Standing Sub Regional Meeting Topics

### Mtg. 1
- **Scenario Planning**
  - One representative watershed
- **Regulatory, Legal, Institutional**
  - Challenges & opportunities associated with permitting the watershed scenario
- **Implementation**
  - Adaptive management plans

### Mtg. 2
- **Scenario Planning**
  - All shared watersheds & TBL model
- **Regulatory, Legal, Institutional**
  - Tools to support intermunicipal cooperation
- **Implementation**
  - Monitoring

### Mtg. 3
- **Scenario Planning**
  - Subregional scenarios & TBL model
- **Regulatory, Legal, Institutional**
  - Structures for permitting
- **Implementation**
  - Financing & affordability
Standing Sub Regional Meeting Topics

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

UPPER CAPE
### Site Scale
- Standard Title 5 Systems
- I/A Title 5 Systems
- I/A Enhanced Systems
- Toilets: Urine Diverting
- Toilets: Composting
- Toilets: Packaging
- Toilets: Incinerating
- Eco-Machines & Living Machines
- Phytobuffers
- Permeable Reactive Barrier

### Neighborhood
- Cluster & Satellite Treatment Systems
- Wastewater Collection Systems
- Constructed Wetlands: Surface Flow
- Constructed Wetlands: Subsurface Flow
- Stormwater: Bioretention / Soil Media Filters
- Stormwater: Wetlands
- Phytoirrigation

### Watershed
- Remediation of Existing Development
- Transfer of Development Rights
- Advanced Treatment
- Effluent Disposal Systems
- Stormwater BMPs
- Fertilizer Management
- Compact Development

### Cape-Wide
- Conventional Treatment
- Advanced Treatment
- Effluent Disposal Systems
- Stormwater BMPs
- Fertilizer Management
- Compact Development
Regulatory, Legal, and Institutional

UPPER CAPE
From what town do you hail?

0 Bourne
1 Sandwich
2 Falmouth
3 Mashpee
4 Other

Bar chart showing 20% for Bourne, Sandwich, Falmouth, Mashpee, and 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
CWMP Joint MEPA/CCC Review:
Projects Requiring Environmental Impact Report (EIR)

**APPLICANT** files:
- MEPA Environmental Notification Form (ENF)
- CCC DRI application

within 30-day MEPA comment period:

**APPLICANT** files Draft Environmental Impact Report (DEIR).

within 20-day MEPA comment period:

**CCC** sends comment letter with recommended scope for review to **MEPA**

**MEPA** issues certificate on ENF, scope of review.

**CCC and MEPA** hold joint public hearing

**CCC and MEPA** hold joint public hearing

**MEPA** issues certificate on ENF, scope of review.
CWMP Joint MEPA/CCC Review:
Projects Requiring Environmental Impact Report (EIR)

- CCC and MEPA hold joint public hearing
- CCC sends comment letter regarding DEIR adequacy to MEPA
- MEPA issues certificate on DEIR and issues to be addressed in FEIR.
- APPLICANT files Final Environmental Impact Report (FEIR).
- MEPA issues certificate of adequacy of FEIR
- MEPA issues certificate of adequacy of FEIR
- CCC sends comment letter letter to MEPA and may scope DRI issues.
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
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?

- Barnstable: 5
- Bourne: 9
- Brewster: 6
- Chatham: 3
- Dennis: 5
- Eastham: 4
- Falmouth: 6
- Harwich: 5
- Mashpee: 3
- Orleans: 14
- Provincetown: 1
- Sandwich: 2
- Truro: 1
- Wellfleet: 1
- Yarmouth: 4
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

M.G.L. c. 40 § 4A
FEDERAL/MUNICIPAL PUBLIC-PUBLIC PARTNERSHIPS

What is it?
Shared service agreement

Authority:

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 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

**What it could do:**
Create construct that provides for funding mechanisms outside town meeting
**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
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

<table>
<thead>
<tr>
<th>Agreement Level</th>
<th>Percentage</th>
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<tr>
<td>Strongly Agree</td>
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<td>20%</td>
</tr>
<tr>
<td>Moderately Disagree</td>
<td>20%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>20%</td>
</tr>
</tbody>
</table>
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

Strongly Agree: 20%
Moderately Agree: 20%
Neutral: 20%
Moderately Disagree: 20%
Strongly Disagree: 20%
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

Strongly Agree 20%  Moderately Agree 20%  Neutral 20%  Moderately Disagree 20%  Strongly Disagree 20%
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

Bar chart showing the responses:

- Strongly Agree: 20%
- Moderately Agree: 20%
- Neutral: 20%
- Moderately Disagree: 20%
- Strongly Disagree: 20%
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

[Bar chart showing distribution of responses with 20% for each category: Strongly Agree, Moderately Agree, Neutral, Moderately Disagree, Strongly Disagree]
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
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?

- 40.60% willing to pay $100-500
- 10.60% willing to pay $500-$1000
- 1.70% willing to pay $1000-$1500
- 2.20% willing to pay $1500-$2000
- 31.40% not willing
- 13.50% don't know
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/GALLOON

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

20%   20%   20%   20%   20%
A great way  A good way  Not a very good way  A terrible way  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: