5-2005

NHEP Management Plan 2005 Update

Jennifer Hunter
New Hampshire Estuaries Project

New Hampshire Estuaries Project

MANAGEMENT PLAN

2005 UPDATE

THE MISSION OF THE NEW HAMPSHIRE ESTUARIES PROJECT IS TO PROTECT, ENHANCE, AND MONITOR THE ENVIRONMENTAL QUALITY OF THE STATE'S ESTUARIES.

NEW HAMPSHIRE ESTUARIES PROJECT 2005

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NEW HAMPSHIRE ESTUARIES PROJECT
MANAGEMENT CONFERENCE - MAY 2005

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Dave Funk - Great Bay Stewards
Brian Giles - Lamprey River Advisory Committee
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Neil Savage - Aquaculture Education & Research Center
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Jennifer Hunter - New Hampshire Estuaries Project
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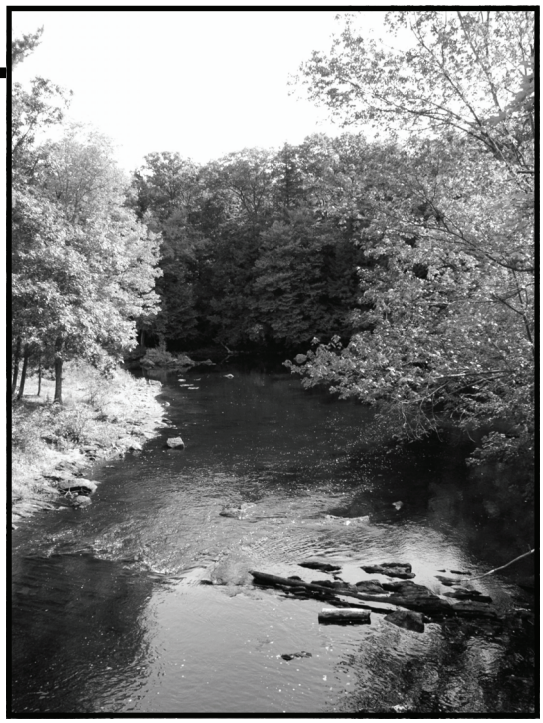
Natalie Landry - NH Department of Environmental Services (Chair)
Bambi Miller - Strafford County Conservation District
Dean Peschel - City of Dover
Ann Reid - University of New Hampshire
Sally Soule - NH Department of Environmental Services
Rob Swift - University of New Hampshire
Matt Wood - NH Department of Environmental Services

FIVE YEARS OF PROGRESS

The first NHEP Management Plan, adopted in 2000, laid out a course of action to improve estuarine environmental quality. In the last five years the NHEP has actively implemented the plan and adapted to emerging management issues. Below is a summary of some of the significant activities that occurred from 2000 to 2005.



Kellam, NHEP

Lamprey River, Epping, NH

NHEP MONITORING PLAN

In 2002 the NHEP adopted a Monitoring Plan that describes the methods and data for indicators to measure the effectiveness of Management Plan implementation. In the plan, thirty-four environmental indicators are tracked on water quality, shellfish resources, land use, and critical species and habitats. The NHEP also gathers and analyzes data on eighteen other "supporting variables" that are used to understand the causes behind trends in the indicators.

NHEP MANAGEMENT COMMITTEE BYLAWS

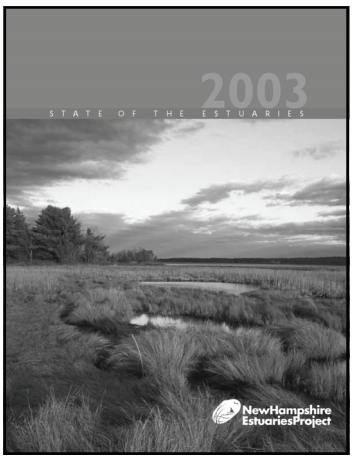
In 2003, the NHEP Management Committee adopted bylaws that document Management Committee responsibilities, composition, members' roles, leadership structure, subcommittee structure, operating procedures and Management Plan review and amendment process.

TECHNICAL ADVISORY COMMITTEE AND PROJECT TEAMS

Once in the implementation phase, the NHEP Management Committee required more input in the specialized areas of the Management Plan. Therefore, the NHEP developed five advisory groups intended to inform Management Committee decisions. A Technical Advisory Committee was developed to address monitoring issues and technical reports, and four Project Teams were formed: Water Quality Team, Land Use and Habitat Protection Team, Shellfish and Living Resources Team and Public Education and Outreach Team.

2003 STATE OF THE ESTUARIES REPORT

Between 2002 and 2003 four environmental indicator reports were produced that summarize the available information and results of statistical tests for indicators identified in the NHEP Monitoring Plan. To communicate the status of the more significant indicators to a broader audience the NHEP produced a *State of the Estuaries* report in the 2003 that examined twelve indicators of estuarine health, including as bacteria levels, nitrogen concentrations, toxic contaminant levels, abundance of shellfish and land use in the coastal watershed. The report was released in conjunction with a two-day conference sponsored by the NHEP that attracted approximately 200 participants from the area.



State of the Estuaries Report

CHANGING ADMINISTRATIVE HOSTS

The NH Office of State Planning administered the NHEP from 1995 to 2003. Agency restructuring in 2003 resulted in a consolidation of agencies and their programs into a newly formed Office of Energy and Planning. This reorganization prompted the NHEP Management Committee to evaluate various host options and review how the program could be implemented most effectively. At its June 2004 meeting, the Management Committee selected the University of New Hampshire (UNH) as host for the NHEP. Concurrent with the Management Committee deliberations on host, additional state agency restructuring moved the NHEP from the Office of Energy and Planning to NH Department of Environmental Services on a temporary basis effective July 1, 2004 until the transition of the program to UNH was completed in 2005.

PROGRESS REPORT

In 2004 the NHEP completed a Progress Report that summarized progress made toward implementing the Management Plan and evaluated the status of environmental and administrative indicators based upon management goals and objectives.

STRATEGIC COMMUNICATION PLAN

At the end of 2004 the NHEP adopted a Strategic Communication Plan which facilitates the implementation of Action Plans related to public outreach and education and directs resources to communication activities that strengthen the organization's position with key audiences over the next three years.

UPDATING THE MANAGEMENT PLAN

After five years of implementation, the NHEP Management Plan has yielded results in improving the condition of New Hampshire estuaries. To be responsive to changes, the NHEP Management Committee bylaws call for a review of the Management Plan every five years to identify new action plans or revisions to current action plans. In 2004, the NHEP began this review process to update the original plan in 2005.

Hunter, NHEP

Lamprey River, Newmarket, NH

THE PROCESS

NHEP staff met with each of the project teams during the spring, summer, and fall of 2004 and asked each to suggest changes to existing action plans or identify emerging issues or subject areas that were not covered by the Management Plan. Following these meetings, the NHEP Coastal Scientist compiled the information, combined duplicate suggestions, and eliminated ideas that were already addressed by existing action plans. The project teams identified two new issues for inclusion in the Management Plan: sustainable water use and invasive species. A list of changes and two draft action plans were distributed to all teams and committees for comment. The Management Committee approved changes to the existing action plans on December 9, 2004, and approved the addition of two new action plans to the Management Plan on March 24, 2005.

THE CHANGES

The project teams recommended relatively few changes to specific action plans or steps. Many were simple grammatical edits that clarified actions. All of the substantive changes to the Management Plan are listed on the following page. Two new Action Plans were added to the Land Use and Restoration sections of the Management Plan, which are located at the end of this Update.

SUBSTANTIVE CHANGES

The NHEP Management Committee approved five substantive changes that were recommended by the Project Teams. These changes are:

- Action Plan: SHL-15 *Evaluate and address perceived and real institutional barriers to aquaculture and promote environmentally sound aquaculture practices.*

  Change: Step #4 was deleted.

- Action Plan: WQ-04b *Assist Seacoast communities in completing and maintaining maps of sewer and stormwater drainage infrastructure systems.*

  Change: Municipalities were included in steps 1 through 4 to reflect their role in infrastructure mapping.

- Action Plan: WQ-07 *Provide incentives to fix or eliminate illegal direct discharges such as grey water pipes, failing septic systems, and agricultural runoff.*

  Change: The Plan title was rewritten as *Provide incentives, including cost-share funding, to fix or eliminate illegal direct discharges such as grey water pipes, failing septic systems, and agricultural runoff.*

- Action Plan: WQ-08 *Research the effectiveness of innovative stormwater treatment technologies for existing urban areas in NH, and communicate results to developers and communities.*

  Change: Step #5 was deleted.

- Action Plan: WQ-15 *Support efforts to reduce deposition of atmospheric pollutants through eliminating loopholes in current laws, encouraging the construction of more efficient power plants, and encouraging energy conservation.*

  Change: A fifth step was added to this Action Plan that reads *Support the recommendations of the NH Mercury Reduction Strategy and encourage implementation of the Research and Monitoring recommendation R-35 which is found under section 5.2.1 Recommended Actions Regarding Research and Monitoring. Recommendation R-35 reads "Continue support for in-state mercury sampling and monitoring programs in order to evaluate trends in mercury deposition and impacts. This information will be used to update the strategy as necessary (ongoing).*

  Also the importance ranking of this Action Plan was raised from "Priority" to "High".

HABITAT PROTECTION

PRIORITY
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ACTION LND-37

Support the development and implementation of water resource management plans to determine sustainable groundwater and surface water use in the coastal watershed.

BACKGROUND

The population of Rockingham and Strafford counties more than doubled between 1960 and 2000 to 339,592 (OEP, 2004). The population of the southeast corner of the state is expected to double again by 2020 (SPNHF, 1999). The increasing population has increased demand for freshwater from groundwater and surface water sources. At some point the demand will outstrip the water supply in the region, which would be unsustainable.

The NHEP has an interest in identifying and maintaining "sustainable use" of the water resources in the coastal watershed before the demand becomes unsustainable. For water use to be considered sustainable, both the human and ecological needs for water resources must be protected under normal variations in climatic conditions.

Two projects to determine sustainable use of water resources are already underway in the coastal watershed. First, the NH Coastal Program, NH Geological Survey, NH Department of Environmental Services, and US Geological Survey are conducting the Seacoast Groundwater Availability Study (http://www.des.state.nh.us/Coastal/Restoration/groundwater.htm). The purpose of this project is to provide southeastern New Hampshire communities with new tools and data needed to make informed decisions about water supply and use and to plan for future growth in their towns. The NHEP has contributed $25,000 toward the initial data collection phase of this study. Second, NH Department of Environmental Services is conducting a protected instream flow study of a reach of the Lamprey River (http://www.des.state.nh.us/Rivers/instream/index.html). The NHDES study will result in a water management plan for the river reach.

On November 5, 2004, the NHEP Land Use Team recommended that a new action plan regarding water resources be added to the NHEP Management Plan. On December 9, 2004, the NHEP Management Committee approved in concept the addition of a new action plan regarding water resources and directed staff to fully develop an action plan for their review.

ACTIONS/ACTIVITIES

1. Support studies of groundwater and surface water quantity and use in the coastal watershed.
2. Support the development of regional or local water resource plans in the coastal watershed.
3. Support implementation of regional or local water resource plans in the coastal watershed.
4. Support public outreach and education regarding Steps 1, 2, or 3 above.

RESPONSIBLE PARTIES

Implementation of this action plan will be led by the NH Department of Environmental Services, the NH Geological Survey, the NH Office of Energy and Planning, Strafford Regional Planning Commission, Rockingham Planning Commission, and the US Geological Survey.

IMPLEMENTATION LOCATION

This action may be implemented throughout the 42 towns in NH's coastal watershed.

COSTS

Activity 1	$1,500,000
Activity 2	$ 500,000
Activity 3	$ 500,000
Activity 4	$ 25,000
Total	$2,525,000

FUNDING

Significant funding has already been budgeted for the Seacoast Groundwater Availability Study ($1.5 million). Most of this funding is through federal appropriations, although a number of seacoast communities have contributed nearly $80,000 in funds. Approximately $350,000 of federal funds have been appropriated to conduct the Lamprey River Protected Instream Flow Study and develop a water management plan. US EPA NHEP implementation funds may be used to implement actions from management plans once developed. State and local funds for natural resource management activities may be available to support this action.

REGULATORY NEEDS

NH regulations concerning water use include Env-Ws 1700 (Surface Water Quality Rules) [http://www.des.state.nh.us/wmb/env-ws1700.pdf] that define water quantity as a component of quality, Section 401 certifications [http://www.des.state.nh.us/wmb/Section401/] that allow the state to put conditions on withdrawals requiring a federal permit, Env-Ws 387 and Env-Ws 388 (groundwater withdrawal rules) [http://www.des.state.nh.us/Rules/adopt_387.pdf and http://www.des.state.nh.us/Rules/adopt_388.pdf] governing adverse impacts from new larger groundwater withdrawals, Env-Ws 1900 (Instream Flow Rules) [http://www.des.state.nh.us/Rules/env-ws1900.pdf] requiring water management plans for the Lamprey and Souhegan Rivers, and Env-Wr 700 (Registration and Reporting Rules) [http://www.des.state.nh.us/Rules/env-wr100-800.pdf] requiring documentation of water use greater than 140,000 gallons per day.

In addition, RSA 4-C:19-23 established the Water Protection Assistance Program within the Office of Energy and Planning. The purpose of the program is to encourage and assist municipalities, through the regional planning commissions, to evaluate their water resources and to develop local and regional measures for the protection of both ground and surface water

The development of water management plans under this proposal does not require additional regulations. However, additional regulatory needs may be discovered as part of the planning process.

EXPECTED BENEFITS

The development and implementation of water resource management plans will provide communities with accurate information needed for planning and growth management decisions. Moreover, sustainable use of water resources in the coastal watershed will protect species dependent on aquatic habitat, such as fish and waterfowl, which might otherwise lose habitat if water resources were overused.

MONITORING AND ENFORCEMENT

None required.

TIMETABLE

Activities 1 and 2 are already being partially implemented by various agencies. Activities 3 and 4 will be implemented in 2006-2010.

PRIORITY

Highest Priority. Regional or local water resource plans (Activity 2) are needed immediately. The other activities are a lower priority. Implementation of this action plan is not dependent on implementation of other action plans listed in the NHEP Management Plan.

REFERENCES

OEP (2004) U.S. Census Data for 2000, Office of Energy and Planning, Concord, NH. 2004. http://www.state.nh.us/osp/sdc/NH2KCensus.htm

SPNHF (1999) New Hampshire's Changing Landscape. The Society for the Protection of New Hampshire's Forests, Concord, NH. 1999. http://www.forestsociety.org/research/papers/NHCLsummary.pdf

HABITAT RESTORATION

PRIORITY

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ACTION RST-7

Support the development and implementation of marine aquatic nuisance species management plans for NH's estuaries.

BACKGROUND

Invasions by marine aquatic nuisance species have already affected NH's estuaries. A rapid assessment survey sponsored by the National Estuary Program in 2003 found that 6-10% of the species at NH sampling sites were non-native and 13-15% were cryptogenic. The Asian Shore Crab, *Hemigrapsus sanguineus*, has been found at Dover Point. Predation by green crabs (*Carcinus maenus*), originally from Europe, is suspected to be a major factor controlling the soft-shell clam fishery in Hampton Harbor.

The NHEP is providing $29,000 in support to the University of New Hampshire to develop an environmental indicator of marine invasions in 2005. The project involves a monitoring program throughout the estuary, a review of historical data, and research into appropriate reporting tools for coastal managers.

Past experience has shown that prevention of invasions is more successful and cost effective than species eradication once an invasion has occurred. Therefore, it is in the interest of the NHEP to support the development of marine aquatic nuisance species management plans to prevent new invasions, to facilitate rapid response activities if new invasions occur, and to contain existing colonies. The NHEP will play a leading role in the development of the NH State Aquatic Nuisance Species Management Plan in 2005. The plan will coordinate efforts of various state and federal agencies. The NHEP Coastal Scientist will lead the estuarine component of the plan.

On December 1, 2004, the NHEP Shellfish and Living Resources Team recommended that a new action plan regarding marine aquatic nuisance species be added to the NHEP Management Plan. On December 9, 2004, the NHEP Management Committee approved in concept the addition of a new action plan regarding marine aquatic nuisance species and directed staff to fully develop an action plan for their review. At the same meeting, the NHEP Management Committee adopted the definition of marine aquatic nuisance species (aka, invasive species) from Executive Order 13112 (February 3, 1999): "Invasive species means an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health."

ACTIVITIES

1. Support assessments of historical data on marine aquatic nuisance species in NH's estuaries.
2. Support research and monitoring of marine aquatic nuisance species in NH's estuaries.
3. Support the development of marine aquatic nuisance species management plans for NH's estuaries.
4. Support implementation of marine aquatic nuisance species management plans for NH's estuaries.
5. Support public outreach and education regarding Activities 1, 2, 3, and 4 above.

RESPONSIBLE PARTIES

Implementation of this action plan will be led by the NH Fish and Game Department, NH Department of Environmental Services, University of New Hampshire, and the NHEP, with support from other agencies.

IMPLEMENTATION LOCATION

This action may be implemented throughout the 17 municipalities with tidal shoreline.

COSTS

Activity 1	$ 10,000
Activity 2	$100,000
Activity 3	$ 10,000
Activity 4	$150,000
Activity 5	$ 10,000
Total	$280,000

FUNDING

Funding will be available from the federal Aquatic Nuisance Species Task Force, U.S. Fish and Wildlife Service, and other federal agencies for the implementation of an approved State management plan for aquatic nuisance species. Limited US EPA NHEP implementation funds may be used to fund the activities of this plan.

REGULATORY NEEDS

Regulations or legislation prohibiting the trade, transport, or release of certain species may be a component of aquatic nuisance species management plans.

EXPECTED BENEFITS

The development and implementation of marine aquatic nuisance species management plans will protect NH's estuaries from invasions that might affect clam and oyster stocks and other native fisheries and natural communities. Prevention of invasions, by means of proper planning or early detection due to public awareness is more cost effective than eradication of aquatic nuisance species after an invasion. In many cases eradication is not feasible.

MONITORING AND ENFORCEMENT

Monitoring will be required for Activity 2. Enforcement may be a component of aquatic nuisance species management plans.

TIMETABLE

Activities 1 and 2 are already being partially implemented by various agencies (see Background). Efforts to implement Activity 3 are underway and should be completed by 2006. Activities 4 and 5 will be implemented in 2006-2010.

PRIORITY

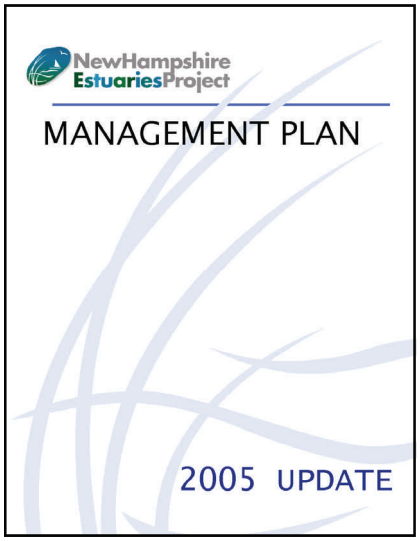
Priority. Implementation of this action plan is not dependent on implementation of other action plans listed in the NHEP Management Plan.

USING THE 2005 UPDATE

This concludes the 2005 Update to the NHEP Management Plan. Holders of the original plan should keep this update with the original 510-page document and consider both when referring to the Management Plan or applying for NHEP grants. The electronic version of the Management Plan merges the two documents and is available on the NHEP website.

THE NEXT UPDATE

The NHEP will produce another update to the Management Plan in 2010.



NHEP MANAGEMENT PLAN
2005 UPDATE

05/05

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