

Appendix 1-5

**Town of Barnstable Nutrient Management
Project Scope, August 2008**

**TOWN OF BARNSTABLE
NUTRIENT MANAGEMENT PLANNING PROJECT**

**PROJECT SCOPE
August 14, 2001
(Updated August 25, 2008)**

The purpose of the Project Scope is to provide a listing of the steps needed for nutrient management planning in Barnstable. Listing these tasks allows Town departments, regional and state agencies, and public interest groups to understand the Nutrient Management Planning process, and efficiently provide input to the Project. The Project Scope is expected to have the following main uses:

- Budgeting and scheduling tool for nutrient management planning.
- Basis for the division of planning tasks within the Town of Barnstable.
- Basis for professional agreements for the specialized consulting services needed for nutrient management planning.
- Low interest loan application for the State Revolving Fund (SRF) loan program.
- Development of an environmental review document for the Project through the joint Massachusetts Environmental Protection Act (MEPA) and Cape Cod Commission Development (CCC) review process.
- Development of public education materials throughout the Project.

Portions of this scope have been completed and the scope is annotated in parenthesis to state the Town's progress on these scope items.

PHASE I – ENVIRONMENTAL MONITORING AND MODELING, AND DEVELOPMENT OF NUTRIENT LIMIT TARGETS.

This is the first phase of nutrient management planning, and it involves the assessment of the nutrient related health of the coastal embayments and fresh water ponds. It is the phase when nutrient loading targets are identified for each embayment by UMass S Mast and the Massachusetts Estuaries Project (MEP). These targets are a measure of the nitrogen assimilative capacity (critical nitrogen loading limits) of each embayment. It is the phase when the water quality of the fresh water ponds is measured and the need for phosphorus remediation in the ponds, and their watersheds, is estimated. The nitrogen limits have now (August 2008) been set by the MassDEP for the Popponessett Bay, Three Bay, Centerville River and Lewis Bay Estuaries. The MEP is still working on the Barnstable Harbor limits. The Town is still working on water quality monitoring, and there is still a need to prioritize the remediation of several freshwater ponds. Updates and status are provided below in italics.

A. Perform Water Quality Monitoring of Coastal Embayments and Ponds.

1. Prepare a water quality-monitoring program for the coastal embayments, ponds and fresh water streams. *(This is completed by S Mast)*
 - Review existing data, reports, previous water quality projects and ongoing monitoring programs.
 - Prepare a Sampling and Analysis Quality Assurance Project Plan (QAPP) identifying all monitoring needs, resources, protocols, parameters, locations and transportation methodologies.
 - Train volunteers to perform the monitoring.
 - Provide needed monitoring equipment.
 - Establish monitoring strategies, parameters, schedule, and locations.
2. Monitor the water quality in the Town's coastal embayments as detailed in the QAPP. *(This work continues for the estuaries)*
 - Collect samples.
 - Send samples to the S Mast laboratory for analysis.
 - Compile and review data and summarize water quality trends.

- Prepare Technical and TMDL Reports. (The TMDL Report for Lewis Bay is still outstanding as well as the Technical and TMDL Reports for Barnstable Harbor.)
3. Monitor and establish water quality in fresh water ponds. *(This work continues)*
- Participate in the Ponds in Peril Program which will assist in sampling of many Barnstable ponds.
 - Collect and analyze additional pond water quality samples as needed based on previously collected data and studies, and data collected through the Ponds in Peril Program.
 - Send samples to a qualified laboratory for analysis.
 - Compare and review data, and present water quality findings and trends.
 - Prepare Pond Assessment Report. *(Completed by CCC)*

B. Collect Additional Environmental Parameters.

1. Collect and analyze embayment sediments to determine nitrogen loadings from this nitrogen source. *(SMAST task)*
2. Collect and analyze additional biological parameters from embayments to allow characterization of embayment health. Possible biological surveys include: *(SMAST task)*
 - Eelgrass Survey
 - Macrophite Survey
 - Survey of benthic animal populations
3. Collect and analyze additional parameters (as needed) from ponds to allow characterization of pond health.

C. Assess the Nutrient Related Health of the Coastal Embayments and Ponds. *(This is completed for several embayments and some ponds)*

1. Integrate the available water quality data, aquatic plant surveys, benthic animal surveys and sediment surveys to assess the health of these water resources.

2. Compare existing water quality and biological parameter information with historic information including
 - Eel grass coverage
 - Macro algae data and observations
 - Algae bloom data and observations
 - Sediment types
3. Present various levels of environmental stress observed in the water bodies documenting if the waterbodies are currently stable or are changing in their ecological health.

D. Perform Embayment Flushing Analysis and Hydrodynamic Model Development.

(This work continues by SMAST for Barnstable Harbor)

1. Determine the usefulness of the hydrodynamic model recently developed for the Three Bay System. Perform new hydrodynamic modeling for this area as needed.
2. Develop the Bathymetry for the coastal embayments using available information and new bathometric surveys as needed.
3. Measure the tidal fluctuation within the embayments with tide gages and velocity meters through one complete lunar cycle.
4. Develop a hydrodynamic model for the embayments based on the tidal fluctuation, bathometry and appropriate modeling techniques for the embayments.

E. Develop Existing and Future Nitrogen Loadings to Coastal Embayments.

(This work continues for Barnstable Harbor)

1. Develop existing nitrogen loadings to the watershed groundwater system based on the following factors and concentrations:
 - Existing land use.

- Water consumption data.
 - Rainfall and evaporation rates for Barnstable.
 - Nitrogen concentrations infiltrating from natural areas, golf courses, lawns, agricultural areas, landfills, impervious areas, and septic systems.
 - Nitrogen loadings from wastewater treatment plant discharges.
2. Develop watershed nitrogen loadings for all significant nitrogen sources in the watershed. Typical sources include:
 - Wastewater discharges
 - Stormwater runoff from roads and roofs
 - Infiltration from lawns, golf courses and agricultural areas
 - Infiltrated nitrogen at the capped landfill site
 - Infiltration from natural areas
 3. Evaluate nitrogen attenuation factors and considerations for the watersheds based on watersheds characteristics (such as freshwater wetlands and bordering salt marshes) and actual water quality data from ponds, streams, and groundwater.
 4. Develop nitrogen loadings to the coastal embayments based on loadings to the ground water system and the attenuation in the watersheds.
 5. Develop future nitrogen loadings to the coastal embayments based on the following factors:
 - Land use within the watersheds at the 20-year design condition as well as the build out condition.
 - Similar factors, concentrations, and sources as listed for the existing nitrogen loading development.
 - Nitrogen attenuation factors evaluated for the existing nitrogen loadings.

F. Perform Water Quality Modeling. *(This work continues for Barnstable Harbor)*

1. Develop and calibrate a water quality model to evaluate the mobilization and fate of total nitrogen in the embayment systems based on the hydrodynamic model and the following factors and considerations:
 - Existing watershed nitrogen loadings.
 - Time of travel from the watershed to the embayments.
 - Nitrogen attenuation in the watersheds.
 - Existing nitrogen loadings (and nitrogen sinks) from embayment sediments.
 - Nitrogen uptake.
 - Water column nitrogen measurements.
 - Assessment of nutrient related health.
2. Run the Water Quality Model to understand and document the potential responsiveness of the modeled water quality to loading variations including:
 - Future nitrogen loadings.
 - Existing nitrogen loadings with portions of the wastewater loadings removed.
 - Reduced loadings to meet desired water quality concentrations or standards.
 - Modified sediment loading based on potential reductions of the watershed loadings.
3. Investigate potential water quality improvements if watershed nitrogen attenuation was maximized or promoted in modified pond or wetland systems.

G. Develop Nitrogen Loading Targets. *(This work continues for Barnstable Harbor)*

1. Develop nitrogen-loading targets for each embayment based on all of the components of this phase as well as CAC, TAC, regulatory, public and other input after review of preliminary findings.
2. Document the nitrogen loading targets in the nutrient loading assessment report (Technical and TMDL Reports). These are the loading targets that will be used in future nitrogen management evaluations to find cost effective nitrogen mitigation solutions.

H. Prepare the Nutrient Loading Assessment Report. (Technical and TMDL Reports)
(This work continues for Lewis Bay and Barnstable Harbor)

1. Prepare reports to document the components of this phase.
2. Submit this report for review as discussed in Phase 6.

PHASE II – NUTRIENT MANAGEMENT NEEDS ASSESSMENT

Phase II consists of the tasks to define the nutrient management needs of the Town. Management needs will be defined by identifying the Town goals for nutrient management, evaluating the existing conditions, developing projections of the future conditions, and then comparing these goals and conditions to the water quality limitations of the Town's water bodies.

The purpose of the nutrient management needs assessments is to evaluate and define the nutrient management needs of the Town.

The main tasks of this phase are listed below:

A. Review and Summarize Town Issues and Data. Including:

1. Nutrient management issues developed and discussed in Phase I.
2. Town governmental issues including:
 - Town goals and objectives affecting nutrient management.
 - Local rules and regulations.
 - Growth management policies.
 - Affordable housing initiatives.
 - Fiscal constraints.
 - Institutional constraints.

3. Available technical data including:

- Water quality and other monitoring data.
- Land use information.
- Build out projections.
- Areas of Town served by public and private water supplies.
- Zone of contribution (ZON) delineations for public water supplies.
- Soils information and area of Town with high groundwater conditions.
- Areas of Town served by on-site systems, cluster treatment systems and the Hyannis WPCF.
- Performance of on-site systems and existing on-site nitrogen removal systems.
- Performance of Barnstable Middle School WWTF and all other cluster and packaged treatment plants.
- Hyannis WWPf performance.
- Properties with septic system failures.
- Geographic Information System (GIS) information.

4. Previous and on-going projects related to nutrient management planning including:

- Town Wastewater Facilities Planning Study
- Recent and planned upgrades to Hyannis WPCF
- Stormwater remediation projects
- No-Discharge Area designation in Town's coastal areas
- Town DCPC nomination efforts
- Land acquisition efforts
- Pond and embayment studies discussed in Phase I Report

B. Review and Summarize Regulatory Issues Affecting Nutrient Management Planning.

Including issues related to:

- Watershed delineations to coastal embayments and freshwater ponds.
- Nitrogen standards for coastal waters.
- On-site systems and the nitrogen management aspects of the Title 5 regulations.
- Ocean Sanctuaries Act and the ability to discharge treated effluent through an ocean outfall.

- Wetland regulations.
- Groundwater standards and the discharge of treated effluent to the groundwater system.
- Drinking water standards and the ability to site an effluent discharge in Cape Cod's Sole Source Aquifer.
- Regulations pertaining to usage and possible moratorium on nitrogen fertilizers.
- Privately owned wastewater treatment facilities.
- Septic systems owned and operated by community groups
- Collection and treatment of stormwater runoff
- Wastewater treatment and discharge requirements
- Coastal Zone Management (CZM), U.S. Corps of Engineers, and FEMA requirements on modifications to and remediation of coastal water bodies

C. Evaluate, Summarize, and Describe Existing Conditions in Town. Including:

1. Nutrient loadings and limitations as presented in Phase I

2. Groundwater and water supply conditions including:
 - Ground water levels
 - Flow directions and watershed delineations
 - Water quality
 - Public water supply areas, Zone II delineations, and water quality
 - Water usage and properties that use large flows of water exceeding 10,000 gallons/day
 - Areas of Town that have many properties with private water supplies

3. Land use and demographics including:
 - Populations
 - Land use as recorded by the Tax Assessor's records
 - Seasonal nature of land use
 - Protected and/or environmentally sensitive areas

4. Wastewater treatment facilities.
 - On-site systems
 - Hyannis WPCF
 - Marstons Mills Middle School WWTF and other cluster and packaged treatment facilities.
5. Soil characteristics
6. Stormwater flows and management systems
7. Town Landfill and water quality at the landfill site

D. Identify the Goals and Objectives of the Town Related to Nutrient Management.

Including:

- Growth policy
- Residential development
- Commercial and economic development
- Affordable housing
- Transportation and traffic control
- Wastewater treatment and discharge
- Groundwater management
- Regulatory initiatives
- Fiscal/financial management
- Zoning

E. Evaluate Summarize and Describe Future Conditions in Town. Including:

- Nutrient loadings and limitations presented in Phase I
- Findings of previous build out analysis
- Potential redevelopment in Hyannis
- Future wastewater flows and loadings with seasonal variation
- Proposed wastewater improvements at the Hyannis WPCF and proposed sewer extensions recommended as part of the wastewater facilities plan

- Proposed affordable housing projects
- Potential new public water supplies and the creation of new ZOC areas
- No action alternative (this is the future condition of the Town if nutrient management strategies are not implemented in the future)

F. Identify Nutrient Related Areas of Concern and Prepare Nutrient Management Needs Assessment Report.

1. Compare the identified Town goals to the existing and projected future condition to identify areas in town that do not meet the goals at present, and/or will not meet the goals at the projected future conditions.
2. Identify watersheds that currently or will exceed nutrient loading thresholds and targets in the future.
3. Identify the nutrient management areas of concern which are the areas in Town that cannot meet the identified goals and the identified nutrient loading thresholds and targets.
4. Summarize the existing and future conditions for these areas to facilitate the evaluation of nutrient management solutions in future phases.
5. Summarize the nutrient management needs of the Town.
6. Identify data gaps and additional information needed to proceed efficiently with the project.
7. Prepare the Nutrient Management Needs Assessment Report in accordance with State guidelines for nutrient management and wastewater management reports, and guidelines for projects funded by State Revolving Fund (SRF) loans. Summarize the analysis and findings of this project phase in the Needs Assessment Report.

PHASE III - IDENTIFICATION AND SCREENING OF ALTERNATIVE SOLUTIONS AND SITES

Phase III reviews, identifies, and develops solutions which may be feasible to meet the Town's nutrient management needs. These solutions are then summarized and screened to retain only the most feasible. Alternative wastewater treatment sites are also identified and screened to identify the most feasible sites that will balance costs, environmental impact and public acceptance. Feasible solutions (technical as well as management) and sites are then grouped into alternative scenarios for detailed evaluation in the next phase.

The purpose of the identification and screening of alternative solutions and sites is to identify nitrogen remediation solutions and then reduce the number of solutions to the most feasible ones for detailed evaluation.

The tasks of this phase are listed below.

A. Identify, Review and Summarize Alternative Solutions to Meet the Town's Nutrient Management Needs. Investigate the following groups of technologies, opportunities and alternatives.

- Modification to Town Zoning and land use requirements
- Stormwater mitigation opportunities
- Fertilizer mitigation opportunities
- Individual on-site wastewater nitrogen removal technologies
- Community (cluster) wastewater nitrogen removal technologies
- Centralized wastewater treatment and nitrogen removal technologies
- Centralized wastewater collection and residual management technologies
- Wastewater flow and loading reduction opportunities
- Wastewater reuse opportunities
- Solutions to encourage greater nitrogen attenuation in the watersheds
- Financing scenarios
- Infrastructure management scenarios

B. Screen the Alternative Solutions to Identify the Most Feasible Ones for Detailed Evaluation.

1. Prepare a screening methodology for regulatory review. The methodology will include a standard set of criteria to screen the technologies.
2. Prepare a screening matrix which provides a side-by-side comparison of the various alternatives within a group.
3. Select the most feasible alternatives for detailed evaluation.

C. Identify and Screen Potential Sites for Nutrient Management Facilities. Including wastewater treatment and discharge sites for cluster systems, centralized facilities, and stormwater treatment and discharge sites.

1. Prepare a facilities site and screening methodology for regulatory and project review. The methodology will include a standard set of criteria to screen the sites.
2. Use the Town GIS to identify and tabulate information on potential sites.
3. Compare a screening matrix which provides a side-by-side comparison for potential sites.
4. Visit the sites to form additional observations about the sites.
5. Meet with Land Bank representatives and other land preservation groups to explore possibilities of using preservation land for nitrogen management facilities.
6. Select the most feasible sites for detailed evaluation.
7. Identify subsurface or environmental investigations needed to demonstrate the feasibility and acceptability of particular sites for wastewater treatment and disposal facilities. Potential investigations include:
 - Wetland delineations

- Endangered species survey
- Archeological survey
- Test pit and percolation investigations
- Pump testing and hydraulic conductivity testing

D. Group Feasible Solutions and Sites into Alternative Nutrient Management Scenarios.

1. Group the feasible solutions with the input of Town staff and Citizen Advisory Committee members.
2. Summarize the rationale for grouping various feasible solutions into the nutrient management scenarios.

E. Prepare the Nutrient Management Alternative Screening Report

1. Summarize the evaluations of Phase III.
2. Prepare this report as an interim report for public and regulatory review.

PHASE IV – DETAILED EVALUATION AND DEVELOPMENT OF THE NUTRIENT MANAGEMENT PLAN

Phase IV provides a detailed analysis of costs and non-monetary factors for the alternative nutrient management scenarios. It also performs the environmental impact analysis for these alternative scenarios in accordance with State and Cape Cod Commission requirements. It presents the recommended nutrient management plan to mitigate the nutrient related problems in each watershed. This plan will include the scheduled implementation steps for new facilities, management structures, local regulations, and funding requirements. The main tasks for this phase are listed below.

The purpose of this phase is to select the most appropriate nitrogen management plan for Barnstable based on a cost effectiveness analysis, analysis of non-monetary factors, and an environmental impact analysis.

The main tasks for this phase are listed below:

A. Perform Subsurface and/or Environmental Investigations and Modeling for Potential Nutrient Management Sites. Potential investigations include:

- Wetland delineations
- Endangered species survey
- Archeological survey
- Test pit and percolation investigations
- Pump testing and hydraulic conductivity testing

B. Prepare a Methodology of the Planned Detailed Evaluation for Project and Regulatory Review.

1. Describe the methodology and evaluation steps.
2. Prepare a timeline for regulatory and project team input.
3. Identify the evaluation criteria and how they will be used to rate the alternative.

C. Perform Present-Worth Evaluations of the Alternative Nutrient Management Scenarios.

1. Develop unit costs for capital and operational & maintenance (O&M) costs.
2. Develop capital costs for each alternative scenario.
3. Develop O&M costs for alternative scenario.
4. Perform a present-worth analysis to equate the capital cost and twenty years of O&M costs of each alternative scenario to a present worth cost. Compare present worth cost of the alternative scenarios to identify the most cost effective scenario. The purpose of this analysis is to develop a comparable cost for alternative scenarios that may have different cost structures. (One alternative scenario may have high capital cost but low O&M cost; while another alternative scenario could have low capital cost but high O&M cost.)

D. Perform Non-Monetary Evaluations of the Alternative Scenarios.

1. Compare non-monetary factors of each scenario such as:
 - Anticipated public acceptance
 - Ease of implementation
 - Land area requirements
 - Energy use
 - Flexibility for changing requirements
 - Maintenance requirements and complexity of operations
 - Nitrogen mitigation performance
 - Regulatory feasibility
 - Expected Growth
2. Develop a numerical rating system to quantify these non-monetary factors

E. Perform an Environmental Impact Analysis of the Alternative Scenarios.

1. Perform an environmental impact analysis in accordance with the guidelines and regulatory procedures of the Cape Cod Commission and the Massachusetts Environmental Protection Act (MEPA) Office of the state.

F. Evaluate the Present-Worth Analysis With the Non-Monetary Evaluation and the Environmental Impact Analysis to Select the Most Appropriate Management Scenario.

1. Develop evaluation summaries for project team and regulatory review.
2. Select the most appropriate management scenario.

G. Develop and Present the Recommended Nutrient Management Plan, and Prepare the Nutrient Management Plan and Draft Environmental Impact Report (DEIR).

1. Briefly summarize the previous evaluations and project phases.

2. Present the findings of any subsurface or environmental investigations performed at the beginning of this phase.
3. Present a summary of the evaluations and analysis performed in this phase.
4. Present fertilizer recommendations including the following possibilities:
 - Public education programs.
 - Town regulations to monitor and control proper application of fertilizer.
 - Development of specifications on the approved types of slow release nitrogen fertilizer to be used in Town.
 - Zoning changes to encourage smaller lawns and the disturbance of less natural ground cover.
5. Present stormwater management recommendations to manage and mitigate nutrient impacts from stormwater including:
 - Prioritization and conceptual design of stormwater projects to mitigate remaining stormwater discharges.
 - Zoning changes to minimize the creation of impervious surfaces and the production of stormwater.
6. Present the wastewater management recommendations including:
 - a. Identify the recommended wastewater management approach for all areas of Town including:
 - Areas to be served by sewers and advanced nitrogen removal at one or more new centralized wastewater treatment facility(s) in the western portion of Barnstable.
 - Areas to be served by sewers and community (cluster) wastewater treatment facilities
 - Areas to be served by on-site nitrogen removal systems serving individual homes or small groups of homes.
 - Areas of Town with minimal nitrogen sensitivity that can be served by non-nitrogen removal Title 5 systems

- b. Present detailed description, O&M requirements, conceptual design, layout, design flows and loadings, and expected performance of all recommended wastewater management facilities including the following possibilities:
- Modification and expansion of the Hyannis WPCF
 - New centralized treatment facility(s) in the western part of Barnstable
 - New community (cluster) treatment facilities
- c. Present detailed description of approved on-site nitrogen removal systems to serve individual homes or small groups of homes; and the operations, maintenance, and management requirements associated with these systems.
- d. Present detailed description of Title 5 systems (non-nitrogen removal systems) to serve areas of Town with minimal nitrogen sensitivity, and the operations, maintenance, and management requirements associated with these systems.
- e. Present detailed description, conceptual design, design capacities, and O&M requirements of recommended effluent discharge facilities.
- f. Present detailed descriptions, conceptual design, O&M requirements and design capacities of recommended wastewater residuals management facilities including:
- Areas to be served by sewers and advanced nitrogen removal at the Hyannis WPCF
 - Septage management facilities and managed pumping of septic tanks.
 - Screenings, grit and biosolids management and disposal.
- g. Capital and O&M costs for all recommendations.
7. Present watershed modification recommendations to create wetlands and other fresh water environments where greater nitrogen attenuation can occur in the watershed to minimize nitrogen loading to coastal embayments.

8. Present pond remediation recommendations including:
 - Prioritization of pond remediation projects.
 - Detailed description of remediation program and technology for each pond.
 - Identification of septic system discharges that need to be relocated to distances greater than 300 feet from freshwater ponds, streams and rivers.
 - Capital and O&M costs for the pond remediation.
9. Present the institutional changes and management structures needed to operate and implement the nutrient management strategies recommended including:
 - Changes in Town staffing
 - Town departmental responsibility shifts
 - Possible management district formation
 - Possible inter-municipal agreements
 - Capital and O&M costs for these management changes
10. Present the implementation schedule for implementing the recommendations.
11. Recommend CIP budgeting needed for the implementation.

H. Submit the Nutrient Management Plan and DEIR for Regulatory and Public Reviews.

PHASE V – RESOLUTION OF REMAINING ISSUES AND PROJECT COMPLETION

This phase is needed to complete the Environmental Impact Review Process and finalize the Nutrient Management Plan. This phase includes the following tasks:

- A. **Resolve Remaining Issues.** There maybe remaining issues to address which will require the following tasks:
 - Reinvestigate previous analyses as required
 - Investigate additional alternatives and/or sites as required
 - Develop additional information as required

B. Modify the DEIR to Prepare the Nutrient Management Plan and FEIR, and Submit it for Public and Regulatory Review. The DEIR will need to be modified to include any requested information to produce a FEIR. The FEIR will then be submitted to the regulatory agencies for review.

PHASE VI – ENVIRONMENTAL AND PUBLIC REVIEW PROCESS

This phase is the creation and coordination of the environmental and public review process that proceeds throughout the whole project.

The environmental review process needs to follow the Cape Cod Commission/Massachusetts Environmental Policy Act (CCC/MEPA) Joint Review Process (CCC/MEPA, 1991) which typically uses public hearings after the submittal of each project document. The Town can also request a more formalized Joint Review Process described as “Special provisions for Major and Complicated Projects” and detailed in State Regulation 201CMR11.12. This review process requires regulatory review of each project document and can require additional review components as requested by the Town. Both environmental review processes require many regulatory meetings and public hearings to coordinate the flow of information to the various regulatory agencies.

The public review process is closely related to the environmental review process. It will contain additional items needed to properly disseminate information to the Town’s community groups and to the Town Public. Proper public education is needed to ensure that the recommended plan will be approved by the Town Council and by the voters in any proposition 2½ override referendums.

The purpose of this phase is to create and coordinate an environmental and public review process which will inform project participants and the Town Public, and ensure that the recommended plan will be approved by the Town Council and Town Voters.

The main tasks of this phase are listed below:

A. Establish and Utilize a Citizens Advisory Committee. A Citizens Advisory Committee (CAC) is typically comprised of Town residents with diverse views that fairly represent all points of view. The purpose and function of the CAC include:

- Become knowledgeable about all aspects of the Project.
- Make recommendations to the Town and Town Decision Makers
- Represent members of the public that cannot attend public meetings.
- Investigate and develop recommendations on issues as they arise.

The CAC will meet periodically throughout the Project as desired by CAC members. Meeting notes will be maintained.

B. Establish and Utilize a Technical Advisory Committee. A technical Advisory Committee (TAC) is typically comprised of representatives of Town technical staff, representations from regulatory agencies, and professional staff from interested agencies. The Town has already assembled a Nutrient Management Team which is considered a TAC. The current representation of this group includes:

- Town Department of Public Works
- Town Health Department
- Town Conservation Department
- Town Planning Department
- Cape Cod Commission
- Massachusetts DEP
- Three Bays Preservation, Inc.

The TAC will meet regularly throughout the Project to be sure that technical issues are addressed. Meeting notes will be maintained.

C. Prepare and Conduct a Public Participation Program. A public participation program is needed to develop appropriate public education materials to inform the public of Project activities and findings. Public education tasks include:

- Provide public notification of all public meetings and hearings.
- Develop Project summaries before and after each major phase of the Project.

- Develop and distribute news bulletins to the press to keep project activities in the news.
- Maintain Project information dissemination booths at public libraries and other public locations. These tables will display information about the project as well as act as a distribution point for project summaries.
- Organize presentations to the Town citizen and public interest groups.
- Prepare one or more video(s) which can be shown on cable television or loaned to community schools or groups.
- Organize workshops with community groups to facilitate greater information exchange between Project team members and the public.

D. Prepare, Submit and Coordinate the Public Review of the Environmental Notification Form and Development of Regional Impact Document. The Environmental Notification Form (ENF) and Development of Regional Impact (DRI) document briefly describes the main issues of the Project and presents a Project Scope that describes the major tasks to be accomplished by the Project. The ENF/DRI document will be based on the Plan of Study.

E. Coordinate the Public Review of the Other Project Documents.

1. Coordinate the public review of the other project documents identified in previous phases including:
 - Water Quality and Nutrient Loading Assessment Report
 - Nutrient Management Needs Assessment Report
 - Nutrient Management Alternatives Screening Analysis Report
 - Nutrient Management Plan and Draft Environmental Impact Report (DEIR)
 - Nutrient Management Plan and Final Environmental Notification Report (FEIR)
2. Attend review meetings and public hearings for these documents.
3. Receive the MEPA, CCC and other comments and address them in a letter.

F. Coordinate and Attend Meetings and Public Hearings.

PHASE VII – PROJECT MANAGMENET AND FUNDING

- A. Develop and Administer State Revolving Fund Loan Applications and Agreements.**
- B. Develop and Administer Contract Agreements for Specialized Services.**
- C. Provide Overall Project Management and Coordination.**