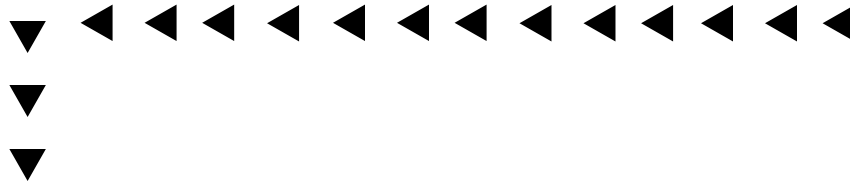
**CURRENT**

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



within 45 days:

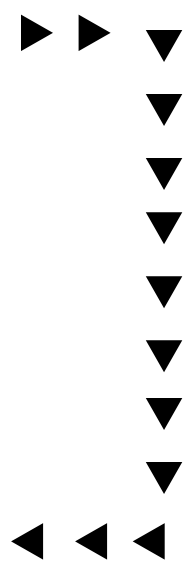
**CCC** formally begins  
DRI review process.



**CCC** issues DRI  
Staff report

Within 90 days:

**CCC** holds public hearing

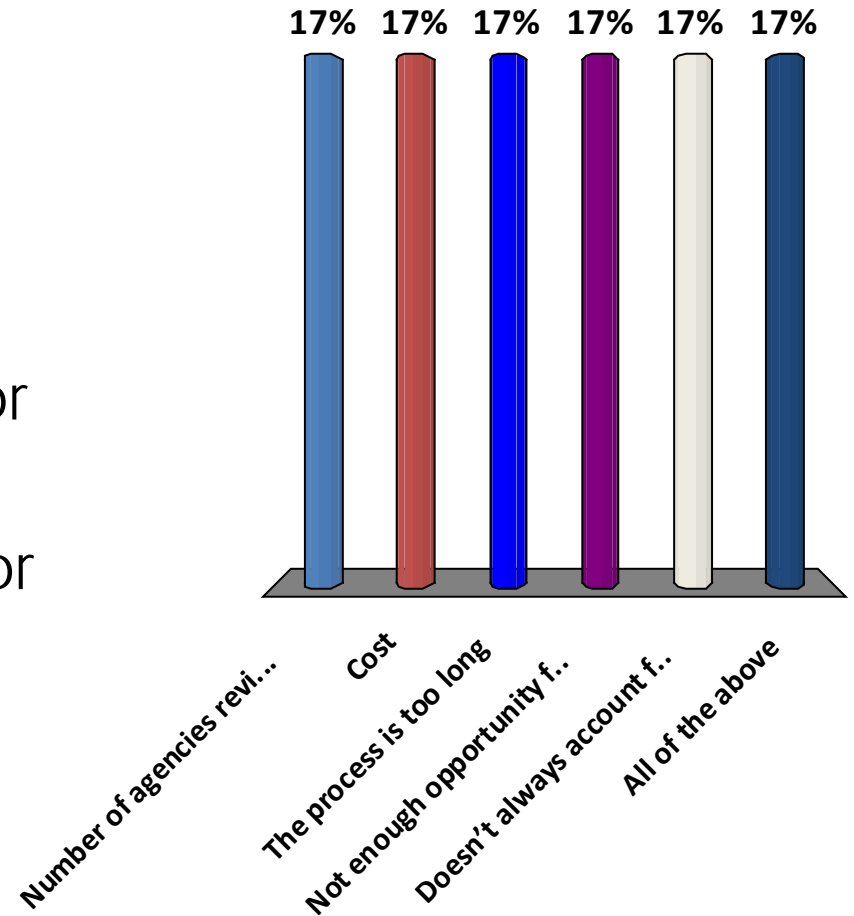


Within 60 days:

**CCC** issues DRI  
decision

# WHAT IS THE MOST DIFFICULT PART OF THE EXISTING PROCESS?

- 0 Number of agencies reviewing the plan
- 1 Cost
- 2 The process is too long
- 3 Not enough opportunity for public comment
- 4 Doesn't always account for remediating nitrogen in shared watersheds
- 5 All of the above



# 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

## 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



# 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

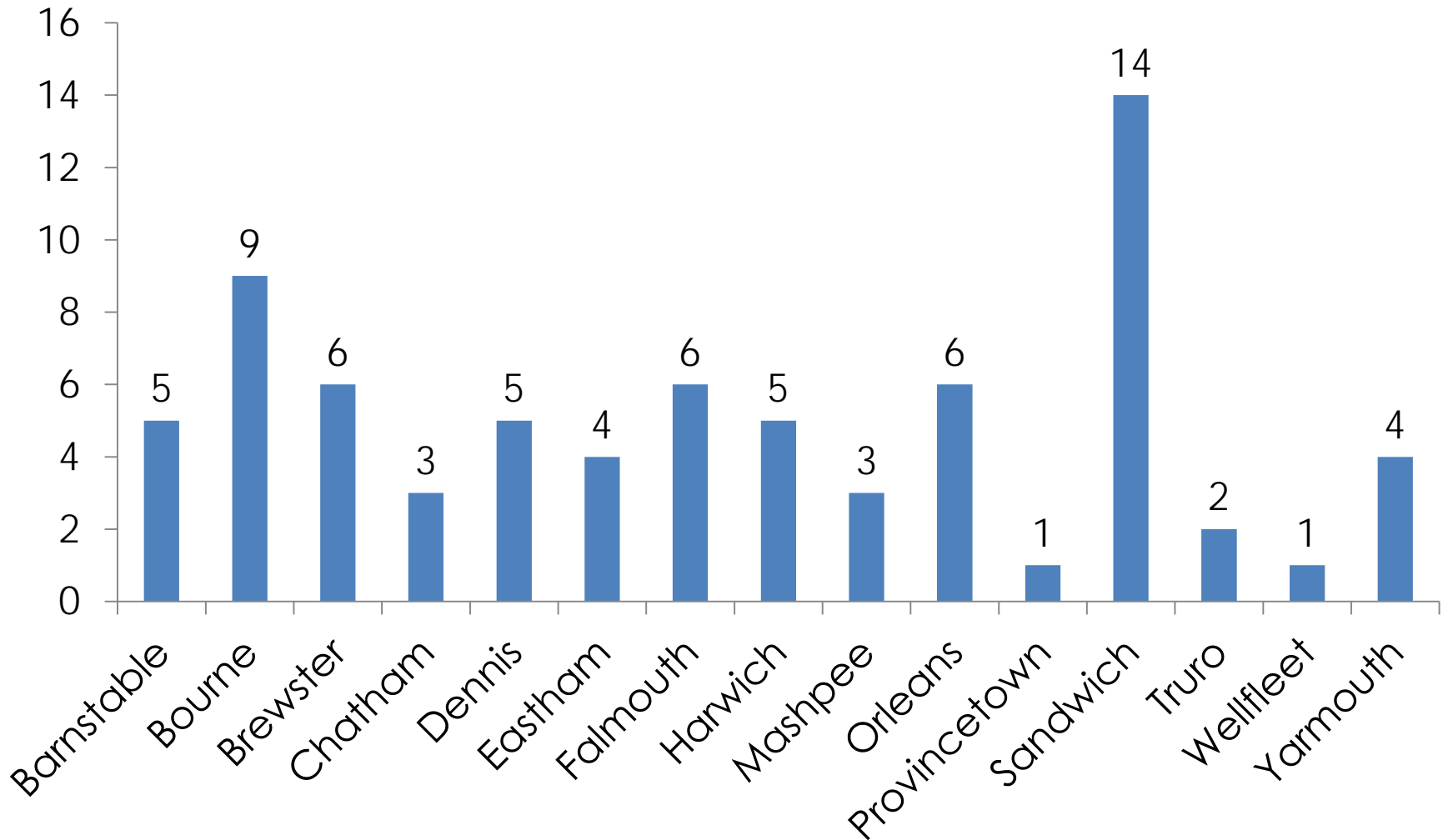




## WHAT EXISTING ENTITIES OR ORGANIZATIONS COULD ACT AS A WMA?

- 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 Waquoit Bay?

# 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:

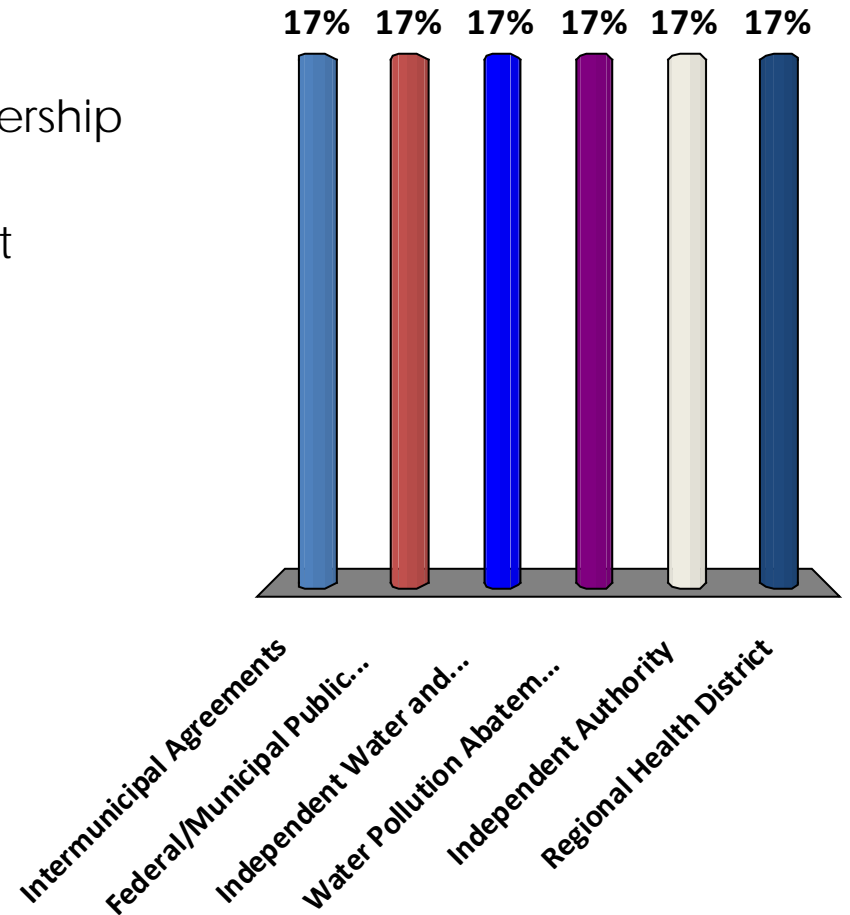
One or more towns

## 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

# WHAT AGREEMENT MODEL DO YOU BELIEVE WOULD BE MOST APPLICABLE IN WAQUOIT BAY?

- 0 Intermunicipal Agreements
- 1 Federal/Municipal Public-Public Partnership
- 2 Independent Water and Sewer District
- 3 Water Pollution Abatement District
- 4 Independent Authority
- 5 Regional Health District



# ALLOCATING NITROGEN



# MEP REPORT

## What factors are considered in the MEP Report for nitrogen allocation?

MEP models the way water flows through the watershed and through all the sub watersheds, accounting for attenuation en route to the embayment.



# WHAT FACTORS SHOULD BE CONSIDERED WHEN ALLOCATING NITROGEN?

WATER USAGE

A METHODOLOGY THAT EVALUATES ATTENUATION

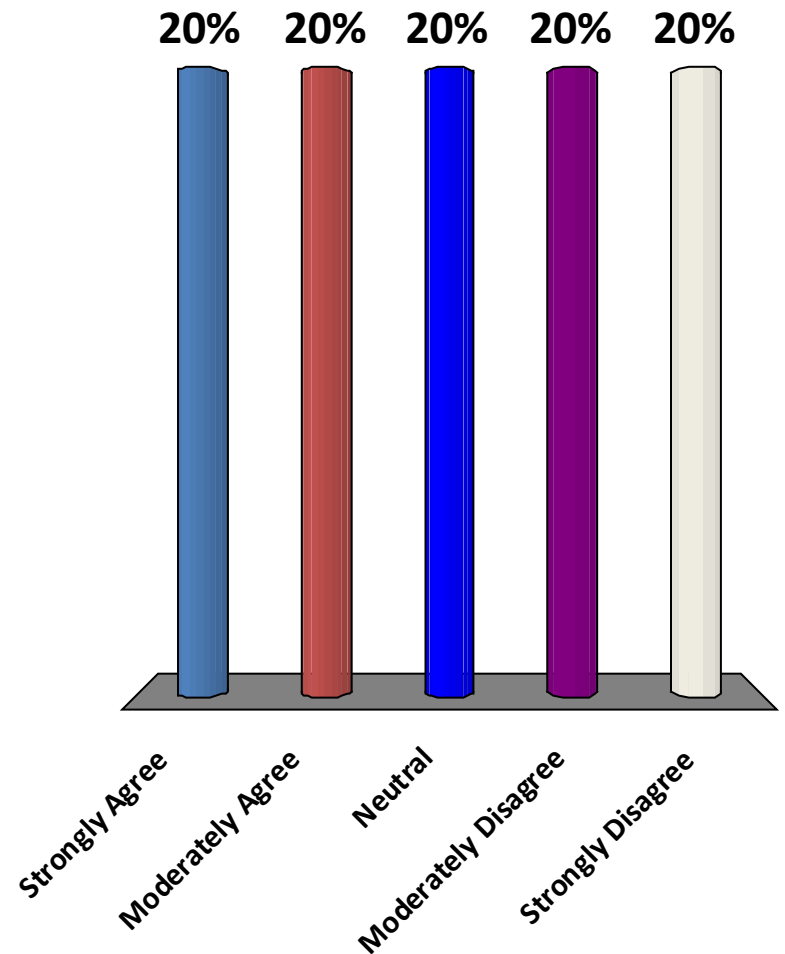
YEAR ROUND POPULATION

SEASONAL POPULATION

GROWTH MANAGEMENT PLANS

# TO WHAT EXTENT SHOULD **WATER USAGE** BE CONSIDERED AS A COMPONENT OF A NITROGEN ALLOCATION FORMULA?

- 0 Quite a lot
- 1 A lot
- 2 Some
- 3 A little
- 4 Not at all



# TO WHAT EXTENT SHOULD **A METHODOLOGY THAT EVALUATES ATTENUATION** BE CONSIDERED AS A COMPONENT OF A NITROGEN ALLOCATION FORMULA?

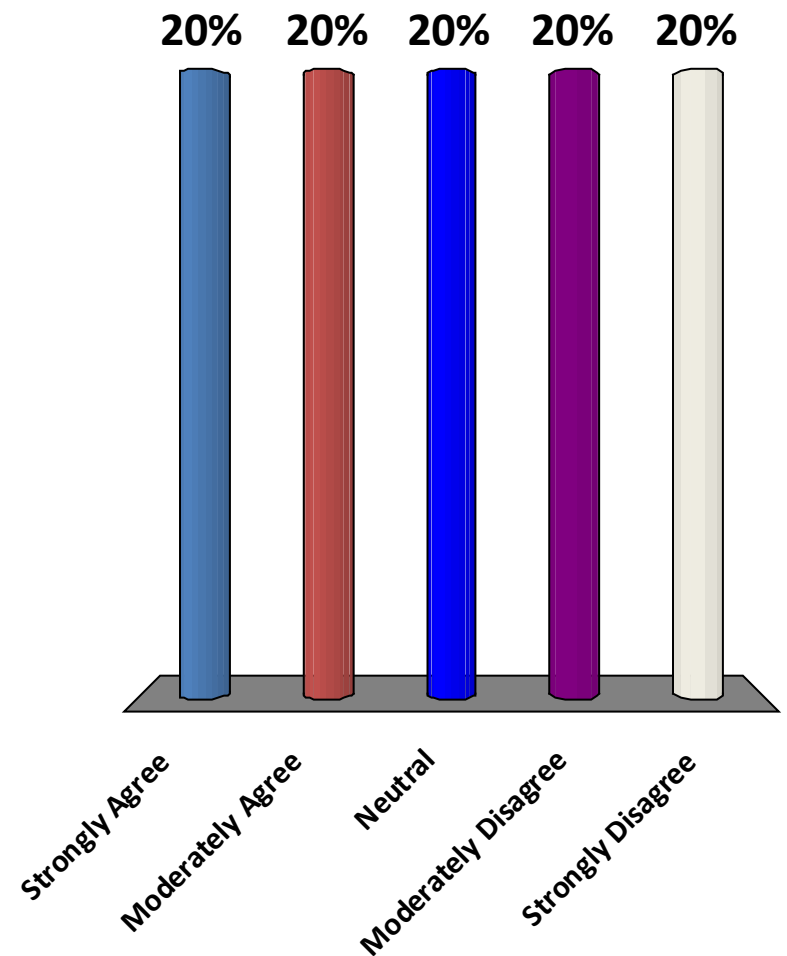
0 Quite a lot

1 A lot

2 Some

3 A little

4 Not at all





# TO WHAT EXTENT SHOULD **YEAR ROUND POPULATION** BE CONSIDERED AS A COMPONENT OF A NITROGEN ALLOCATION FORMULA?

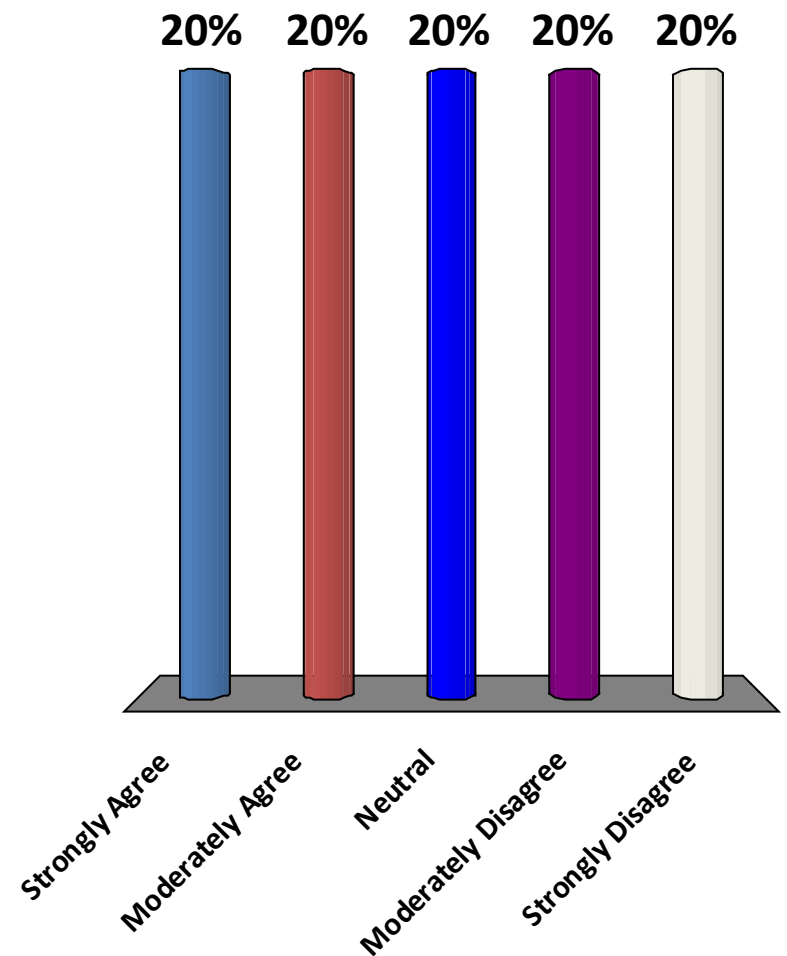
0 Quite a lot

1 A lot

2 Some

3 A little

4 Not at all



# TO WHAT EXTENT SHOULD **SEASONALITY** BE CONSIDERED AS A COMPONENT OF A NITROGEN ALLOCATION FORMULA?

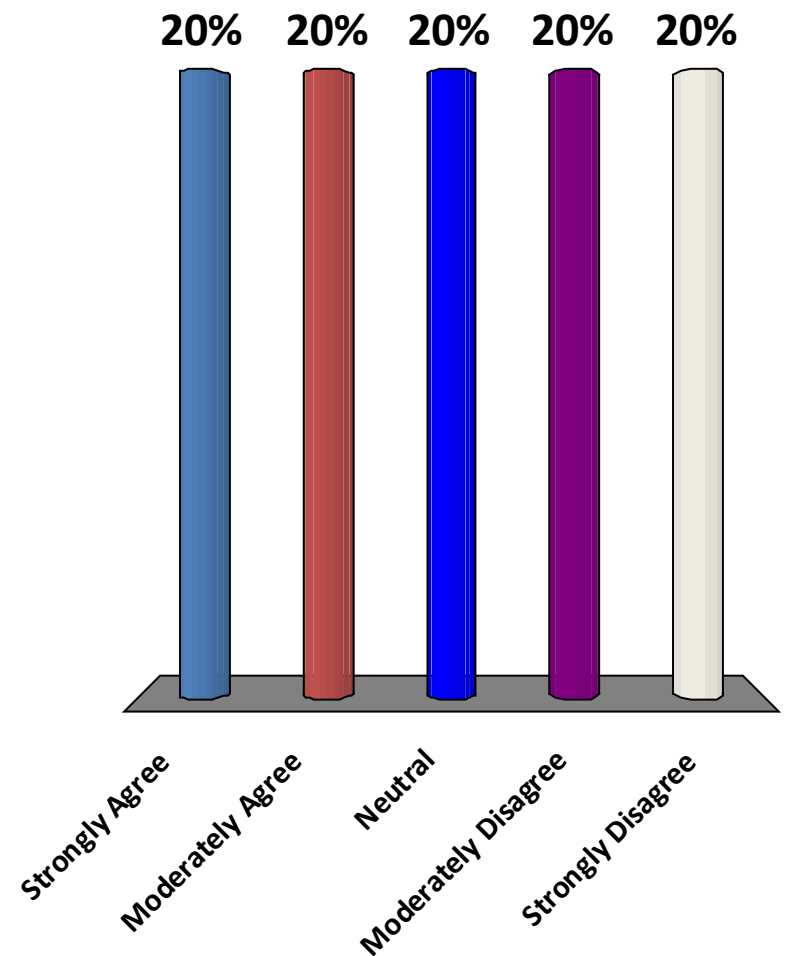
0 Quite a lot

1 A lot

2 Some

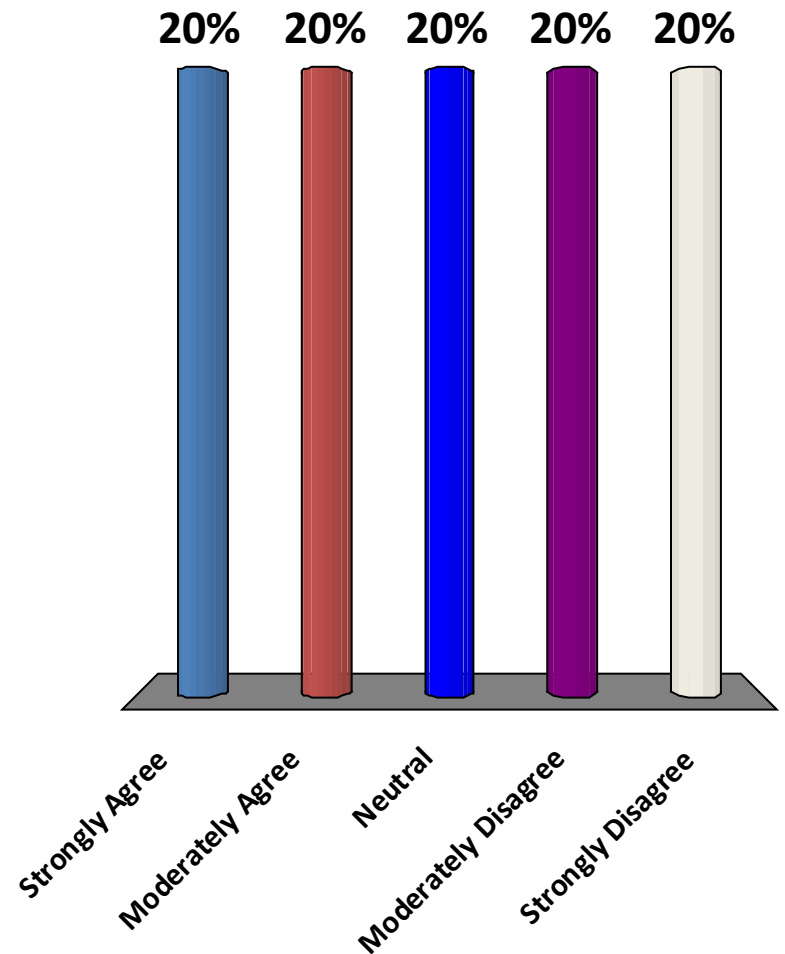
3 A little

4 Not at all



# TO WHAT EXTENT SHOULD **GROWTH MANAGEMENT PLANS** BE CONSIDERED AS A COMPONENT OF A NITROGEN ALLOCATION FORMULA?

- 0 Quite a lot
- 1 A lot
- 2 Some
- 3 A little
- 4 Not at all



# Implementation

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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



# HOW MUCH WOULD YOU BE WILLING TO PAY PER YEAR TO IMPROVE WATER QUALITY?

0 \$100 to \$500

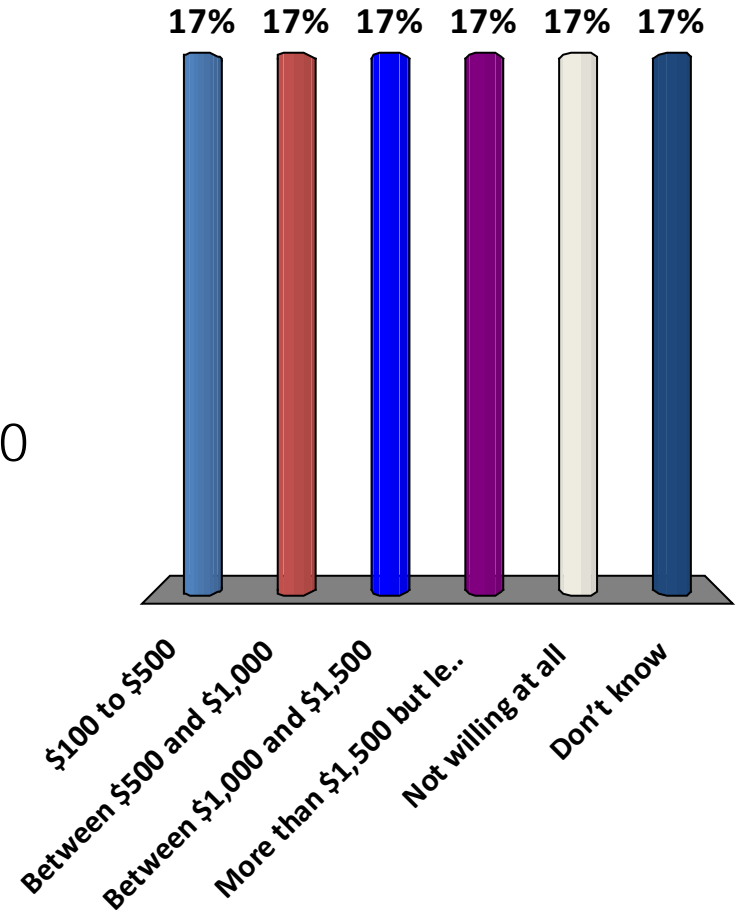
1 Between \$500 and \$1,000

2 Between \$1,000 and \$1,500

3 More than \$1,500 but less than \$2,000

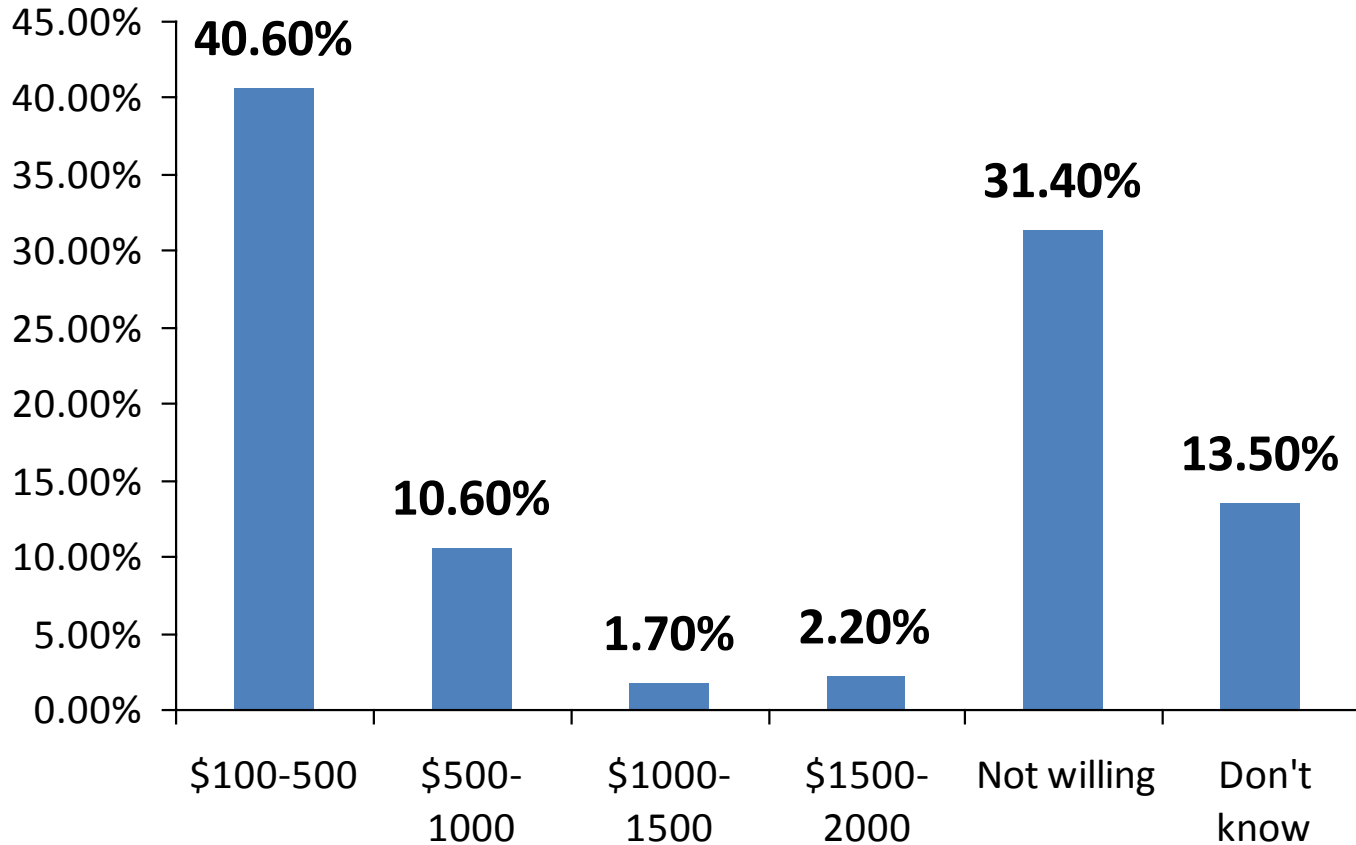
4 Not willing at all

5 Don't know



# CAPE WIDE SURVEY RESULTS

## How Much Would You Be Willing To Pay Per Year To Improve Water Quality?



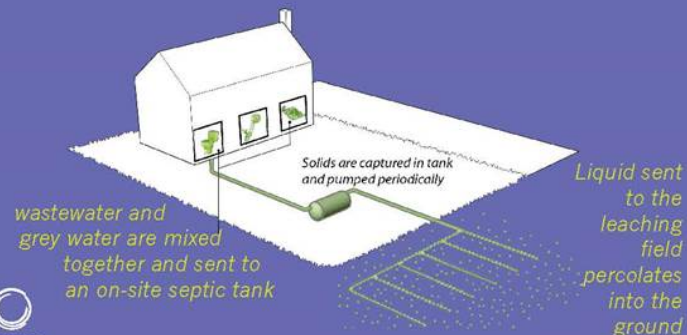


# AFFORDABILITY BASELINE

## SEPTIC SYSTEMS

A septic system for collecting waste typically consists of a septic tank, and a leaching field, connected by pipes. Solid waste is collected in a buried tank and pumped out, and disposed of, at regular intervals. The remaining liquid percolates into the ground through the leaching trench or field.

Bacteria in the septic system changes the composition of the waste as it travels through the system.



**AVERAGE YEARLY COST**  
for the construction  
And maintenance  
of a septic system  
(based on a 20 year lifespan)

**\$750**

# REVENUE MODULE

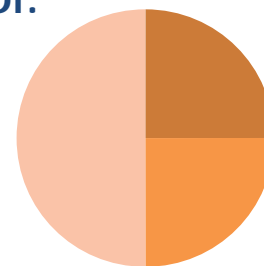
## PURPOSE:

- 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



# POSSIBLE REVENUE SOURCES



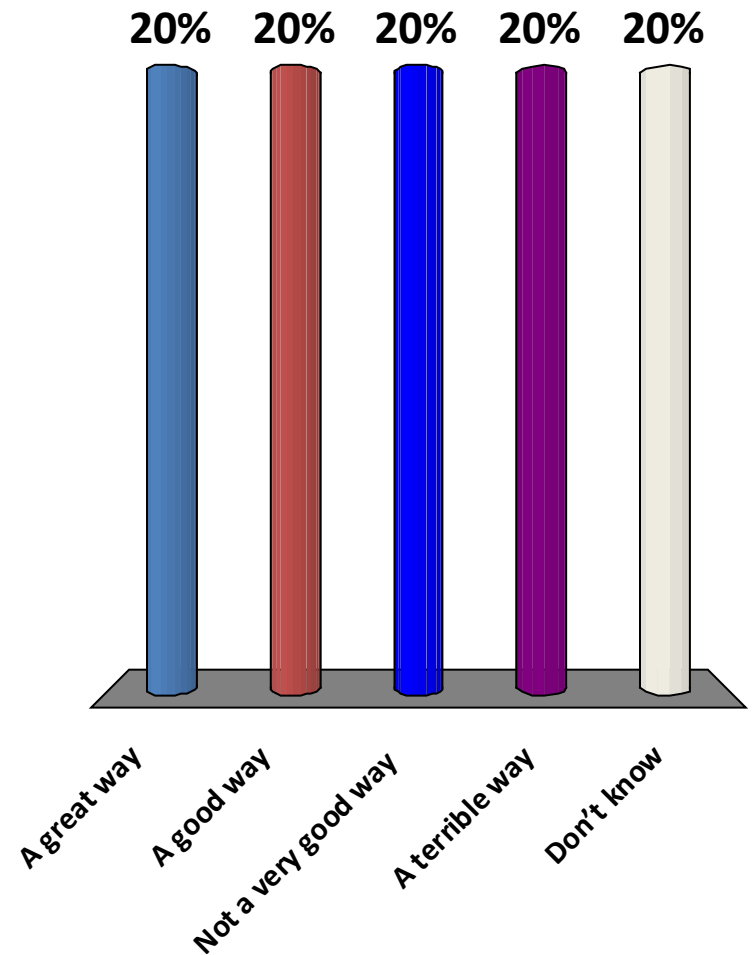
# SOURCES POLLED FROM CAPE WIDE SURVEY



# MOTOR FUEL TAX: 5 CENTS/GALLON

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

- 0 A great way
- 1 A good way
- 2 Not a very good way
- 3 A terrible way
- 4 Don't know



# CAPE WIDE SURVEY RESULTS

## MOTOR FUEL TAX: 5 CENTS/GALLON



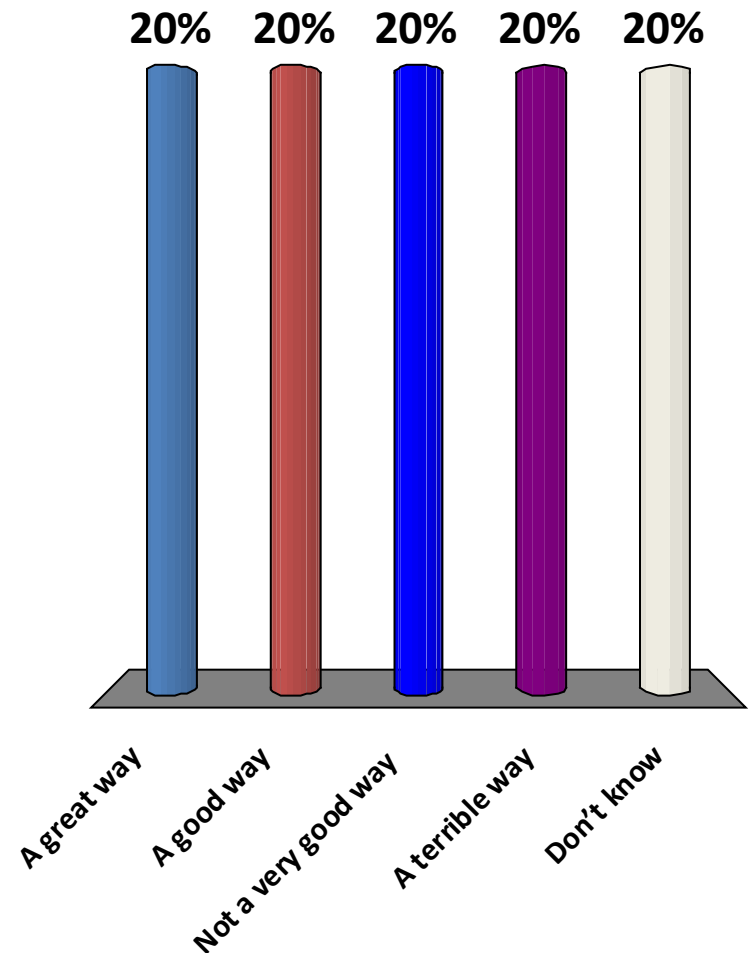
# 13.7%

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.

- 0 A great way
- 1 A good way
- 2 Not a very good way
- 3 A terrible way
- 4 Don't know



# CAPE WIDE SURVEY RESULTS

## EARMARK A PORTION OF EXPECTED GAMING PROCEEDS



# 71.1%

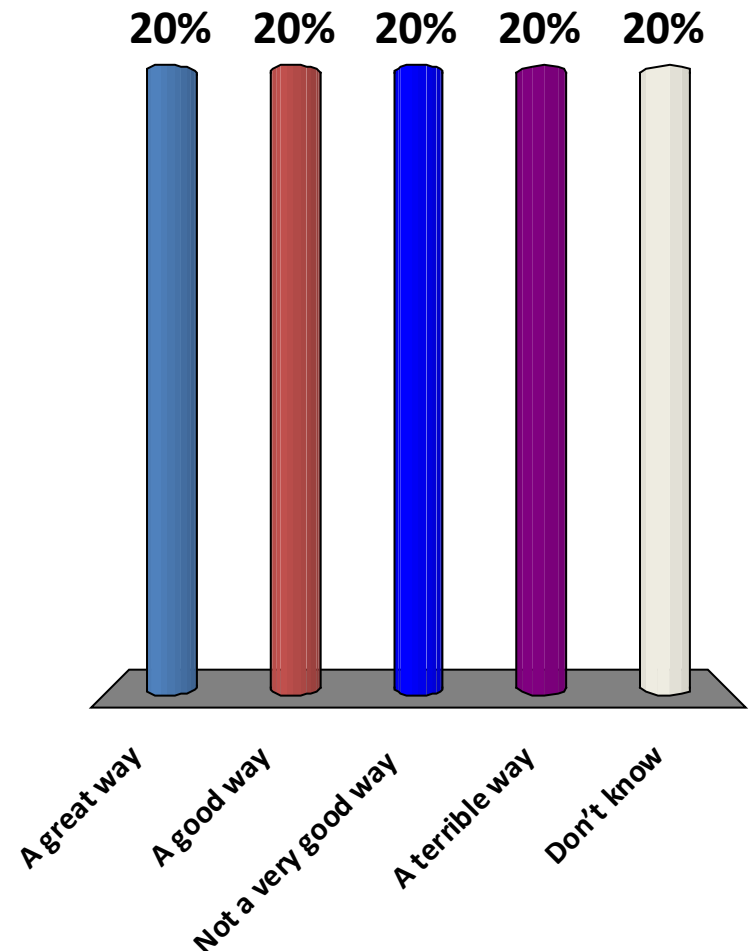
of people thought this was a good or great way to fund wastewater projects.



# EARMARK A PORTION OF AN INTERNET SALES TAX

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

- 0 A great way
- 1 A good way
- 2 Not a very good way
- 3 A terrible way
- 4 Don't know



# CAPE WIDE SURVEY RESULTS

## EARMARK A PORTION OF AN INTERNET SALES TAX



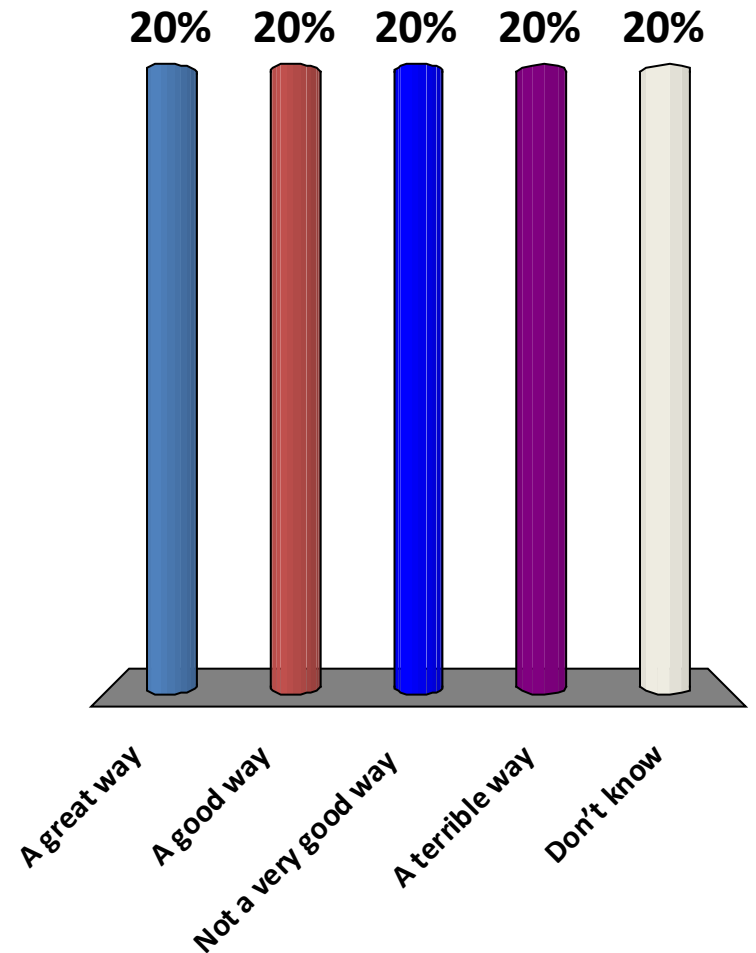
# 32.2%

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.

- 0 A great way
- 1 A good way
- 2 Not a very good way
- 3 A terrible way
- 4 Don't know



# CAPE WIDE SURVEY RESULTS

## REDEDICATING LOCAL OPTION MEAL AND ROOM OCCUPANCY TAX



# 42%

of people thought this was a good or great way to fund wastewater projects.

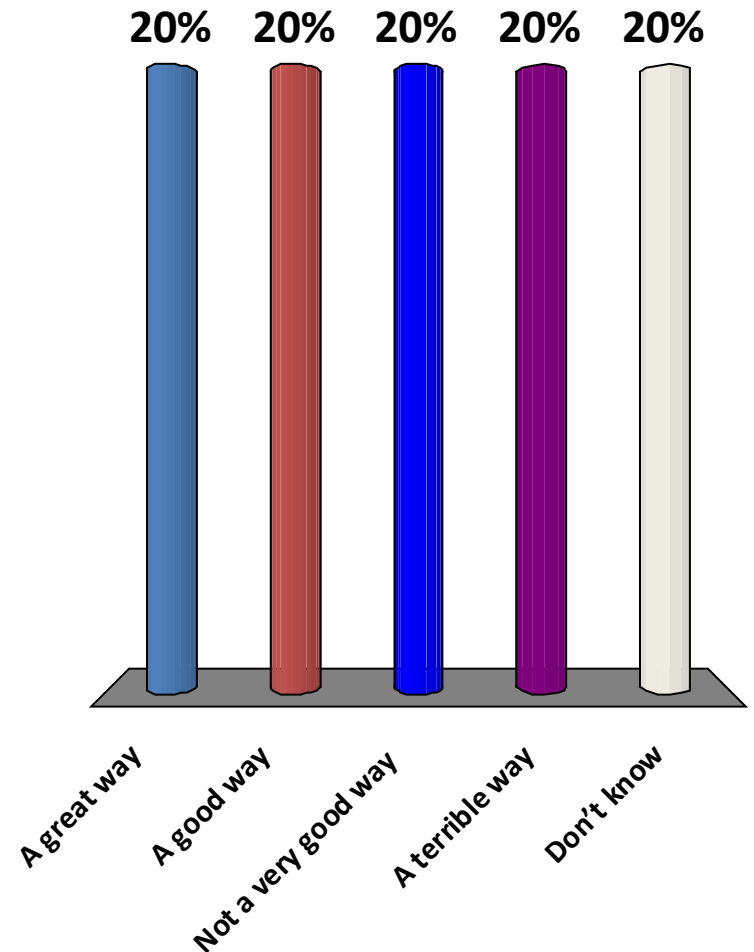
# ADDITIONAL POSSIBLE REVENUE SOURCES



# SEPTIC SYSTEM INSTALLATION TAX (\$200), PUMP-OUT TAX (\$20)

There are about 686,000 septic systems in MA (approximately 120,000 of which are on Cape Cod). Statewide annual revenue total would be approximately \$3.9 million.

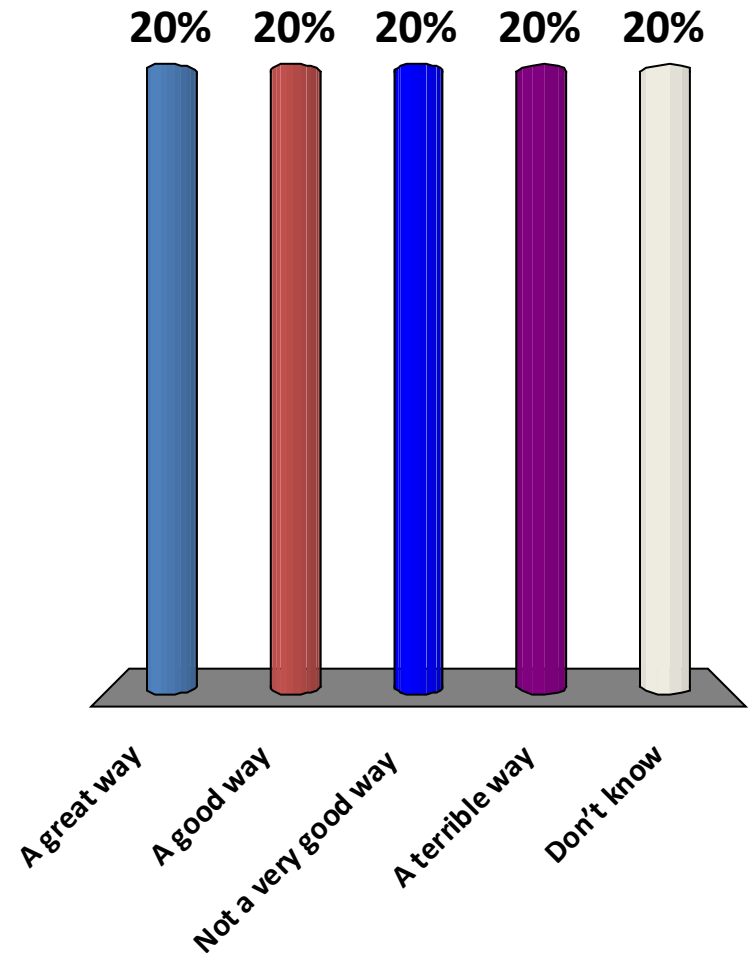
- 0 A great way
- 1 A good way
- 2 Not a very good way
- 3 A terrible way
- 4 Don't know



# 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.

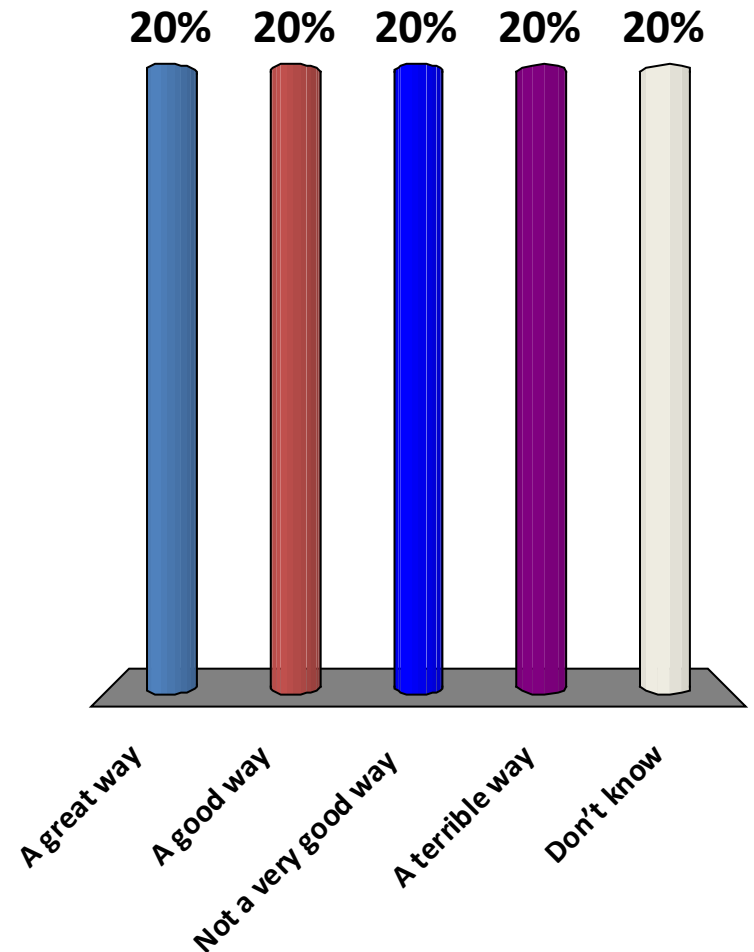
- 0 A great way
- 1 A good way
- 2 Not a very good way
- 3 A terrible way
- 4 Don't know



# EMBARKATION EXCISE TAX: 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.

- 0 A great way
- 1 A good way
- 2 Not a very good way
- 3 A terrible way
- 4 Don't know

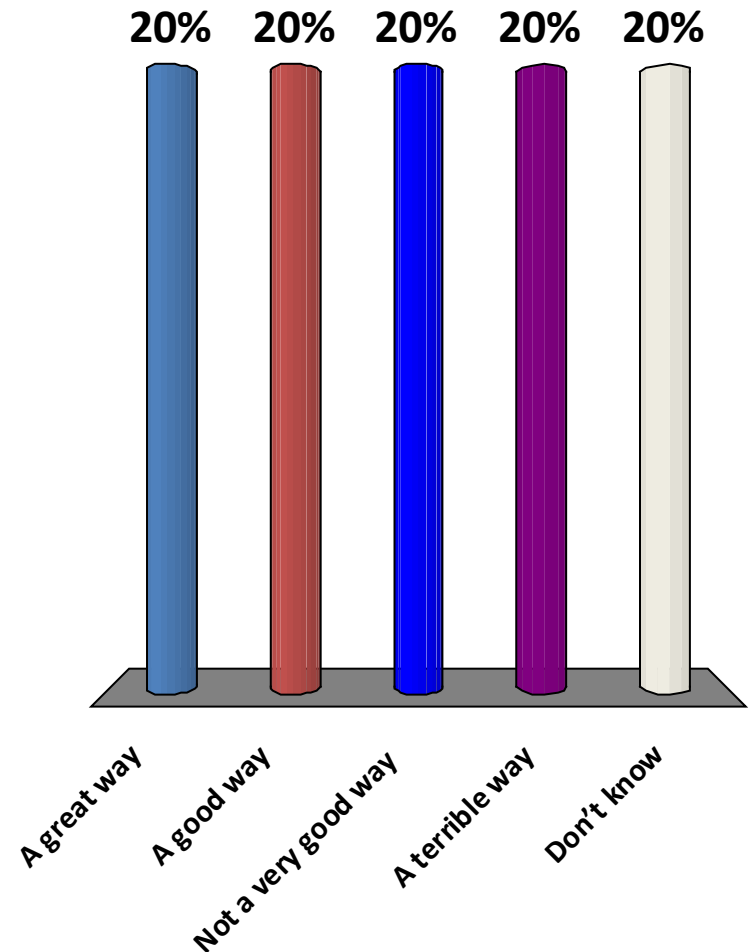




# MA EXCISE TAX: MILLAGE ON WATER CONSUMPTION OF 1-3 MILLS/GALLON

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.

- 0 A great way
- 1 A good way
- 2 Not a very good way
- 3 A terrible way
- 4 Don't know



# POSSIBLE REVENUE SOURCES

## What's already happening?

- Environmental Bond Bill
- Southeast New England Coastal Watershed Restoration Program:  
Funding available for FY14
- Water Infrastructure Bill :  
Principal Forgiveness



# 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



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

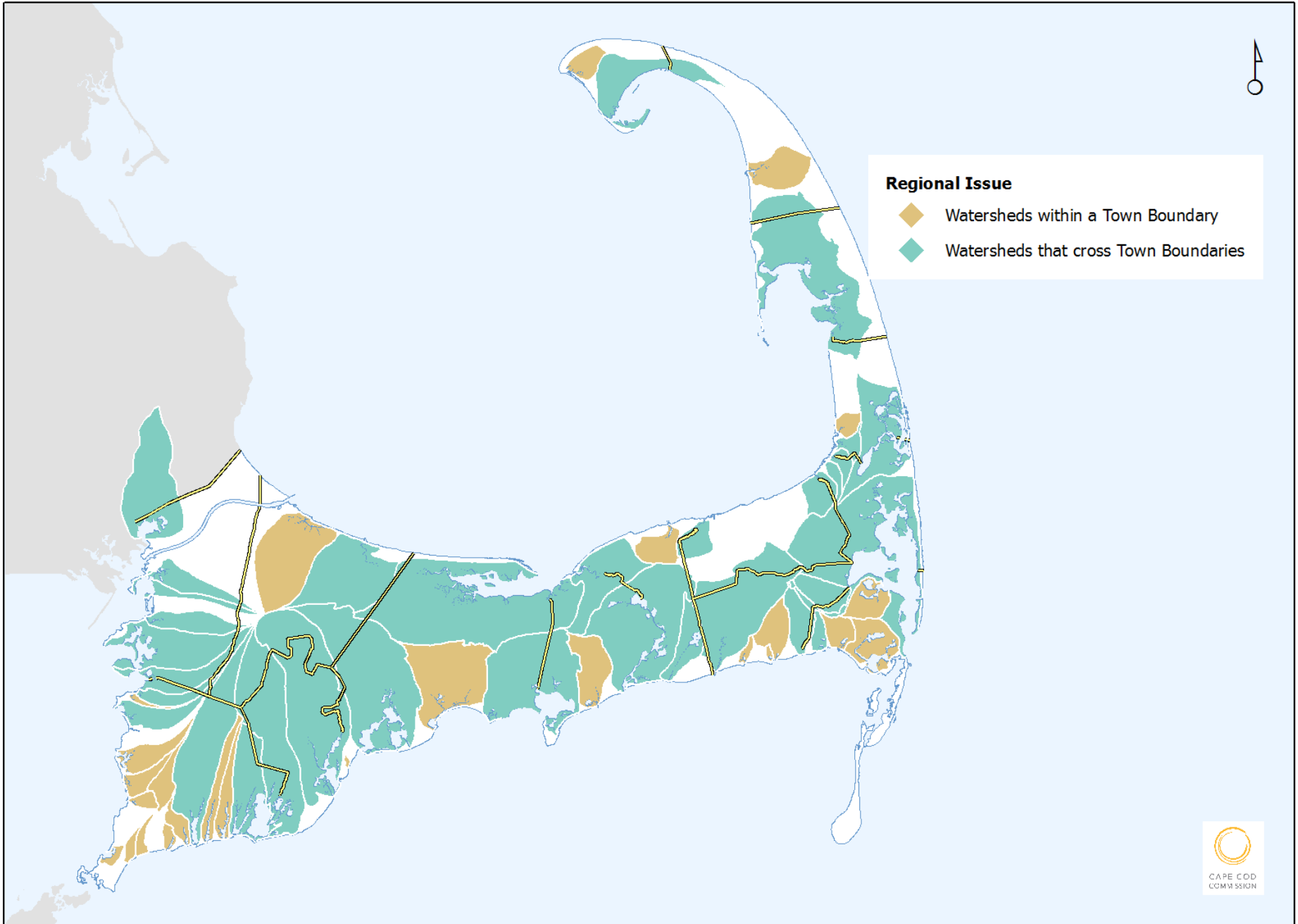


<http://watersheds.capecodcommission.org/index.php/watersheds/upper-cape>

# Upper Cape Sub Regional Group



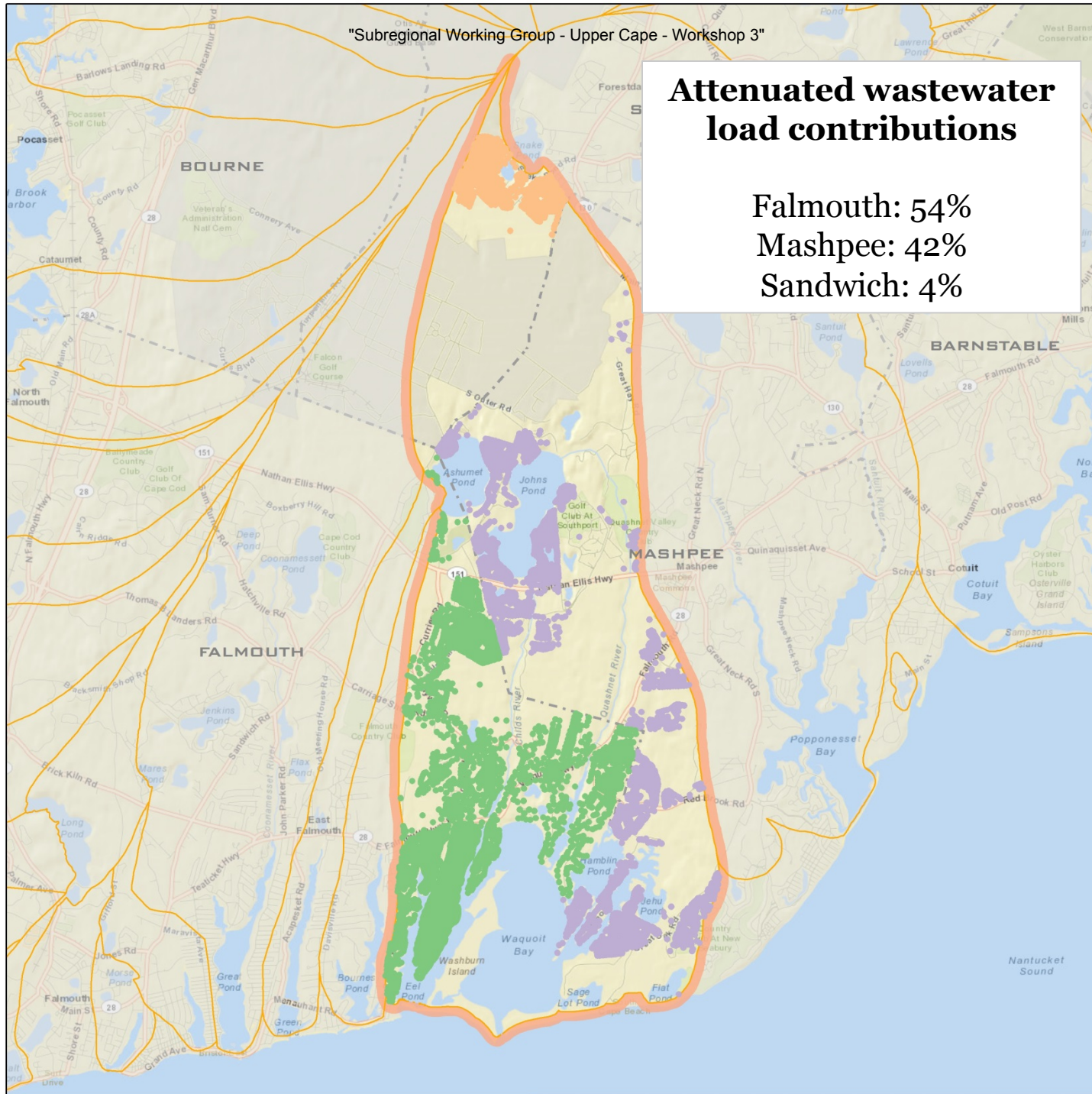
MEETING 3





## Attenuated wastewater load contributions

Falmouth: 54%  
Mashpee: 42%  
Sandwich: 4%



# Upper Cape Sub Regional Group



MEETING 3



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

**Meeting Three**

**May 16, 2014**

**1 PM – 5 PM**

**Mashpee Town Hall**

**16 Great Neck Road North, Mashpee, MA 02649**

**Meeting Summary Prepared by the Consensus Building Institute**

**I. ACTION ITEMS**

Working Group

- Provide feedback on the Consensus Building Institute's draft meeting summary
- Submit ideas and feedback regarding the proposed Special Review Process

Consensus Building Institute

- Draft meeting summary
- Contact Working Group about next steps

Cape Cod Commission

- Send date and details of July Tabletop exercise to the Working Group

**II. WELCOME AND REVIEW OF 208 PLANNING GOALS**

Ms. Carri Hulet, Facilitator from the Consensus Building Institute, welcomed the Working Group members to the third meeting of the Upper Cape Sub Regional Group, briefly reviewed the meeting agenda, objectives, and meeting ground rules; led introductions; and asked the group to send her feedback on the meeting notes.

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 the Department of Environmental Protection on June 1<sup>st</sup>. The Commission will hold a tabletop exercise in July to provide the working groups with a hands on method to experiment with the models and collaborative agreements. The draft will be made available to the public on August 1<sup>st</sup>, and the public will have 90 days to comment on the draft. The Commission will then have 60 days from November 1<sup>st</sup> to January 1<sup>st</sup> to review the comments and submit a revised plan to the DEP. He also added that the *Ad Hoc* Monitoring Committee will report back to the stakeholder groups soon and may become a permanent committee if it looks like it can be useful in the long term.

Mr. Niedzwiecki described the meeting topics. Similar to the first two meetings, this third meeting would cover 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. During the regulatory, legal, and institutional interactions discussion, the group would review possible models for collaboration and discuss how those mechanisms do or do not meet the needs of the Cape towns. Finally, the group learned about 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

Members provided the following feedback and questions after the meeting overview.

Responses from Mr. Niedzwiecki, Ms. Hulet, or other Commission staff are *italicized*.

- A participant said the first agenda item should be to review the 208 goals. She said the matrix is not being used correctly in Falmouth. It is the test kitchen, and the town is trying to use the tools, but they need instructions or some guide on how to use them. *"The town cannot do watershed planning if it just picks a few technologies to test." The Commission can discuss the creation of a guide on how to use the tools.*
- A participant from Mashpee agreed, saying the low hanging fruit might not be that low hanging.
- Another person suggested there are two tracks: using sewer in dense areas and the sequential approach with non-traditional technologies in the remaining areas.
- The Commission replied: *There is a tension between having a transparent stakeholder engagement process and sharing the uncompleted draft plan. There will be one consolidated approach with extensive feedback. The Cape is on track in this process. All of this information is useful, and the Commission will absolutely qualify the information that comes out of it. Furthermore, the tabletop exercise will guide participants through the process steps and help the Commission find blind spots before the August 1<sup>st</sup> public release and issuing the final version of the draft.*

### **III. SCENARIO PLANNING: Subregional Scenarios**

Mr. Niedzwiecki presented a map of the Cape's 57 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 presentation<sup>1</sup>). The first scenario represented a maximum collection footprint of a sewer system, 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 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 the Upper Cape that were selected by screening parcels and matching landscape characteristics with specific technologies. The EPA and DEP are vetting the alternative technologies to come up with a short list of options. Though they have a wide variability in performance and cost, PRBs might be a good option. Mr. Niedzwiecki concluded with a map of the Comprehensive Wastewater Management Plan's (CWMP) footprint as another basis for considering the different technologies, though noting that it has inefficient boundaries.

#### **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 were to discuss which models could be used for the 208 process and apply the collaboration models discussed last time to the watershed.

Ms. Senatori and Ms. Hulet introduced the Working Group to keypad polling, emphasizing that it was being used to get a sense of the group's feelings, not to make decisions. Ms. Senatori led the group through several warm up questions, including:

- From which town do you hail?
  - Bourne: 28%
  - Sandwich: 0%
  - Falmouth: 39%
  - Mashpee: 22%
  - Other: 11%
- How old are you?
  - 18-30: 6%
  - 31-40: 6%
  - 41-50: 6%
  - 51-60: 6%
  - 61-70: 28%
  - 70+: 33%
  - None of your business: 17%

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<sup>1</sup> <http://watersheds.capecodcommission.org/index.php/watersheds/upper-cape/regional-stakeholder-group-upper-cape>

Ms. Senatori briefly reviewed the current filing process for a CWMP. She noted that filing 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 (see presentation for full process<sup>2</sup>). She polled the Working Group on "what is the most difficult part of the existing process?" The group responded:

- Number of agencies reviewing the plan: 0%
- Cost: 7%
- The process is too long: 13%
- Not enough opportunity for public comment: 13%
- Doesn't always account for remediating nitrogen in shared watersheds: 20%
- All of the above: 47%

After reviewing the current filing process, Ms. Senatori then reviewed a new, streamlined six-step special review process based on lessons learned from the Herring River Project and suggestions proposed by the Massachusetts Secretary of Energy and Environmental Affairs (EEA) in the certification of Falmouth's Comprehensive Wastewater Management Plan. Ms. Senatori suggested that 208 projects could possibly be reviewed through this proposed process or a similar one.

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 Environmental Affairs, as Citizen Advisory Committees. The Watershed Association could be a multi-town entity. The Secretary would appoint/approve 10 members to the associations. Suggestions for those to be included:

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<sup>2</sup> <http://watersheds.capecodcommission.org/index.php/watersheds/upper-cape/regional-stakeholder-group-upper-cape>

- 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 to engage the community.
  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 of Regional Impact Review (DRI).
  6. The issuance of a certificate of FEIR adequacy by the Secretary and DRI approval from the Commission

Mr. Niedzwiecki emphasized that this process would be modeled after current successful projects. Though this process is just a recommendation, it could represent a significant improvement of the permitting process. It allows the Commission to advise projects, can handle multiple water quality issues, provides an opportunity to access state funds, and allows for quick consensus and action on small projects and targeted watershed plans. A similar process, which Falmouth went through, was approved in 30 days. This SRP process would also include an adaptive management component.

The Working Group members expressed several concerns about the SRP – primarily about adding another process (it was not clearly understood at first that this process was streamlined and an alternative to the complexity of the existing process) and in response to the suggestion that the EEA Secretary would appoint the members of the Citizen Advisory Committees. In response, Ms. Senatori and Mr. Niedzwiecki explained that the SRP is an optional alternative and is designed to make it easier and faster for towns, but if towns have already started the old process and want to continue with it, they could do so or switch to the new SRP. After a lot of discussion about the Advisory Committees and the Secretary, it was made clear that the Secretary would “bless” the groups, but that they would be organically formed by people on the Cape who know the players. The group approved phrasing this as the “Secretary acting in consultation with local government.”

The Commission said they are proposing the SRP primarily as an option to streamline the process for shared watersheds but it can also be used for contained sheds. By allowing individual projects with consensus to move forward, the permitting process can be expedited, as not all projects will have to be comprehensive. The upfront consultation with the Commission is meant to facilitate the conversation between the towns and the regulators to get the project on the best path for reducing costs and boosting efficiency.

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

- The poll asking, "what is the most difficult part of the existing process" should include a "some of the above option."
- The Clean Water Act is an issue towns will have to deal with, since it counts wastewater as part of the problem, so towns cannot just discharge treated sewage. This could make it more difficult to get final overall approval.
- For shellfish farming licenses, towns do not need to go through Commission review.
- If Falmouth and Mashpee both had CWMPs and wanted to come together, how would this work? *There is no clear answer for this question because that is part of what we are still trying to figure out in this process, but it would be a huge step forward for the towns to at least allocate responsibility for the problem, and they could subsequently move forward separately.*
- Trusting the regulatory agencies to provide enough money to set up pilot projects will be difficult.
- The CWMP is supposed to be a town-wide approach, so the SRP could help increase efficiency by boosting town cooperation. *Falmouth is a great example; it has many shared watersheds, and there may be political issues that prevent towns from getting together. Dividing the jurisdiction of the problem is the most efficient way to start the process.*
- The SRP will help eliminate legal snags and give towns operating space to focus on watersheds. I like it.
- The divisibility component is promising.
- Any plan has to have a Certificate of Adequacy by DEP
- The goal of an environmental review is to ensure the solutions will not cause more problems, so it seems like the earlier consultation to get enough information to make rational decisions is an important step. *Yes, we live in an era of shrinking public revenue. When the state pushes for comprehensive reviews, the 208 process should give them comfort that its resources will be allocated effectively.*

Ms. Senatori reviewed the requirements of the Clean Water Act and the 208 Plan. The state must designate one or more waste management agencies (WMA) that can implement the plan, manage waste treatment, design and construct new or existing works, accept or utilize grants, raise revenues, incur indebtedness, and assure each town pays its costs. There are several

existing entities on the Cape that have the authority to fulfill this role, including the fifteen towns and established fire and water districts (see PowerPoint for complete list<sup>3</sup>).

Mr. Niedzwiecki showed the large number of shared watershed on the Cape. Thus, agreements among towns might be difficult but will be necessary. Organizations may need to be set up to manage this collaboration. *De minimis* classifications could potentially shrink the number of shared sheds, and management areas could be consolidated by the body of water ultimately impacted.

Ms. Senatori reviewed the different collaborative models for carrying out the 208 process and led the group through a discussion of how each model could be applied to Waquoit Bay (see meeting PowerPoint for more information about the models<sup>4</sup>). Ms. Hulet asked the Working Group to how think about how the different models could apply to a specific watershed and to identify possible benefits and challenges of the application.

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

Intermunicipal agreement:

- How could a sewage plan be included in these?
- There are many different kinds of water quality problems that are part of the overall problem. Would there by different intermunicipal agreements for different solutions? *There could be one or many.*
- It makes more sense to figure out the agreement structure after your figure out what you're going to do. *Yes, familiar plans like intermunicipal agreements might be the starting points, but as the technical information is developed, towns might choose different plan. It could be an iterative process.*
- Is this the most flexible model then? *Yes, this is the broadest kind of agreement.*
- We are hoping it will be cheaper for Sandwich to reimburse Falmouth and Mashpee to manage the nitrogen mitigation, but then we would need to look at controlling growth to manage the load. *For now, we want to look at applying an agreement not designing it, but that idea could work.*

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<sup>3</sup> <http://watersheds.capecodcommission.org/index.php/watersheds/upper-cape/regional-stakeholder-group-upper-cape>

<sup>4</sup> <http://watersheds.capecodcommission.org/index.php/watersheds/upper-cape/regional-stakeholder-group-upper-cape>

- This model is the most likely approach towns would take, since they have the structure in place, and it is the most flexible. I could envision this happening 5 years from now. Sandwich also has its own interests, as it wants to send sewage to the military base.
- Intermunicipal agreements are the most flexible and likely to happen. I think the town meetings will grant the selectmen power to make agreements, but intermunicipal agreements will still be important. *Yes, and they are necessary to allocate funds.*
- 20-25 years seems reasonable timeframe for these, since it is part of the CWMP planning process and mirrors infrastructure lifespan.
- The Estuaries Report in Waquoit Bay shows that both towns need to do their parts, as Mashpee's mitigation projects depend on Falmouth's load. There are complicated watershed overlaps between the towns. *This could be an advantage of an intermunicipal agreement.*
- Ecotoilets last almost forever, and only the fan needs to be replaced.

#### Federal/Municipal Public-Public Partnerships

- This looks like a plan that could involve the facilities on the military base. It is almost impossible to get an agreement with the base because of the multiple layers of agreement that have to happen.

#### Independent water and sewer districts

- One of these districts was just created for Mashpee, but it is just in Mashpee's town boundaries. Much of the city's plan is still dependent on aquaculture, which is controlled by the town.
- These can be cheaper overall, especially if there already is a water district, the utilities can be consolidated.
- Who controls the local water and sewer rates? Would the prices be outside the control of the selectmen? *These are created through municipal elections, so they have separate bonding authority.*
- What is the likelihood that a town would give an entity like this power? *Many towns already have groups like this.*
- How much of the responsibility for nitrogen in the watershed rests on the base? All of the base's waste is sewerred and pumped into Bourne. *We will talk about nitrogen allocation later today.*
- The Cape should consider the base as a 16<sup>th</sup> town. *Land use collaboration with the base is a complicated issue. We need to work with the base to tackle the nitrogen problem.*
- The base could benefit surrounding towns by mitigating nitrogen.

#### Water Pollution and Abatement District

- For this approach, does the DEP own and operate the district? *The DEP would not be an authority. The towns can vote these in on their own. The DEP has never designated one, and the DEP cannot establish rates. These have been effective when geared toward a particular pollution problem.*



- We should look at examples of this approach elsewhere.
- In places with many I/A systems, it might make sense to have a managing entity.
- We could consider a public utility with management authority over these issues and systems like I/As.
- Maybe the Mashpee water and sewer district could take on this role.

#### Independent Authority

- Ms. Senatori suggested skipping over this model. There were no comments.

#### Regional Health District

- The group may need more information about this approach. *At the last meeting, we reviewed the example of the district in Pelham. It consolidated authority to decrease costs when three towns had similar public health issues.*
- This could work for I/A systems.
- There should be an entity that collects liquids as well as solids.
- How would this be funded? It could be a complicated issue.
- These have a lot of authority.

#### Other Comments

- We need to find a solution first, then an entity that fits it.
- Does attenuated load refer to attenuated nitrogen? *Yes.*
- For now, are we looking at present or future build out? *We are looking at current development.*
- We should consider discussing future development. *We will look at this later in the meeting.*

The Working Group used TurningPoint to express its preference for the models. Each participant was only allowed to choose one model. The poll concluded that 63% of the group favored intermunicipal agreements, 5% federal/municipal public-public partnerships, 5% independent water and sewer districts, 16% water pollution and abatement districts, 11% independent authorities, and 0% regional health districts.

Ms. Senatori introduced the Working Group to different criteria for allocating nitrogen responsibility among towns, noting that the factors are not mutually exclusive. Nitrogen allocation could be the crux of the process moving forward. The MEPs have examined this issue but are not available for all towns yet. Accordingly, towns need to agree on alternatives for measuring nitrogen loads. The group used TurningPoint polling to respond to the question: "How strongly do you believe the following factor should be a factor for nitrogen allocation." The factors and responses from the group were:

- Water Usage
  - Strongly Agree: 18%
  - Moderately Agree: 24%
  - Neutral: 29%
  - Moderately Disagree: 6%
  - Strongly Disagree: 24%
- A methodology that evaluates attenuation
  - Strongly Agree: 29%
  - Moderately Agree: 24%
  - Neutral: 35%
  - Moderately Disagree: 12%
  - Strongly Disagree: 0%
- Population
  - Strongly Agree: 25%
  - Moderately Agree: 31%
  - Neutral: 19%
  - Moderately Disagree: 13%
  - Strongly Disagree: 13%
- Seasonality
  - Strongly Agree: 42%
  - Moderately Agree: 16%
  - Neutral: 11%
  - Moderately Disagree: 16%
  - Strongly Disagree: 16%
- Growth Management Plans: How could new subdivisions affect water management decisions, especially since growth and its impacts on nitrogen contribution is not equally important everyone.
  - Strongly Agree: 24%
  - Moderately Agree: 53%
  - Neutral: 6%
  - Moderately Disagree: 6%
  - Strongly Disagree: 12%

Members provided the following feedback and questions about nitrogen allocation. Responses from Mr. Niedzwiecki or other Commission staff are *italicized*.

- Is the first question asking if water usage should be a component of the algorithm? *Yes, when talking about the watershed.*
- Are we going to discuss what concentrations of nitrogen to use? *We are not looking at that level of detail yet.*
- It is important to recognize that MEP reports calculate nitrogen by water use, so if water use is changed, the MEP reports need revision.
- Is this only for Waquoit Bay? *This exercise is for any watershed.*

- Ponds attenuate nitrogen but are still impacted by phosphorous. *The exercise is just looking at nitrogen for now.*
- Future build out is important.
- What does build out and growth mean here? *When allocating nitrogen responsibility, should towns with no growth versus communities with potential for growth be looked at differently? It involves zoning and other factors.*
- Towns should look at factors affecting growth when looking at build out.
- It sounds like the Commission is asking these questions to figure out the right way to allocate nitrogen. *The Commission is trying to figure out if there are other factors aside from the MEP that would give towns alternatives for discussion.*
- We went through a similar process and came to the conclusion that the option really was measuring the attenuated nitrogen load reaching the bay. *That is an approach you agreed on. The Commissions is giving you other options. There are no rules that tell towns how to allocate nitrogen.*

## **V. IMPLEMENTATION: Financing and Affordability**

Mr. Niedzwiecki and Jennifer Clinton, Special Projects Coordinator at the Cape Cod Commission, introduced the Working Group to three models 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 goal being to develop a model applicable to the entire Cape but divisible at the town level. 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, giving its purpose as establishing existing wastewater liability by watershed and by town and the resulting household burden to achieve TMDLs. 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 EPA suggests 2% of median regional household income as the tax rate for wastewater, though the Commission believes this rate is not feasible for Cape Cod. It also wants to avoid situations where communities that have already invested in mitigation programs do not benefit. Mr. Niedzwiecki also emphasized that many people on the Cape think they spend nothing on wastewater at the moment, but the actual yearly cost of septic system maintenance and construction per Cape household is around \$750. Towns need to educate their citizens that this is the current affordability baseline, as this could shift perspectives on the affordability of wastewater programs.

Mr. Niedzwiecki polled the Working Group on "How much would you be willing to pay per year to improve water quality?" The results showed:

- \$100 to \$500: 36% of the group
- Between \$500 to \$1,000: 14% of the group

- Between \$1,000 and \$1,500: 14% of the group
- More than \$1,500 but less than \$2,000: 14% of the group
- Not willing at all: 21% of the group
- Don't know: 1% of the group

For comparison, Mr. Niedzwiecki showed the results for the Cape residents as a whole:

- \$100 to \$500: 40.6%
- Between \$500 to \$1,000: 10.6%
- Between \$1,000 and \$1,500: 1.7%
- More than \$1,500 but less than \$2,000: 2.2%
- Not willing at all: 31.4%
- Don't know: 13.5%

Mr. Niedzwiecki explained the revenue module, which is meant to provide macro level revenue sources to finance Capewide wastewater solutions and is capable of providing revenue sources to finance a watershed, a combination of watersheds, and town wastewater solutions. The Commission is initially aiming to fund 25% of the costs with federal construction grants, 25% with multiple state revenue sources, and 50% locally with 0-2% SRF financing and the possibility of principal forgiveness up to 25%.

Mr. Niedzwiecki walked the group through several possible revenue sources for funding nitrogen mitigation programs and collected its polling feedback. The results for the percentage of the Cape as a whole who thought a source was a good or great way to fund wastewater projects was also shown when available.

- A 5 cents/gallon motor fuels tax
  - A great way: 13%
  - A good way: 7%
  - Not a very good way: 60%
  - A terrible way: 20%
  - I don't know: 0%
  - \*Capewide good or great results: 13.7%
- Earmarking a portion of expected gaming proceeds
  - A great way: 33%
  - A good way: 40%
  - Not a very good way: 0%
  - A terrible way: 20%
  - I don't know: 7%
  - \*Cape wide good or great results: 71.1%
- Earmarking a portion of internet sales

- A great way: 14%
  - A good way: 36%
  - Not a very good way: 7%
  - A terrible way: 43%
  - I don't know: 0%
  - \*Cape wide good or great results: 32.2%
- Rededicating local option meal and room occupancy tax
    - A great way: 35%
    - A good way: 29%
    - Not a very good way: 18%
    - A terrible way: 18%
    - I don't know: 0%
    - Cape wide good or great results: 42%
  - Septic system installation tax (\$200), pump-out tax (\$20)
    - A great way: 43%
    - A good way: 43%
    - Not a very good way: 7%
    - A terrible way: 7%
    - I don't know: 0%
  - Embarkation excise tax for ferry service
    - A great way: 50%
    - A good way: 43%
    - Not a very good way: 7%
    - A terrible way: 0%
    - I don't know: 0%
  - Embarkation excise tax for flights
    - A great way: 43%
    - A good way: 43%
    - Not a very good way: 14%
    - A terrible way: 0%
    - I don't know: 0%
  - MA Excise Tax: Millage on water consumption of 1-3mills/gallon
    - A great way: 67%
    - A good way: 13%
    - Not a very good way: 13%
    - A terrible way: 7%
    - I don't know: 0%

Mr. Niedzwiecki noted that some of the revenue sources, such as gaming proceeds and the Internet tax, were politically unviable 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 current funding sources. The Environmental Bond Bill has allocated approximately \$4 million, but only part of these funds legally need to be allocated, so the governor would need to be engaged to allocate the rest. At the moment, the bill provides interest free funds but may also include principle forgiveness in the future. Southeast New England Coastal Watershed Restoration Program (SNECWRP), sponsored by the EPA, will provide \$2 million in federal funds in 2014 with \$500,000 earmarked for nitrogen remediation on the Cape, and next year the 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% at a rate determined by the DEP. 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 PowerPoint<sup>5</sup>.

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

- Do gaming proceeds include the lottery? *No, it would be new revenue.*
- How do you take away the disincentive inherent in a septic system pumping tax? *That's the problem with it. It's tough.*
- I like that the millage tax has a connection to the problem.
- If the millage tax revenue is statewide, the money will just go to the MWRA.
- How does the SNECWRP money get to the Cape? *The EPA will bring it. They are currently looking at projects.*
- Is SNECWRP basically a grant process? *Yes.*
- Is SNECWRP funding only available this year? *So far, but it could go up to \$5 million in the president's budget next year.*
- Is the Water Infrastructure Bill at the federal or state level? *It is at the state level.*

Mr. Niedzwiecki presented the finance module. The module identifies costs to a town, watershed, or region by engineer solution and compiles a financial plan that can be adapted to meet EPA affordability criteria, accounting for existing and new wastewater and capital replacement costs.

Ms. Clinton presented the user interface of the financial model. Users input technologies at

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<sup>5</sup> <http://watersheds.capecodcommission.org/index.php/watersheds/upper-cape/regional-stakeholder-group-upper-cape>

quantified levels to determine construction, monitoring, and upkeep costs; the county might be the best entity to conduct monitoring to maximize economies of scale. 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. The aim of the tool is to provide decision support to make agreement easier. Working Group members will have the chance to go through the model and scenario planning during the tabletop exercise.

Working Group members had the following comments and questions about the financial model and related issues. Responses from Mr. Niedzwiecki, Ms. Hulet, or other Commission staff are *italicized*.

- It is great that the model is all on one page.
- Is there likely to be money for marsh restoration? *SNECWRP will target this and help better coordinate existing federal resources for targeting nitrogen.*
- Are the numbers that come out of the model driven by the technology matrix? *Yes, and the matrix is constantly updated. It is on version 39. The watershed MVP can also be integrated into this model, which will be part of tabletop exercise. The results have been good so far.*

- It seems like the Commission is working on a lot of good tools, but they are all coming in at the same time. A tool is only good if people use it, so the Commission needs to think through the tools' adoption and help people learn them. *That is a great point, and the Commission is trying to make it easier for local communities to have these discussions, but some tools with more extensive functionalities might be best suited for engineers and trained planners. The exercise in July will also allow people to use the basic set of tools. Moreover, part of the special review procedure is the first step that involves orientation and training on the tools. This is part of the intent of having groups initially meet with the Commission.*
- Apart from the first SRP consultation, it might be good to add additional consultation steps afterward. *Yes, the Commission also envisions that it will have an ongoing role supporting local efforts. It could also train town staff or provide training to technical assistance supervisors. Yes, this will be important.*
- What are the plans for phase 2 of the 208 Plan? *Much of it involves structural issues as well as outreach and communication to bring the stakeholder input to the general public. 25% of people on the Cape have attended wastewater meetings, but everyone thinks that they are not part of the problem. CBI did a survey, and it found that there is not a lack of education but an ownership problem.*
- Subwatersheds should be analyzed individually and should have separate sentinel stations to measure nitrogen.
- I agree; sub-analysis needs to be done. *This is a simplified analysis. Nitrogen allocation is part of this issue. This will be discussed further in July. EPA is also getting ready to issue the MS4, requiring towns to remove nutrients from stormwater.*
- The tax on gas should go to stormwater, since it contributes to the issue. *Yes, this is one of the arguments for the tax. If stormwater utilities could be created and combined with wastewater issues, it could deal with the entire issue.*
- Towns should consider districts that look at stormwater, wastewater, and drinking water. *This depends on what towns are focusing on. It is possible to construct a framework for solving nitrogen problems that also deals with other watershed based pollutants.*
- Has the state been receptive to watershed permitting? *Yes, it has been very receptive.*
- How much communication has the Commission had with the State about stormwater and fertilizer to determine how much credit the Cape will get? *The numbers the Commission is using come from the MEP. The variability from subwatershed to subwatershed really matters.*
- Every little reduction towns can make will make a difference.
- Does it matter how much total nitrogen there is as well? *Yes, even small changes in nitrogen can make the difference between having to construct a collections system or not.*
- *From a policy standpoint, towns have the opportunity to create a new sense of environmental stewardship when they tie the nitrogen problem to economic drivers.*
- For stormwater, nitrogen is not the only problematic contaminant. There are many other chemicals in it that could potentially be filtered with plants.



- From a fertilizer standpoint, the state is working on new guides for farms, yards, and golf courses. Golf courses have reduced the amount of fertilizer applied. The Cape can possibly take credit for this. There is very accurate data collecting now. *When there is an economic incentive not to over fertilize it helps, though the general population does not have such strong drivers for fertilizer use.*
- Do we need to know how much nitrogen is imported to Cape? *The Commission is just finalizing a fertilizer and pesticide report for the Cape.*
- We need a more integrative approach that deals with all aspects of the issue. Our water supplies are contaminated. 9 of the 10 Massachusetts towns with the highest breast cancer rates are located on the Cape.

**VI. PUBLIC COMMENTS**

The public had the following comments and questions. Responses from Mr. Niedzwiecki are *italicized*.

- Many chemical fertilizers have fillers in them that are hazardous waste. These could contaminate our ground water and should be controlled.

Ms. Hulet thanked everyone for coming and closed the meeting.

**APPENDIX ONE: MEETING PARTICIPANTS**

<b>Name</b>	<b>Town</b>
Rob Adler	US EPA
Earle Barnhart	The Green Center
Cindy Coffin	Town of Bourne Board of Health
David Dow	East Falmouth
Brian Dudley	Mass DEP
Tom Fudala	Water District, Mashpee
Sia Karplus	Science Wares, Inc.
Win Munro	Falmouth Water Quality Management Committee
Ed Nash	Golf Course Superintendents Association
Jerry Potamis	Wastewater Superintendent, Town of Falmouth
Sallie Riggs	Town of Bourne
Tonna-Marie Surgeon-Rogers	Waquoit Bay Reserve
Dale Saad	Engineer, Town of Barnstable
Virginia Valiela	Falmouth Water Quality Management Committee
Rick York	Shellfish Constable, Mashpee
Linda Zuern	Board of Selectmen, Bourne
<b>Staff</b>	
Anne McGuire	Cape Cod Commission

Paul Niedzwiecki	Cape Cod Commission
Erin Perry	Cape Cod Commission
Kristy Senatori	Cape Cod Commission
Dani Donahue	Cape Cod Commission
Carri Hulet	Consensus Building Institute
Griffin Smith	Consensus Building Institute
<b><i>Observers/Alternates</i></b>	
Victoria Brisson	Pocasset
Wesley Ewell	
Hilde Maingay	The Green Center
Dan Milz	University of Illinois