

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY MANAGEMENT PLANNING PROGRAM**

**INDICATIVE PROJECT SUMMARIES**

**1991 - 1997**

**APRIL 1997**

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY MANAGEMENT PLANNING PROGRAM**

**INDICATIVE PROJECT SUMMARIES**

**1991 - 1997**

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**APRIL 1997**

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## **INTRODUCTION**

This report presents indicative summaries of 45 projects partially financed under the 604b Water Quality Management Planning Grants Program during the federal fiscal years of 1991 - 1997.

Section 604b of the Federal Clean Water Act authorizes the awarding of funds through the U.S. Environmental Protection Agency (EPA) to states for water quality assessment and management planning grants. In Massachusetts the 604b program is administered by the Department of Environmental Protection, Division of Municipal Services.

The 604b Grant Program is designed to assist eligible recipients in providing water quality assessment and planning assistance to local communities. Prior to 1995 the 604b Grant Program was administered by the Department's Division of Water Supply. Grants awarded focussed primarily on water supply protection and planning projects. In 1995 the Department directed the focus of the 604b program towards watershed or subwatershed based nonpoint source assessment type projects. Priority is given to projects that provide diagnostic information to support the Department's basin-wide water quality management activities. The assessment activities provide information useful in the development of recommendations relative to future nonpoint source pollution best management practice (BMP) implementation projects, the water withdrawal permitting process, drinking water source protection, and/or management strategies for restoration and protection of surface and groundwater resources.

Each year the Department issues a Request for Proposals (RFP) for competitive projects to be funded under the 604(b) program. Eligible respondents include regional planning agencies, councils of governments, conservation districts, counties, cities and towns, and other substate planning agencies and interstate agencies. Priority is given to projects located in one (or more) of the priority watersheds targeted for assessment work as defined by the Department and involve assessment/planning activities such as: assessment of local water quality protection measures; assessment of land use activities; assessment of local environmental awareness and concerns; water quality assessment; water supply/water quality source protection planning, and water supply development planning. Matching funds are not required under the 604b Grant Program, however proposals are enhanced by offering additional cash or in-kind services as demonstration of local support.

The statewide distribution by basin of the 604b funded projects is illustrated in Figure 1. Table 1 shows a comparison between the number of projects funded in each basin and the allocation of Federal 604b dollars by basin. Table 2 is a listing of 604b funded projects by river basin.

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Comparison of Number of 604b Projects and Allocation of 604b Dollars  
by Basin (1991-1997)**

**Table 1**

<u>Basin Name</u>	<u>Number of Projects</u>	<u>Dollars Allocated</u>
Hudson (Hoosic, Kinderhook, BashBish)	3	\$ 67,700
Housatonic	3	\$ 67,700
Deerfield	7	\$ 73,900
Westfield	7	\$130,800
Farmington	3	\$ 51,700
Connecticut	11	\$165,900
Millers	6	\$ 68,500
Chicopee	9	\$127,400
Quinebaug	0	0
French	0	0
Nashua	1	\$ 20,000
Blackstone	0	0
Merrimack	4	\$ 65,600
Concord (SuAsCo)	1	\$ 43,500
Shawsheen	0	0
Parker	2	\$ 26,600
Ipswich	2	\$ 54,000
North Coastal	3	\$ 78,500
Boston Harbor (Mystic, Neponset, Weymouth & Weir)	1	\$ 37,000
Charles	1	\$ 39,000
South Coastal	1	\$ 44,000
Cape Cod	5	\$109,600
Islands	2	\$ 58,000
Buzzards Bay	1	\$ 13,000
Taunton	6	\$150,000
Narragansett Bay & Mount Hope Bay Shore	2	\$ 23,000
Ten Mile	0	0

Notes: Where projects encompass more than one basin, the grant allocation has been divided evenly among basins. All Dollar amounts are rounded to the nearest \$100.

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Distribution of 604b Projects by River Basin (1991-1997)**

**Table 2**

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CHICOPEE

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QUINEBAUG - NONE

FRENCH - NONE

NASHUA

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BLACKSTONE - NONE

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CONCORD (SuAsCo)

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SHAWSHEEN - NONE

PARKER

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BOSTON HARBOR

(Mystic, Neponset, Weymouth & Weir)

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### TEN MILE - NONE

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-01**

PROJECT TITLE: Control of Hazardous Material Users to Protect Groundwater Quality on Cape Cod

INVESTIGATOR: Barnstable County Health and Environmental Department

LOCATION: Cape Cod

DESCRIPTION: This project will provide technical assistance to the communities of Chatham, Eastham and Orleans for implementation of a local initiative to regulate hazardous material users (HMU's) to prevent groundwater deterioration.

Tasks include:

- 1.preparation of draft model regulation to control toxic and hazardous materials;
- 2.conduct inventory, registration and assessment of HMU's;
- 3.train local officials in site inspections of HMU's;
- 4.determine locations of all residential and commercial underground storage tanks located in the study area; and
- 5.reassess potential contamination sources to determine if more comprehensive regulations are necessary.

COST: \$20,531

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-02**

PROJECT TITLE: Monomoy Lens Regional Water Protection Project

INVESTIGATOR: Cape Cod Commission

LOCATION: Cape Cod

DESCRIPTION: This project will provide technical assistance to the Monomoy Lens Communities of Dennis, Harwich, Brewster, Orleans, Chatham and Yarmouth for the development of a comprehensive regional groundwater protection plan.

The investigator will:

1. develop Monomoy Lens Geographic Information System (GIS);
2. prepare Monomoy Lens Groundwater Protection Plan; and
3. establish a Monomoy Lens Groundwater Protection Committee.

COST: \$50,825

FUNDING: \$15,000 by the U.S. Environmental Protection Agency  
\$35,825 by the Cape Cod Commission

DURATION: 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-03**

PROJECT TITLE: Quaboag River Water Supply Protection Project

INVESTIGATOR: Central Massachusetts Regional Planning Commission

LOCATION: Chicopee River Basin

DESCRIPTION: The purpose of this project is to provide technical assistance to the communities of East Brookfield, Brookfield, West Brookfield and Warren for development of regional water supply protection measures to safeguard their public supplies.

Specific tasks will include:

- 1.establishment of regional task force to oversee the planning process;
- 2.identification of major potential sources of contamination to the public water supplies;
- 3.an evaluation and identification of development controls; and
- 4.development of recommendations for proposed new land use regulations in each community.

COST: \$25,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-04**

PROJECT TITLE: Franklin County Water Resources Protection Planning Project

INVESTIGATOR: Franklin County Commission

LOCATION: Deerfield, Millers, Connecticut and Chicopee River Basins

DESCRIPTION: This project will provide technical assistance and support to selected communities in Franklin County for comprehensive water resource protection planning, to develop contingency plans for public groundwater supplies, develop regional water supply protection measures and develop and implement an education program for the banking and real estate community.

Specifically, the investigator will:

1. establish water resource protection committees;
2. prepare parcel-level risk assessment mapping for public water supplies in Greenfield, Colrain, Bernardston and Orange, and for private water supplies in Leyden and Colrain;
3. develop and implement regulations and bylaws to protect water supplies in the communities of Greenfield, Colrain, Bernardston, Orange, and Leyden;
4. provide staffing to the Western Valley Water Supply Committee;
5. develop contingency plans for the public water supplies in the communities of Sunderland, South Deerfield, Old Deerfield, Whately, Orange, and Buckland/Shelburne; and
6. develop and conduct workshops for banks, realtors, and appraisers.

COST: \$39,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1992 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-05**

**PROJECT TITLE:** Merrimack River Water Resources Protection Project

**INVESTIGATOR:** Merrimack Valley Planning Commission

**LOCATION:** Merrimack River Basin

**DESCRIPTION:** The purpose of this project is to provide technical assistance to the communities of Merrimack, Newburyport and West Newbury to enhance local water supply protection and management and provide more effective water supply protection at the local and regional levels.

Tasks to be completed include:

- 1.formation of permanent water resource protection committee;
- 2.inventory and mapping of water supply resources and potential sources of contamination;
- 3.assessment of contamination risks;
- 4.development and implementation of local water supply protection strategies;
- 5.organization of public education meeting.

**COST:** \$24,500

**FUNDING:** \$19,500 by the U.S. Environmental Protection Agency  
\$5,000 by the Merrimack Valley Planning Commission

**DURATION:** 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-06**

PROJECT TITLE: Charles River Southwest Regional Water Supply Protection Planning Project

INVESTIGATOR: Metropolitan Area Planning Council

LOCATION: Charles River Basin

DESCRIPTION: This project will provide technical assistance to the communities of Bellingham, Dover, Franklin, Holliston, Medway, Milford, Millis, Sherborn, and Wrentham in the Charles River Basin to develop and implement local and regional water supply protection measures.

The investigator will:

1. establish a Southwest Advisory Water Supply Protection Committee;
2. inventory and map available hydrogeologic data for delineation of aquifer boundaries and/or zones of contribution to public supply wells and watersheds of municipal reservoirs;
3. inventory and map contamination sources and land use;
4. evaluate existing groundwater protection measures;
5. recommend groundwater protection measures for local implementation; and
6. implement an outreach program.

COST: \$39,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-07**

**PROJECT TITLE:** Upper Naukeag Lake Watershed Protection Study

**INVESTIGATOR:** Montachusett Regional Planning Commission

**LOCATION:** Millers River Basin

**DESCRIPTION:** The purpose of this project is to provide technical assistance to the communities of Ashburnham and Winchendon in the Upper Naukeag Lake Watershed to improve the level of protection for the area through the use of conservation restrictions, easements, land acquisition and zoning changes and to develop best watershed management practices for implementation.

Tasks to be performed include:

- 1.formation of a task force;
- 2.identification of major potential groundwater and surface water contamination sources in the watershed; and
- 3.evaluation of the adequacy of local water resource protection regulations and bylaws.

**COST:** \$12,000

**FUNDING:** \$10,000 by the U.S. Environmental Protection Agency  
\$2,000 by the Montachusett Regional Planning Commission

**DURATION:** 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-08**

PROJECT TITLE: Northern Middlesex County Water Resources Protection Project

INVESTIGATOR: Northern Middlesex Council of Governments

LOCATION: Merrimack River Basin

DESCRIPTION: The purpose of the project is to provide technical assistance to the communities of Chelmsford, Dracut, Tyngsborough, and Westford to establish permanent water resource protection committees and to pilot and support on-going community-based water resource education, planning, protection and management.

More specifically the investigator will:

1. facilitate the establishment of permanent water resource protection committees;
2. inventory and map water supply resources and potential sources of contamination;
3. assess contamination risks;
4. develop and implement local water supply protection strategies;  
and
5. organize and present a public education meeting.

COST: \$24,500

FUNDING: \$19,500 by the U.S. Environmental Protection Agency  
\$5,000 by the Northern Middlesex Council of Governments.

DURATION: 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-09**

**PROJECT TITLE:** Upper Taunton River Basin Water Supply Protection and Development Project

**INVESTIGATOR:** Old Colony Planning Council

**LOCATION:** Taunton River Basin

**DESCRIPTION:** This project will provide assistance to communities affecting Silver Lake and other areas to conduct contingency planning and resolution of short-term to mid-term problems for the Brockton/Whitman Water Supply.

Specific tasks are as follows:

1. provide technical assistance to planning boards and other regulatory bodies in Halifax, Plympton, Kingston and Pembroke on adoption of new or strengthened water supply protection regulations;
2. prepare information materials on underground storage tanks;
3. assist the town of Avon to strengthen existing regulations to meet the requirements for new groundwater sources for regulation of handlers of hazardous materials;
4. assist towns of Hanson, East Bridgewater and Halifax in establishing a Drinking Water Protection District;
5. conduct contingency planning and resolution of water supply concerns in the Brockton/Whitman Water Supply; and
6. conduct public information and awareness activities.

**COST:** \$20,000

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-10**

PROJECT TITLE: Pioneer Valley Water Resources Protection Project

INVESTIGATOR: Pioneer Valley Planning Commission

LOCATION: Westfield River Basin

DESCRIPTION: The purpose of this project is to provide technical assistance to participating communities (Holyoke and Southamptton) for the development of a coordinated approach to inventory and regulate underground storage tanks (USTs) to enhance the Barnes Aquifer protection efforts and to the communities of Blandford, Granville and Russell for development of regional watershed protection mechanisms.

Specifically, the investigator will:

1. provide technical assistance to the Barnes Aquifer Protection Advisory Committee (BAPAC) by developing and implementing UST bylaws, and developing UST inventory and database for Geographic Information System;
2. provide technical assistance to Blandford, Granville and Russell in developing a regional watershed protection strategy, designing a regional water supply protection strategy, and developing public education material;
3. provide technical assistance to the Western Valley Water Protection Committee; and
4. provide technical assistance to the Eastern Valley Water Protection Committee.

COST: \$39,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 91-11**

**PROJECT TITLE:** Mattapoisett River Water Supply Protection Project

**INVESTIGATOR:** Southeastern Regional Planning and Economic Development District

**LOCATION:** Taunton River Basin

**DESCRIPTION:** The objective of this project is to provide technical assistance to the communities of the Mattapoisett River Water Supply Protection Advisory Committee of Fairhaven, Marion, Mattapoisett, Rochester and Acushnet and to the Lakeville Ponds Protection Committee communities of Taunton, New Bedford, Raynham, Dighton, Berkley, Acushnet, Dartmouth, Fairhaven, Freetown, Lakeville, Middleborough, and Bridgewater for water supply protection.

The investigator will perform the following tasks:

1. organize a subcommittee of the Mattapoisett River Water Supply Protection Advisory Committee, develop materials for formation of water supply protection district and conduct presentations at public meetings; and
2. provide assistance and develop bylaws for the Lakeville Ponds Protection Committee.

**COST:** \$35,000

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1992 - 1993

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-01**

PROJECT TITLE: Cape Cod Small Volume Well Prioritization Project

INVESTIGATOR: Cape Cod Commission

LOCATION: Cape Cod

DESCRIPTION: This project will develop a watershed protection plan for targeted water supply districts and develop an enforcement program for local officials for water resource protection planning.

The investigator will:

1. conduct a comprehensive survey locating non-community and non-transient/non-community water supplies;
2. evaluate and compare a variety of approaches for delineating the wellhead protection zones of small volume wells;
3. assess land use around each well to determine existing vulnerability; and
4. develop an education and training program.

COST: \$19,804

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-02**

**PROJECT TITLE:** Fitchburg Watershed Planning Project

**INVESTIGATOR:** City of Fitchburg

**LOCATION:** Nashua River Basin

**DESCRIPTION:** This project will provide technical support to local officials in the communities of Fitchburg, Ashby, Hubbardston, Princeton and Westminister to facilitate and streamline enforcement of water supply protection provisions.

Specific tasks will include:

- 1.the establishment of a Water Resource Committee(s) to provide direction and address water protection issues;
- 2.development of intermunicipal agreements regarding notification of sale of watershed land and transfer of purchase rights;
- 3.delineation of watershed boundary information;
- 4.identification of land ownership and parcel boundaries in the watershed;
- 5.identification of potential hazards to water quality; and
- 6.develop critical area acquisition list.

**COST:** \$20,000

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-03**

**PROJECT TITLE:** Franklin County Water Resources Protection Planning Project

**INVESTIGATOR:** Franklin County Commission

**LOCATION:** Deerfield, Millers, Connecticut and Chicopee River Basins

**DESCRIPTION:** The purpose of this project is to provide technical assistance and education to communities and small water suppliers in Franklin County.

This following will be conducted:

- 1.the establishment of water resource protection committees with representatives from town boards, water districts and interested citizens in the town of Ashfield and Shelburne;
- 2.a comprehensive education and support program to small water suppliers for compliance with the Safe Drinking Water Act;
- 3.development of a Watershed Resource Protection Plan for the South Deerfield Water Supply District;
- 4.development of strategies for enforcing state and local laws relating to water resource protection; and
- 5.assistance to communities pursuing water resource protection strategies not participating in this project.

**COST:** \$45,000

**FUNDING:** \$39,000 by the U.S. Environmental Protection Agency  
\$5,000 by the Franklin County Commission  
\$1,000 by the South Deerfield Water Supply District

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-04**

PROJECT TITLE: Martha's Vineyard Water Resources Protection Planning Project

INVESTIGATOR: Martha's Vineyard Commission

LOCATION: Islands Coastal Drainage Area

DESCRIPTION: This project will provide technical assistance and education to the communities and small water suppliers of Vineyard Haven, Edgartown, West Tisbury, Tisbury and Oak Bluffs and develop resource protection and land use evaluation plans for regional public water supply resources.

More specifically, the investigator will:

1. establish a permanent Water Resource Protection Committee with appointed representation from boards of health, water commission, Martha's Vineyard Water Supply Protection District, Water Superintendents; non-community small water suppliers and the Martha's Vineyard Commission;
2. assist Martha's Vineyard communities in coordinating their efforts to protect drinking water sources through land use evaluation by mapping major potential groundwater contamination sources in Wellhead Protection Areas;
3. develop a contingency plan for the provision of alternative drinking water supplies for each public water system in the event of contamination or other emergency; and
4. coordinate public education efforts by conducting workshops.

COST: \$25,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-05**

**PROJECT TITLE:** Merrimack Valley Regional Water Supply Protection Project

**INVESTIGATOR:** Merrimack Valley Planning Commission

**LOCATION:** Merrimack and Parker River Basins and Coastal Drainage Area

**DESCRIPTION:** The objective of this project is to provide technical assistance and support to the communities of Newbury, Rowley and Salisbury and to develop an enforcement program for local officials for comprehensive water resource protection planning.

The investigator will:

- 1.establish a permanent water resource protection committee consisting of appointed representation from key local boards and interested citizens from participating communities to promote responsible water resource education, planning, and protection at the local level;
- 2.identify and map key water supply resources and potential sources of contamination;
- 3.assess pollution threats to each water supply;
- 4.develop and implement local water supply protection measures;  
and
- 5.conduct workshops on water supply protection issues.

**COST:** \$24,645

**FUNDING:** \$19,645 by the U.S. Environmental Protection Agency  
\$5,000 by the Merrimack Valley Planning Commission

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-06**

PROJECT TITLE: Ipswich and North Coastal River Basins Water Resources Protection Planning Project

INVESTIGATOR: Metropolitan Area Planning Council

LOCATION: Ipswich and North Coastal River Basins

DESCRIPTION: This project will provide technical assistance and support to the communities of Danvers, Gloucester, Middleton, Peabody, Rockport and Topsfield to develop a regional water supply protection plan for groundwater and surface water sources.

Tasks include:

1. establishment of permanent Water Resources Protection Committees with appointed representation from town boards, water districts, conservation commissions, and interested citizens from participating communities;
2. compilation of all available hydrogeologic data useful for delineation of aquifer boundaries and/or zones of contribution to public supply wells and watersheds of municipal reservoirs;
3. an inventory of contamination sources and land use;
4. an evaluation of existing local water supply protection measures;  
and
5. recommendations for new or amended water supply protection measures.

COST: \$35,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-07**

**PROJECT TITLE:** Montachusett Water Resources Protection Planning Project

**INVESTIGATOR:** Montachusett Regional Planning Commission

**LOCATION:** Millers River Basin

**DESCRIPTION:** The purpose of this project is to provide technical assistance and education to selected communities and water supplies to facilitate and streamline enforcement of water supply protection provisions and develop recommendations for new regulations as necessary and develop a Watershed Resource Protection Plan for Ashburnham and Winchendon.

More specifically, the investigator will:

1. develop a Watershed Resource Protection Plan for the Ashburnham and Winchendon Joint Water Authority;
2. assess risks and develop best management plans;
3. inventory and map all open space under public control and direct efforts to obtain all agreements with land owners; and
4. conduct education and support program for small water suppliers for compliance with the Safe Drinking Water Act.

**COST:** \$18,203

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-08**

**PROJECT TITLE:** Pioneer Valley Water Resources Protection Planning Project

**INVESTIGATOR:** Pioneer Valley Planning Commission

**LOCATION:** Westfield, Connecticut and Chicopee River Basins

**DESCRIPTION:** This project will provide technical assistance and education to communities and small water suppliers in the Pioneer Valley of Massachusetts, develop a Watershed Protection Plan for targeted Water Supply Districts, and develop an enforcement program for local officials for comprehensive water resource protection planning.

Specifically, this will include:

1. establishment of an Intermunicipal Watershed Protection Advisory Committee;
2. Geographic Information System (GIS) mapping of land use, underground storage tanks and other potential contamination sources in selected communities;
3. development of public education materials, such as fact sheets and maps;
4. technical support to the Barnes Aquifer Protection Advisory Committee and the Eastern Valley Water Protection Committee;
5. development of an education and support program for small water suppliers for compliance with the Safe Drinking Water Act; and
6. GIS mapping of small public water supply systems.

**COST:** \$39,000

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-09**

**PROJECT TITLE:** Small Public Water Supplies Planning and Protection Project

**INVESTIGATOR:** Rural Housing Improvements Rural Community Assistance Program

**LOCATION:** Hoosic, Housatonic, Deerfield, Westfield, Farmington and Connecticut River Basins

**DESCRIPTION:** This project will provide technical assistance, training, and support to communities in Central and Western Massachusetts, develop a watershed protection plan for targeted Water Supply Districts, and assist local officials in comprehensive water resource protection planning.

The investigator will:

- 1.deliver a comprehensive education and support program to small water supply systems;
- 2.coordinate and conduct a workshop for small water suppliers to facilitate compliance with the Safe Drinking Water Act; and
- 3.organize "teams" and use team approach to deal with water supply problems.

**COST:** \$13,888

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 92-10**

PROJECT TITLE: Taunton River Basin Water Resources Protection Planning Project

INVESTIGATOR: Southeastern Regional Planning and Economic Development District

LOCATION: Taunton River Basin

DESCRIPTION: The objective of this project is to provide technical assistance and education to communities and water suppliers in the targeted Water Supply Districts, and develop an enforcement program for local officials for comprehensive Water Resource Protection Planning.

Tasks will include:

- 1.establishment of a permanent Water Resource Committee to address water resources protection issues in the Palmer River Watershed, Warren Upper Reservoir, and Lower Warren Reservoir areas (in Rehoboth and Swansea, respectively);
- 2.in conjunction with the Assawompsett Ponds Protection Committee revise existing water resources protection bylaws; and
- 3.provide administrative support and technical assistance to the Mattapoisett River Valley Water Supply Protection Advisory Committee and propose a model sanitary code.

COST: \$37,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 93-01**

**PROJECT TITLE:** Technical Assistance to Community and Non-Transient Non-Community (NTNC) Water Suppliers in Preparing Source Protection Plans

**INVESTIGATOR:** Berkshire County Regional Planning Commission

**LOCATION:** Hoosic, Housatonic, Deerfield, Westfield and Farmington River Basins

**DESCRIPTION:** This project will assist NTNC Public Water Suppliers in Berkshire County in the preparation of Source Protection Plans relative to the SOC/IOC waiver application.

Tasks will include:

1. compiling a list of all communities and NTNC Community Public Water Suppliers in Berkshire County including relevant information on each supplier;
2. provide direct technical assistance on the Source Protection Component of the SOC/IOC Waiver applications by conducting workshops, identifying monitoring responsibilities, completing the Wellhead Protection Plan Form, calculating Zone I and IWPA protection areas, aiding in addressing source vulnerability, and offering best management practices as appropriate;
3. conduct an evaluation of the SOC/IOC Waiver application and produce a supplementary plan to address SOC/IOC issues and make recommendations; and
4. develop recommendations to targeted communities on the adoption of Hazardous Materials bylaws.

**COST:** \$24,473

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 93-02**

**PROJECT TITLE:** Franklin County Water Quality Improvement Program

**INVESTIGATOR:** Franklin County Commission

**LOCATION:** Deerfield, Millers, Connecticut and Chicopee River Basins

**DESCRIPTION:** The objective of this project is to provide technical assistance and education outreach to communities in Franklin County to improve public and private water systems and overall groundwater quality.

Specific tasks to be performed by the investigator include:

1. work with a Water Resource Committee in the Town of Northfield to review current protection measures and identify weaknesses and areas of vulnerability and make recommendations for improved resource protection;
2. provide direct technical assistance on the Source Protection Component of SOC/IOC Waiver applications for all community and non-transient non-community Public Water Suppliers;
3. conduct a comprehensive water protection workshop;
4. develop contingency plans for Erving and Greenfield which would provide for management of their water supplies during droughts and emergencies; and
5. provide technical assistance to the Western Valley Water Protection Committee.

**COST:** \$44,000

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 93-03**

**PROJECT TITLE:** Development and Implementation of Local Floor Drain Regulations in the Merrimack and Parker River Basins

**INVESTIGATOR:** Merrimack Valley Planning Commission

**LOCATION:** Merrimack and Parker River Basins

**DESCRIPTION:** The purpose of this project is to enhance the capability of local governments to prevent or minimize groundwater contamination from commercial and industrial floor drains.

The principal investigator will:

1. organize and conduct introductory informational meetings in the communities of Georgetown, Groveland, Merrimac, Newbury, Rowley, Salisbury and West Newbury to solicit local input on the project;
2. inventory all commercial and industrial facilities which have the potential to house unauthorized floor drains discharging to the ground, a leaching structure, or a septic system;
3. map the locations of all known and potential facility floor drains identified;
4. present findings and introduce the Department of Environmental Protection's Model Floor Drain Regulation to local officials; and
5. design and conduct a regional training seminar on commercial and industrial floor drains.

**COST:** \$33,600

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 93-04**

**PROJECT TITLE:** Sudbury-Assabet-Concord (SuAsCo) River Basin Water Supply Protection Project

**INVESTIGATOR:** Metropolitan Area Planning Council

**LOCATION:** Sudbury-Assabet-Concord River Basin

**DESCRIPTION:** The purpose of this project is to develop a regional water supply protection plan for the communities of Acton, Boxborough, Carlisle, Concord, Hudson, Littleton, Maynard and Stow.

Specific tasks will be to :

1. establish a SuAsCo Basin Water Supply Protection Committee in the eight study towns to assist in locating relevant data, reviewing draft maps and reports, and take a leading role in implementing the plan's actions;
2. inventory and map hydrogeologic data useful for delineation of aquifer boundaries and/or zones of contribution to public supply wells and watersheds of municipal reservoirs;
3. inventory and map contamination sources (such as underground storage tanks) and land use;
4. evaluate existing water supply protection measures including zoning bylaws, general bylaws, and board of health regulations;
5. develop draft recommendations for new or amended water supply protection measures for each community; and
6. provide assistance to communities for the implementation and enforcement of the recommended protection measures.

**COST:** \$43,500

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 93-05**

**PROJECT TITLE:** Upper Taunton River Basin Water Supply Protection/Contingency Planning Program

**INVESTIGATOR:** Old Colony Planning Council

**LOCATION:** Taunton River Basin

**DESCRIPTION:** This project will strengthen zoning and non-zoning water supply protection measures, improve contingency supply planning efforts and present a regional forum on supply protection progress and needs in the communities of Avon, Brockton, East Bridgewater, Easton, Halifax, Hanson, Kingston, and West Bridgewater.

The investigator will perform the following tasks:

1. establish a Water Supply Protection Advisory Committee to encourage cooperative water supply protection in areas with shared resources or with potential impacts on each others resources;
2. expand protection of local and regional ground and surface water supplies in target areas;
3. prepare a comprehensive water supply protection plan for the town of Halifax;
4. review and synthesize water supply issues, assumptions and recommendations from past efforts performed in the Taunton River Basin;
5. conduct contingency planning for Brockton's short to mid-term water supply needs; and
6. coordinate and conduct a public forum on water supply issues in the Taunton River Basin.

**COST:** \$35,000

**FUNDING:** 100% of the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 93-06**

PROJECT TITLE: Pioneer Valley Regional Water Supply Protection Project

INVESTIGATOR: Pioneer Valley Planning Commission

LOCATION: Westfield, Connecticut and Chicopee River Basins

DESCRIPTION: The objective of this project is to provide technical assistance to communities in the Pioneer Valley on water supply protection.

More specifically the investigator will conduct the following tasks:

1. provide technical assistance to the Barnes Aquifer Protection Advisory Committee (BAPAC) by coordinating meetings, developing a proposal for a permanent BAPAC funding mechanism, and revising zoning bylaws for expanded protection areas;
2. provide technical assistance to the Eastern Valley Water Protection Committee (EVWPC) by coordinating meetings and developing and implementing applicable components of the EVWPC's comprehensive water protection strategy;
3. provide technical assistance to the Western Valley Water Protection Committee (WVWPC) by coordinating meetings, developing and implementing applicable components of WVWPC's Comprehensive Water Protection Strategy, preparing a strategy to protect the confining clay layer over the Mill River Aquifer, and inventorying property owners of all agricultural parcels in Zone II's of wells located in the WVWPC;
4. conduct regional watershed management; and
5. develop a comprehensive water supply strategy for the Town of Granby.

COST: \$44,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 93-07**

**PROJECT TITLE:** Technical Assistance to the Palmer River Watershed, Mattapoisett River Valley Water Supply Protection Advisory Committee and the Taunton River Basin Needs Study

**INVESTIGATOR:** Southeastern Regional Planning and Economic Development District

**LOCATION:** Taunton River Basin, Buzzards Bay, and Narragansett Bay

**DESCRIPTION:** This project will protect the water resources in the communities of Rehoboth, Swansea, Marion, Mattapoisett, Rochester, Fairhaven, Acushnet and those within the Taunton River Basin through improved regional watershed management planning and regionally-consistent regulations.

Specific tasks will be to:

1. address water resources protection and watershed management planning issues in the Palmer River Watershed, Upper Warren Reservoir and Lower Warren Reservoir by amending existing/or establishing new regulations relative to floor drain and septage tracking and management, and organizing and conducting regional health, planning and technology-based workshops;
2. provide technical assistance to the Mattapoisett River Valley Water Supply Protection Advisory Committee to establish uniform health regulations to help alleviate potential drinking water contamination; and
3. perform a multi-community water supply needs survey in the Taunton River Basin.

**COST:** \$39,094

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1993 - 1994

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 94-01**

**PROJECT TITLE:** Sagamore Lens Groundwater Protection Project

**INVESTIGATOR:** Barnstable County/Cape Cod Commission

**LOCATION:** Cape Cod

**DESCRIPTION:** The purpose of this project is to develop consistent water resource planning strategies for the six-town area that make up the Sagamore Lens including the towns of Bourne, Falmouth, Mashpee, Sandwich, Barnstable and Yarmouth. Technical assistance will be provided through the development of a groundwater protection matrix and land use analysis within water resource recharge areas.

The principal investigator will perform the following tasks relative to this project:

1. evaluate the existing groundwater protection regulations in the six towns that comprise the Sagamore Lens as well as the Massachusetts Military Reservation which overlays the crown of the lens and present this information to the local planning committees for implementation;
2. prepare and present the Sagamore Lens findings and develop an educational poster for distribution to schools, towns, and public interest groups; and
3. select a limited number of zones of contribution crossing town boundaries for land use assessments.

**COST:** \$30,000

**FUNDING:** \$18,000 by the U.S. Environmental Protection Agency  
\$12,000 by Barnstable County /Cape Cod Commission

**DURATION:** 1994 - 1995

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 94-02**

PROJECT TITLE: Small Public Water System Collaborative Project

INVESTIGATOR: Franklin County Commission

LOCATION: Deerfield, Millers, Connecticut and Chicopee River Basins

DESCRIPTION: The objective of this project is to safeguard the public health by maintaining and promoting the viability of small public water suppliers in Franklin County through the formation and support of a permanent, mutually-supportive collaborative of small public water suppliers who will act cooperatively to reduce costs and improve efficiency.

The principal investigator will:

1. form a Steering Committee to set priorities and objectives, establish guidelines, and provide overall guidance and supervision of the project;
2. conduct a comprehensive evaluation of system participant needs;
3. form and operate a purchasing and testing collaborative for laboratory testing services and bulk purchase of supplies;
4. develop a model purchasing and testing collaborative; and
5. provide technical assistance to meet requirements of the Lead and Copper Rule.

COST: \$39,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1994 - 1995

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 94-03**

PROJECT TITLE: Cape Ann Emergency Water Supply Plan

INVESTIGATOR: Metropolitan Area Planning Council

LOCATION: North Coastal Drainage Area

DESCRIPTION: The intent of this project is to develop an emergency water supply plan for the City of Gloucester and the Town of Rockport to ensure reliable public water supply service during an emergency due to loss of supplies or water distribution facilities.

The following will be conducted:

1. the establishment of a Cape Ann Water Supply Coordinating Committee;
2. an inventory and mapping of the components of the Water Supply Systems of Gloucester and Rockport relevant to establishing the capability for emergency transfers of water between the communities;
3. a review and evaluation of past planning or engineering studies relevant to system interconnections or emergency water supply provisions;
4. a review and evaluation of issues relating to the cost of providing emergency water supplies between the two communities and alternative methods of allocating costs and providing financial compensation to the donor community in the event of an emergency transfer of water; and
- 5.a presentation of recommendations for providing emergency supply capabilities for Gloucester and Rockport, including recommendations for further technical or engineering studies, operation policies and appropriate regulatory measures.

COST: \$20,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1994 - 1995

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 94-04**

**PROJECT TITLE:** Public Water Supply Technical Assistance/Watershed Inspection Implementation and ISTEA Planning Project

**INVESTIGATOR:** Pioneer Valley Planning Commission

**LOCATION:** Westfield, Connecticut and Chicopee River Basins

**DESCRIPTION:** The objective of this project is to provide technical assistance to Pioneer Valley communities on water supply protection. This includes protection of regional aquifer recharge areas through development of a "Green Business" Program to implement best management practices (BMPs), protection of surface water supplies by control of highway runoff and protection of small water supplies through comprehensive municipal strategies to protect small public water systems.

The principal investigator will perform the following:

1. provide technical assistance to landowners and municipal officials in the communities of Westfield and Easthampton to implement BMPs for existing land uses to mitigate potential threats to water supplies from those uses;
2. assess and evaluate potential contamination threats from existing land uses in the area of the Barnes Aquifer and work with cooperative landowners/business to identify and implement BMPs;
3. develop and publicize a program to recognize cooperative businesses through a "Green Business" award program;
4. develop and conduct a pilot-planning project to secure ISTEA enhancement funded projects for mitigation of highway runoff which threatens public drinking water supplies;
5. improve watershed inspection programs by assessing existing watershed inspection programs and developing and evaluating a proposed "model" inspection program; and
6. develop a comprehensive water supply protection program for Brimfield and Goshen, two communities with a large number of small water supplies.

**COST:** \$34,112

**FUNDING:** \$32,612 by the U.S. Environmental Protection Agency  
\$1,500 by the Pioneer Valley Planning Commission

DURATION: 1994 - 1995

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 94-05**

PROJECT TITLE: A Regional Approach to Water Resources Protection and Protecting a Future Potential Water Supply

INVESTIGATOR: Southeastern Regional Planning and Economic Development District

LOCATION: Narragansett Bay and Taunton River Basin

DESCRIPTION: The objective of this project is to protect the water resources in the communities of Somerset, Dighton, and Rehoboth through improved local and regional wellhead and watershed management planning and regionally-consistent regulations.

More specifically, this project will:

1. develop and implement a regional water resource protection initiative to serve the water supply protection needs of the Dighton and Somerset wellfields, help to protect a shared regional resource, and upgrade local water resource protection-related regulations in both communities; and
2. develop and implement water resource protection bylaw provisions focussing on the protection of areas of future potential water supply in the town of Rehoboth.

COST: \$25,000

FUNDING: \$20,000 by the U.S. Environmental Protection Agency  
\$5,000 by the Southeastern Regional Planning and Economic Development District

DURATION: 1994 - 1995

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 94-06**

PROJECT TITLE: Tri-Town Watershed Protection Implementation Project

INVESTIGATOR: Tri-Town Board of Water Commissioners

LOCATION: Weymouth and Weir River Basins

DESCRIPTION: The purpose of this project is to implement key elements of the Tri-Town Board of Water Commissioners' "Watershed Protection Program" in order to protect existing and potential sources of water supplies.

Tasks include:

1. establish a regional watershed protection committee and conduct meetings to inform neighboring communities about the critical need for watershed protection;
2. develop an emergency response plan to provide effective regionally-coordinated response capabilities to ensure water supply and public safety are protected from accidents;
3. develop a recommended standard policy for road salt storage and use;
4. review existing zoning protection and develop recommendations for a unified Tri-Town Watershed Protection Bylaw;
5. develop a recommended Model Hazardous Materials Bylaw; and
6. implement a Public Information Program.

COST: \$37,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1994 - 1995

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 95-01**

**PROJECT TITLE:** Nonpoint Source Assessment in the Westfield River Watershed

**INVESTIGATOR:** Pioneer Valley Planning Commission

**LOCATION:** Westfield River Basin

**DESCRIPTION:** This project will assess nonpoint sources of pollution in the Westfield River Watershed and assess local water resource protection control measures.

The investigator will:

1. assess and map current land use activities within the Westfield River Watershed;
2. assess the level of existing local water resource protection control in communities in the Westfield River Watershed;
3. estimate nonpoint source pollutant loadings; and
4. conduct water quality sampling in four targeted sub-basins of the Westfield River.

**COST:** \$56,927

**FUNDING:** \$44,927 by the U.S. Environmental Protection Agency  
\$12,000 by the Pioneer Valley Planning Commission

**DURATION:** 1995 - 1996

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 95-02**

PROJECT TITLE: Farmington River Watershed Nonpoint Source Assessment Project

INVESTIGATOR: Berkshire Regional Planning Commission

LOCATION: Farmington River Basin

DESCRIPTION: The purpose of this project is to assess the existing and potential water quality problems within the Farmington River Basin to establish an information base that can serve federal, state, regional and local officials.

The Scope of Services include the following tasks:

1. develop a Geographic Information System (GIS) Database for the Farmington River Watershed;
2. conduct a comprehensive assessment of land use and land use activities, including an identification of potential pollution sources and an evaluation of pollutant loadings;
3. assess local water quality protection measures;
4. assess local and regional needs for public awareness, environmental education, technical assistance, and interagency/community coordination; and
5. develop a watershed Action Plan presenting a management strategy plan to address remediation of existing nonpoint source pollution (NPS) and prevention of potential future NPS pollution.

COST: \$51,508

FUNDING: \$44,008 by the U.S. Environmental Protection Agency  
\$7,500 by the Berkshire Regional Planning Commission

DURATION: 1995 - 1996

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 95-03**

PROJECT TITLE: South Shore Nonpoint Source Management Plan

INVESTIGATOR: Metropolitan Area Planning Council

LOCATION: South Coastal Drainage Area

DESCRIPTION: This project will provide the Department and local officials data to characterize the problems of nonpoint source pollution in the South Coastal Drainage Area and provide management tools which can be implemented by communities under their home rule authority.

The following tasks will be conducted:

- 1.the establishment of a South Shore Water Quality Task Force to assist in locating relevant local data, review draft maps and reports, and take a leading role in implementing the South Shore Nonpoint Source (NPS) Management Plan's recommendations;
- 2.an inventory and mapping of land use and potential NPS pollution throughout the targeted nine-town study area;
- 3.a more detailed assessment and modeling of NPS pollution in three sub-basins; and
- 4.an assessment of local water quality protection measures.

COST: \$43,553

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1995 - 1996

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 95-04**

**PROJECT TITLE:** Nonpoint Source Assessment in the Ipswich River Watershed

**INVESTIGATOR:** Merrimack Valley Planning Commission

**LOCATION:** Ipswich River Basin and Coastal Drainage Area

**DESCRIPTION:** The purpose of this project is to assess the nonpoint pollution sources in the non-sewered areas of the Ipswich River Watershed from the confluence of the Miles River to the coast.

More specifically, the investigation will:

- 1.inventory town records and maps and build computer databases of all storm drains and subsurface sewage disposal systems in the study area;
- 2.conduct a field survey of subsurface sewage disposal systems;
- 3.collect and analyze water samples from storm drains to identify areas of failing subsurface sewage disposal systems and polluted storm water sources;
4. conduct a dye testing program of selected homes/businesses to confirm or reject suspected pollution sources; and
- 5.begin the development of an on-site sewage disposal system management plan for the study area.

**COST:** \$40,226

**FUNDING:** \$36,476 by the U.S. Environmental Protection Agency  
\$3,750 by the Merrimack Valley Planning Commission and Others

**DURATION:** 1995 - 1996

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 96-01**

PROJECT TITLE: Hoosic River NPS Pollution Assessment Project

INVESTIGATOR: Berkshire Conservation District

LOCATION: Hoosic River Watershed

DESCRIPTION: This project will provide a comprehensive environmental/land use assessment of the entire Hoosic River Watershed. Based on the assessment information, recommendations will be developed to address existing nonpoint source problems and to prevent future nonpoint source pollution in the watershed. The primary goal of the project is to establish a solid information base to guide future governmental and private property actions to minimize nonpoint source pollution and ensure a high level of water quality in the Hoosic River Watershed.

Specific tasks of the project include:

1. acquire and update existing GIS data, and develop new GIS data layers relevant to the various physical, institutional, and natural features of the watershed;
2. develop a land suitability map that will illustrate general environmental constraints to development in the watershed;
3. determine the type, intensity and distribution of existing land uses within the watershed;
4. assess and identify potential and existing sources of pollution;
5. organize and conduct a "Stream Team" survey on the North Branch;
6. evaluate and model selected pollutant loadings in the watershed;
7. assess local water quality protection measures and regional and local environmental awareness and needs for public education and technical assistance; and
8. develop a watershed action plan.

COST: \$66,730

FUNDING: \$59,830 by the U.S. Environmental Protection Agency  
\$6,900 by the Berkshire Conservation District, the Berkshire County Regional Planning Commission, the Natural Resource Conservation Service and the University of Massachusetts.

DURATION: 1996-1998

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 96-02**

**PROJECT TITLE:** Assessment of On-Site Sewage Disposal Related Pollution in Gloucester Waters

**INVESTIGATOR:** Gloucester Board of Health

**LOCATION:** North Coastal Watershed

**DESCRIPTION:** This project will assess existing and new data relative to fecal coliform pollution from failing septic systems in the City of Gloucester's water resources, particularly those impacting shellfish beds. The project will provide a rapid assessment of the extent and location of septic system pollution problems to efficiently focus cleanup efforts and provide a baseline for comparison to post-cleanup water quality.

Specific tasks of the project include:

1. analyze historic water quality data to determine which shellfish beds have been commonly impacted by fecal coliform pollution;
2. assess the degree to which historic fecal coliform pollution is attributable to inadequately treated septic system effluent;
3. collect and analyze water quality samples not historically monitored for septic system pollution;
4. identify upland areas likely to have significant septic system problems using GIS; and
5. involve resident and shellfish stakeholders in project's conclusions by way of presentations and neighborhood meetings.

**COST:** \$49,536

**FUNDING:** \$41,396 by the U.S. Environmental Protection Agency  
\$8,140 by the City of Gloucester and the Massachusetts Division of Marine Fisheries

**DURATION:** 1996-1998

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 96-03**

PROJECT TITLE: An Assessment of Urban Stream Restoration: Tannery and Poor Brooks

INVESTIGATOR: Pioneer Valley Planning Commission

LOCATION: Connecticut and Chicopee River Watersheds

DESCRIPTION: The project objective is to identify potential watershed management practices that will restore water quality in Tannery and Poor Brooks, two degraded urban streams, to a more natural condition. The project will utilize a comprehensive watershed management approach to assess measures that address stormwater runoff, erosion and sedimentation, wetland degradation, and flooding by using restoration and stormwater control measures.

Specific tasks of the project include:

1. establish watershed committees for each brook;
2. conduct a sampling program to identify existing watershed conditions within each watershed;
3. develop GIS maps of the watersheds;
4. perform an analysis of the watersheds based on sampling and mapping task results and develop a matrix of watershed management practices for restoration;
5. conduct public outreach to promote awareness of the project including a public forum on recommended restoration actions; and
6. develop an implementation plan for restoration of the watersheds with recommended actions and guidance for future outreach activities.

COST: \$83,380

FUNDING: \$45,880 by the U.S. Environmental Protection Agency  
\$37,500 by the Natural Resource Conservation Service, City of Holyoke, City of Springfield, and local volunteers.

DURATION: 1996-1998

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 96-04**

PROJECT TITLE: Edgartown Great Pond: Existing and Projected Nitrogen Loading

INVESTIGATOR: Martha's Vineyard Commission

LOCATION: Islands Watershed

DESCRIPTION: This project will provide delineation of critical areas of the groundwater watershed of Edgartown Great Pond on Martha's Vineyard. Land-use analysis and nitrogen loading modeling will be performed to examine build-out scenarios and the resultant potential impacts to the pond. Public outreach will be ongoing throughout the project to inform and involve watershed stakeholders and residents in the development of long and short term pond watershed management strategies.

Specific tasks of the project include:

1. delineate the groundwater watershed of the pond and perform an assessment of pond recharge rates and groundwater flows;
2. map existing and projected land use of the groundwater recharge area and model nitrogen loading for three growth scenarios;
3. determine a nitrogen loading limit for the pond;
4. provide a matrix of watershed management strategies for the pond and present two comprehensive management scenarios for water quality improvement/preservation for public consideration; and
5. provide public education via the press and public meetings to promote awareness of the project.

COST: \$44,954

FUNDING: \$33,454 by the U.S. Environmental Protection Agency  
\$11,500 by the Martha's Vineyard Commission

DURATION: 1996-1998

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 96-05**

PROJECT TITLE: Housatonic River Watershed Nonpoint Source Pollution Assessment Project

INVESTIGATOR: Berkshire County Regional Planning Commission

LOCATION: Housatonic River Basin

DESCRIPTION: The Housatonic River Watershed nonpoint source pollution assessment project will comprehensively assess both existing and potential water quality problems within the watershed. The primary goal of this project is to establish a solid information base to guide future governmental and private property actions to minimize nonpoint source pollution and ensure a high level of water quality in the Housatonic River Watershed.

Specific tasks of the project include:

1. conduct a comprehensive environmental/land use assessment of the basin that will inventory its various physical and institutional characteristics and natural features;
2. identify existing and potential nonpoint source pollution problems;
3. update existing GIS data relevant to the watershed and develop new GIS data layers based on the information collected under tasks 1 and 2;
4. assess the local capacity to address nonpoint source pollution impacts by analyzing existing municipal bylaws and other source controls; recommendations on how to more comprehensively address nonpoint source pollution will be developed based on this assessment; and
5. develop a Watershed Action Plan which presents a comprehensive management strategy to address the remediation of existing nonpoint source pollution problems and prevention of future nonpoint source pollution.

COST: \$60,000

FUNDING: 100% by the U.S. Environmental Protection Agency

DURATION: 1997-1998

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROJECT 96-06**

**PROJECT TITLE:** Assessment and Evaluation of Stormwater Source Reduction Practices on Combined Sewer Overflows

**INVESTIGATOR:** Pioneer Valley Planning Commission

**LOCATION:** Connecticut Watershed

**DESCRIPTION:** The project will assess the potential impacts of stormwater source reduction projects on a specified CSO outfall point. Focusing on a single sewershed or sub-sewershed, it will use a hydraulic model to predict the likelihood of CSO events under different stormwater reduction scenarios. The modeling results will then be analyzed to determine the extent to which stormwater best management practices (BMP's) can achieve significant reductions in CSO volume and frequency, and to develop a recommended stormwater management plan for the study area. Comparative cost estimates will be used to evaluate the relative advantages and disadvantages of a source reduction approach to CSO abatement, and to develop the recommended stormwater management plan.

Specific tasks of this project include:

1. establish a project Steering Committee;
2. collect data to identify and characterize existing conditions in the study area;
3. develop Geographic Information Systems (GIS) maps of the conditions identified in Task 2;
4. develop a baseline model of CSO frequency and flow for 10-12 classifications of storm event;
5. develop a set of stormwater reduction scenarios for the study area;
6. for each of the stormwater BMP's identified in Task 5, predict the impacts on CSO frequency and flow using the SWMM hydraulic model; and
7. identify the most promising stormwater reduction scenarios identified by the modeling in Task 6 and prepare a comparative cost analysis of them.

**COST:** \$34,700

**FUNDING:** 100% by the US Environmental Protection Agency

**DURATION:** 1997-1998

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROPOSAL 97-01**

**PROJECT TITLE:** Stream Classification and Assessment Project

**INVESTIGATOR:** Franklin County Commission

**LOCATION:** Connecticut and Deerfield Watersheds

**DESCRIPTION:** This project proposes to use the Rosgen Stream Classification and Assessment Methodology to generally classify and assess stream types in the Deerfield and Connecticut River Basins, to collect data at selected sites on different stream types, and to establish an inventory of different stream types for reference and educational purposes. The resulting information will be used to make predictions about stream behavior, anticipate problems in the watershed as a result of certain land uses, identify areas in need of restoration, distinguish between natural stream migration and evidence of stream instability, and improve overall ability to make good watershed planning decisions based on the stability and types of streams in the watershed. The primary purpose of the work is to develop and disseminate a reference base of information that can be used to educate local boards and others about the different characteristics of stream types and the usefulness of the stream classification system, provide actual local reference sites for hands-on training, and develop tools for local planning and development decision-making.

**COST:** \$52,500

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1997-1999

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 604b WATER QUALITY PLANNING PROPOSAL 97-02**

**PROJECT TITLE:** Priority Land Acquisition Assessment for Cape Cod: Protecting Suitable Land for Future Water Supply Needs

**INVESTIGATOR:** Cape Cod Commission

**LOCATION:** Cape Cod Watershed

**DESCRIPTION:** This project proposes to conduct a regional assessment of suitable parcels for potential water supply sites and water supply source protection in the Cape Cod Watershed. The method proposed will serve as a rational, cost effective planning tool for identifying potential future well sites and guidance for parcel acquisition. The project will consist of the development and application of an innovative parcel-based GIS methodology to refine efforts to identify priority water supply related land parcels for immediate protection and eventual acquisition. Prioritization of parcels will be conducted cooperatively with water supply purveyors and town planners.

**COST:** \$36,300

**FUNDING:** 100% by the U.S. Environmental Protection Agency

**DURATION:** 1997-1999