Cape Cod 208 Plan Update
What is the 208 Plan?
Clean Water Act Section 208

The Commission was directed to update the 1978 Plan

The Commonwealth provided $3 million to fund the project
Focus on 21st Century Problems

Nitrogen: Saline Waters

Phosphorus: Fresh Waters

Growth & Title 5 Limitations
Nitrogen Removal Required

Studied Watersheds
- Excess Nitrogen Watersheds
- Watersheds Without Excess Nitrogen
A Regional Issue

Regional Issue
- Watersheds within a Town Boundary
- Watersheds that cross Town Boundaries
Approach to the 208 Plan Update

**Goal:**
To generate a series of approaches in each watershed that will meet water quality standards
Area Boundaries
208 Water Quality Management Plan Update

- Lower Cape
- Mid Cape
- Outer Cape
- Upper Cape
Subgroup Boundaries
208 Water Quality Management Plan Update

**Lower Cape**
- Herring River
- Pleasant Bay
- Stage Harbor Group
- Nauset and Cape Cod Bay Marsh Group

**Mid Cape**
- Cape Cod Bay Group
- Lewis Bay to Bass River
- Three Bays & Centerville River

**Outer Cape**
- Provincetown Harbor
- Wellfleet Harbor & Pamet River

**Upper Cape**
- Waquoit Bay & Popponesset Bay
- Upper Cape West & South
What is the stakeholder process?
208 Planning Process

Public Meetings

Goals, Work Plan & Roles
Affordability, Financing

Watershed Working Groups
Baseline Conditions
Technology Options Review
Watershed Scenarios

July
August
September
October
December

"Panel on Technologies - September 26, 2013"
Public Meetings

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Advisory Board

RLI

TAC

Advisory Board

RLI

Finance

TAC

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Tech Panel

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Finance

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Finance

Panel on Technologies - September 26, 2013

Regulatory, Legal & Institutional Work Group

Technical Advisory Committee of Cape Cod Water Protection Collaborative

208 Planning Process
The 208 Advisory Board

**Mission:** To support the 208 planning process by providing advice on the overall approach, reviewing draft work product and offering insight on strategic and tactical decision-making.

**Members**

*Robert Churchill*, Broker-Owner of Buyer Brokers of Cape Cod, Churchill Associates  
*Robert Lawton*, former Yarmouth Town Administrator  
*Wendy Northcross*, CEO of the Cape Cod Chamber of Commerce  
*Sheila Vanderhoef*, Eastham Town Administrator  
*Virginia Valiela*, Member of the Falmouth Water Quality Management Committee  
*Robin Wilkins*, former Town of Harwich Selectman
The 208 Finance Subcommittee

**Mission:** Establish a factual basis for discussing issues of affordability, financing, and resources

**Members**

*Bob Ciolek*, Chair, consultant to Barnstable County  
*Bill Hincheny*, Yarmouth Town Administrator  
*Mark Milne*, Finance Director, Town of Barnstable
The 208 Panel on Technologies

**Mission:** The mission of this panel is to review, confirm, and expand upon the matrix of technology options, review the overall planning approach to be used in each watershed, and provide input on a site screening methodology for green infrastructure technologies.

**Members**

*Ivan Valiela*, Marine Biological Laboratory  
*Chris Neill*, Marine Biological Laboratory  
*Eric Davidson*, Woods Hole Research Center  
*Sarah Slaugher*, Built Environment Coalition  
*Anamarija Frankic*, UMASS Boston  
*Patrick Lucey*, Aquatex, British Columbia  
*Jay Prager*, Maryland Dept of the Environment
**Targets/ Goals**

**Present Load:**
- X kg/day

**Target:**
- Y kg/day

**Reduction Required:**
- N kg/day

**Composite Target Areas**
- A. High Nitrogen Reduction Areas
- B. Pond Recharge Areas
- C. Title 5 Problem Areas

**Low Barrier to Implementation**
- A. Fertilizer Management
- B. Stormwater Mitigation

**Watershed/Embayment Options**
- A. Permeable Reactive Barriers
- B. Inlet/Culvert Openings
- C. Constructed Wetlands
- D. Dredging

**Alternative On-Site Options**
- A. Eco-toilets (UD & Compost)
- B. I/A Technologies
- C. Enhanced I/A Technologies
- D. Shared Systems

**Priority Collection/High-Density Areas**
- A. Greater Than 1 Dwelling Unit/acre
- B. Village Centers
- C. Economic Centers
- D. Growth Incentive Zones

**Supplemental Sewering**