

**INDICATIVE PROJECT SUMMARIES**

**Water Conservation Grant Program**

**FFY 2004-2010**

**Commonwealth of Massachusetts Executive Office of Energy and  
Environmental Affairs**

**Ian A. Bowles, Secretary**

**Massachusetts Department of Environmental Protection**

**Laurie Burt, Commissioner**

**Division of Municipal Services**

**Steven J. McCurdy, Director**

**2010**

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL  
PROTECTION**

**INDICATIVE PROJECT SUMMARIES**

**WATER CONSERVATION GRANT PROGRAM**

**FFY 2004 - 2010**

**Prepared by:  
Malcolm M. Harper**

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**2010**

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| 05-05/WLP | Upton Water Loss Prevention Grant Project              | 18 |
| 05-07/WLP | North Attleborough Water Loss Prevention Grant Project | 20 |
| 06-13/WLP | Paxton Water Loss Prevention Grant Project             | 37 |
| 07-16/WCG | Hopedale Water Conservation Grant Project              | 54 |
| 07-18/WCG | Shrewsbury Water Conservation Grant Project            | 56 |
| 08-03/WCG | Hopkinton Water Conservation Grant Project             | 60 |
| 08-11/WCG | North Attleborough Water Conservation Grant Project    | 68 |

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|           |   |    |
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| 04-02/WLP | Walpole Water Loss Prevention Project               | 2  |
| 06-03/WLP | Dedham-Westwood Water Loss Prevention Grant Project | 28 |
| 06-06/WLP | Medfield Water Loss Prevention Grant Project        | 31 |
| 07-09/WCG | Sharon Water Conservation Grant Project             | 47 |
| 08-05/WCG | Walpole Water Conservation Grant Project            | 62 |
| 08-07/WCG | Quincy Water Conservation Grant Project             | 64 |
| 08-13/WCG | Milton Water Conservation Grant Project             | 70 |
| 09-05/WCG | Sharon Water Conservation Grant Project             | 85 |

### **Buzzards Bay**

|           |  |    |
|-----------|--|----|
| 05-11/WLP | Mattapoisett Water Loss Prevention Grant Project | 24 |
| 06-04/WLP | Plymouth Water Loss Prevention Grant Project     | 29 |
| 06-07/WLP | Fairhaven Water Loss Prevention Grant Project    | 32 |
| 06-08/WLP | Marion Water Loss Prevention Grant Project       | 33 |
| 07-02/WCG | Wareham Water Conservation Grant Project         | 40 |
| 08-12/WCG | Onset Water Conservation Grant Project           | 69 |
| 08-22/WCG | Buzzards Bay Water Conservation Grant Project    | 79 |
| 09-13/WCG | Buzzards Bay Water Conservation Grant Project    | 93 |

### **Cape Cod**

|           |   |    |
|-----------|---|----|
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### **Charles**

|           |  |    |
|-----------|--|----|
| 04-01/WLP | Millis Water Loss Prevention Project                   | 1  |
| 04-02/WLP | Walpole Water Loss Prevention Project                  | 2  |
| 04-08/WLP | Department of Correction Water Loss Prevention Project | 8  |
| 04-09/WLP | Milford Water Loss Prevention Project                  | 9  |
| 04-12/WLP | Ashland and Hopkinton Water Loss Prevention Project    | 12 |
| 06-01/WLP | Millis Water Loss Prevention Grant Project             | 26 |

|           |   |    |
|-----------|---|----|
| 06-03/WLP | Dedham-Westwood Water Loss Prevention Grant Project       | 28 |
| 06-06/WLP | Medfield Water Loss Prevention Grant Project              | 31 |
| 06-12/WLP | Holliston Water Loss Prevention Grant Project             | 36 |
| 07-05/WCG | Norfolk Water Conservation Grant Project                  | 43 |
| 07-10/WCG | Department of Correction Water Conservation Grant Project | 48 |
| 07-16/WCG | Hopedale Water Conservation Grant Project                 | 54 |
| 08-03/WCG | Hopkinton Water Conservation Grant Project                | 60 |
| 08-05/WCG | Walpole Water Conservation Grant Project                  | 62 |
| 08-08/WCG | Malden Water Conservation Grant Project                   | 65 |

**Chicopee**

|           |  |    |
|-----------|--|----|
| 04-05/WLP | Barre Water Loss Prevention Project      | 5  |
| 08-21/WCG | Spencer Water Conservation Grant Project | 78 |

**Connecticut**

|           |  |    |
|-----------|--|----|
| 04-13/WLP | West Springfield Water Loss Prevention Project | 13 |
| 04-14/WLP | Holyoke Water Loss Prevention Project          | 14 |
| 06-14/WLP | Hatfield Water Loss Prevention Grant Project   | 38 |
| 07-01/WCG | Hadley Water Conservation Grant Project        | 39 |
| 08-17/WCG | Holyoke Water Conservation Grant Project       | 74 |
| 08-18/WCG | Hatfield Water Conservation Grant Project      | 75 |
| 08-20/WCG | Easthampton Water Conservation Grant Project   | 77 |

**French and Quinebaug**

|           |   |    |
|-----------|---|----|
| 05-08/WLP | Southbridge Water Loss Prevention Grant Project           | 21 |
| 08-14/WCG | Cherry Valley & Rochdale Water Conservation Grant Project | 71 |

**Ipswich**

|           |  |    |
|-----------|--|----|
| 04-10/WLP | Lynnfield Center Water Loss Prevention Project | 10 |
| 04-11/WLP | Wilmington Water Loss Prevention Project       | 11 |
| 05-03/WLP | Hamilton Water Loss Prevention Grant Project   | 16 |
| 05-12/WLP | Ipswich Water Loss Prevention Grant Project    | 25 |
| 07-12/WCG | Danvers Water Conservation Grant Project       | 50 |
| 08-01/WCG | North Reading Water Conservation Grant Project | 58 |
| 09-04/WCG | Danvers Water Conservation Grant Project       | 84 |

**Merrimack**

|           |   |    |
|-----------|---|----|
| 06-02/WLP | Groton Water Loss Prevention Grant Project        | 27 |
| 06-09/WLP | Ayer Water Loss Prevention Grant Project          | 34 |
| 07-07/WCG | Haverhill Water Conservation Grant Project        | 45 |
| 08-10/WCG | Lowell Water Conservation Grant Project           | 67 |
| 08-16/WCG | North Chelmsford Water Conservation Grant Project | 73 |
| 09-02/WCG | North Andover Water Conservation Grant Project    | 82 |
| 09-07/WCG | Lawrence Water Conservation Grant Project         | 87 |

**Nashua**

|           |   |    |
|-----------|---|----|
| 04-03/WLP | West Boylston Water Loss Prevention Project               | 3  |
| 04-07/WLP | Worcester Water Loss Prevention Project                   | 7  |
| 04-08/WLP | Department of Correction Water Loss Prevention Project    | 8  |
| 06-09/WLP | Ayer Water Loss Prevention Grant Project                  | 34 |
| 06-10/WLP | Lancaster Water Loss Prevention Grant Project             | 35 |
| 06-13/WLP | Paxton Water Loss Prevention Grant Project                | 37 |
| 07-08/WCG | Holden Water Conservation Grant Project                   | 46 |
| 07-10/WCG | Department of Correction Water Conservation Grant Project | 48 |
| 07-14/WCG | West Boylston Water Conservation Grant Project            | 52 |
| 07-20/WCG | Pepperell Water Conservation Grant Project                | 57 |
| 08-21/WCG | Spencer Water Conservation Grant Project                  | 78 |

**North Coastal**

|           |  |    |
|-----------|--|----|
| 04-10/WLP | Lynnfield Center Water Loss Prevention Project | 10 |
| 05-09/WLP | Gloucester Water Loss Prevention Grant Project | 22 |
| 05-10/WLP | Rockport Water Loss Prevention Grant Project   | 23 |
| 08-08/WCG | Malden Water Conservation Grant Project        | 65 |
| 08-24/WCG | Gloucester Water Conservation Grant Project    | 80 |

**Parker**

|           |  |    |
|-----------|--|----|
| 05-06/WLP | Georgetown Water Loss Prevention Grant Project | 19 |
| 05-12/WLP | Ipswich Water Loss Prevention Grant Project    | 25 |
| 09-06/WCG | Georgetown Water Conservation Grant Project    | 86 |

**Shawsheen**

|           |   |    |
|-----------|---|----|
| 09-07/WCG | Lawrence Water Conservation Grant Project | 87 |
|-----------|---|----|

**South Coastal**

|           |   |    |
|-----------|---|----|
| 04-08/WLP | Department of Correction Water Loss Prevention Project    | 8  |
| 06-04/WLP | Plymouth Water Loss Prevention Grant Project              | 29 |
| 07-10/WCG | Department of Correction Water Conservation Grant Project | 48 |
| 07-11/WCG | Pembroke Water Conservation Grant Project                 | 49 |
| 09-09/WCG | Abington Water Conservation Grant Project                 | 89 |
| 09-10/WCG | Rockland Water Conservation Grant Project                 | 90 |

**SuAsCo**

|           |   |    |
|-----------|---|----|
| 04-12/WLP | Ashland and Hopkinton Water Loss Prevention Project | 12 |
| 07-04/WCG | Concord Water Conservation Grant Project            | 42 |
| 07-15/WCG | Lexington Water Conservation Grant Project          | 53 |
| 07-18/WCG | Shrewsbury Water Conservation Grant Project         | 56 |
| 08-03/WCG | Hopkinton Water Conservation Grant Project          | 60 |
| 08-06/WCG | Concord Water Conservation Grant Project            | 63 |
| 08-09/WCG | Wayland Water Conservation Grant Project            | 66 |
| 08-15/WCG | Marlborough Water Conservation Grant Project        | 72 |

|           |  |    |
|-----------|--|----|
| 08-19/WCG | Maynard Water Conservation Grant Project     | 76 |
| 09-11/WCG | Marlborough Water Conservation Grant Project | 91 |

**Taunton**

|           |   |    |
|-----------|---|----|
| 04-04/WLP | Halifax Water Loss Prevention Project                     | 4  |
| 04-06/WLP | Avon Water Loss Prevention Project                        | 6  |
| 04-08/WLP | Department of Correction Water Loss Prevention Project    | 8  |
| 05-01/WLP | Easton Water Loss Prevention Grant Project                | 15 |
| 06-05/WLP | Bridgewater Water Loss Prevention Grant Project           | 30 |
| 07-06/WCG | Middleborough Water Conservation Grant Project            | 44 |
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| 07-10/WCG | Department of Correction Water Conservation Grant Project | 48 |
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| 08-02/WCG | Hanson Water Conservation Grant Project                   | 59 |
| 09-01/WCG | Mansfield Water Conservation Grant Project                | 81 |
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| 09-05/WCG | Sharon Water Conservation Grant Project                   | 85 |
| 09-09/WCG | Abington Water Conservation Grant Project                 | 89 |
| 09-10/WCG | Rockland Water Conservation Grant Project                 | 90 |
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**Ten Mile**

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## **INTRODUCTION**

This report presents Indicative Project Summaries of Water Conservation Grant Program projects funded during federal fiscal years 2004-2010. From 2004-2006 this program was entitled the Water Loss Prevention Grant Program.

These programs were developed to support the 1996 Safe Drinking Water Act Amendments, and the Massachusetts Water Resources Commission's and Massachusetts Department of Environmental Protection's watershed management policies and water conservation initiatives, as well as the Massachusetts Water Policy developed through the Executive Office of Energy and Environmental Affairs. Funding is provided from the Drinking Water State Revolving Fund Set-Asides.

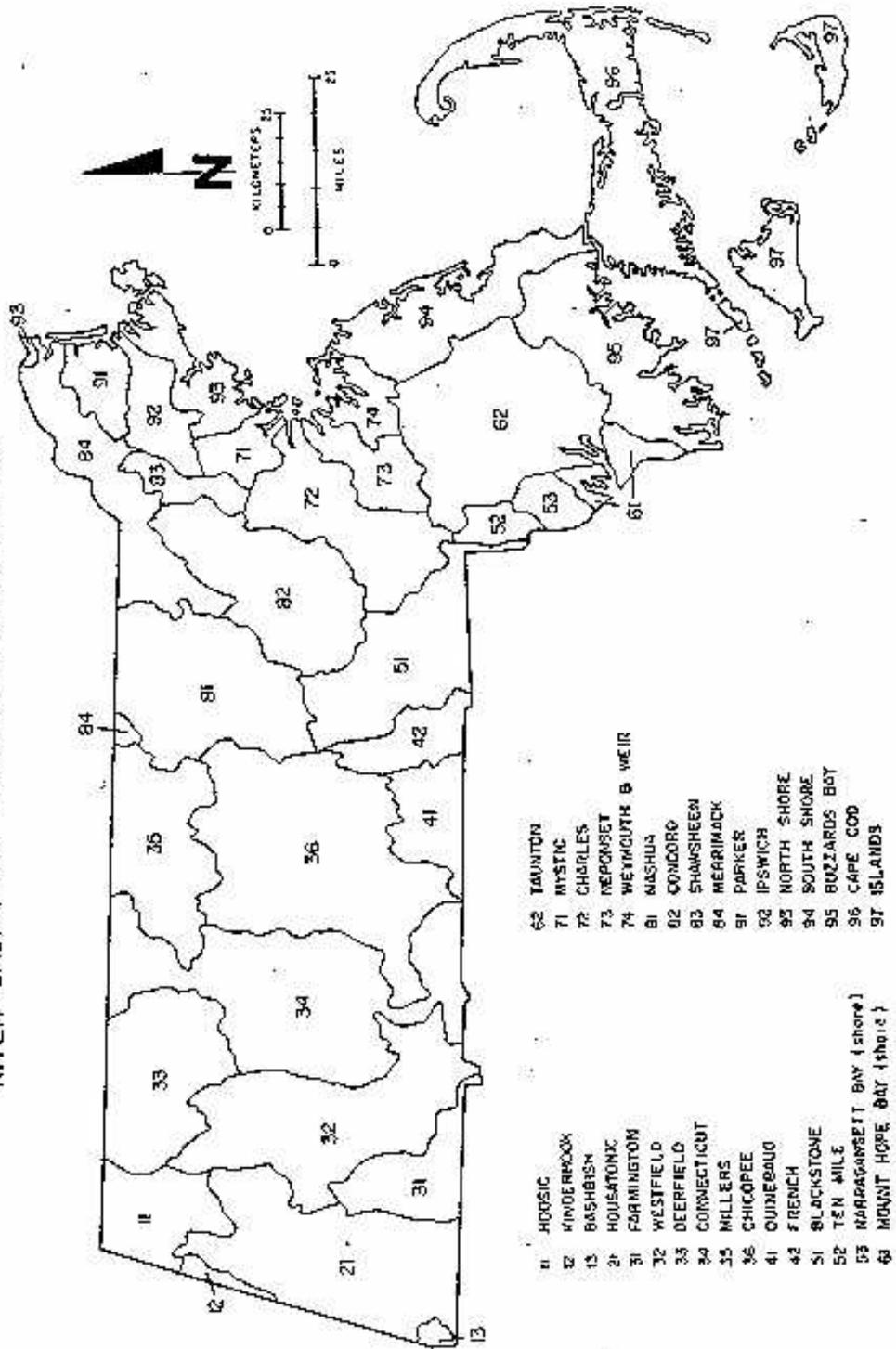
### **Water Conservation Grant Program**

The Water Conservation Grant Program assists public water systems in addressing drinking water supply and distribution system water losses and supports projects that promote the implementation of drinking water conservation programs. Priority is given to those public water systems having a significant environmental concern that would benefit from a reduction in demand; having an identified issue where the public water system cannot meet demand; with water pricing policies that strongly encourage conservation; with existing water loss prevention and water conservation programs; or those projects that incorporate a watershed approach to reducing water loss.

During the 2004-2006 granting rounds, the Water Loss Prevention Program supported water audits, leak detection programs, public water conservation outreach programs, and other projects that focus on water conservation and water loss identification, resolution, and prevention.

During the 2007-2010 granting rounds, the Water Conservation Program provided matching funds to assist public water systems and municipalities in addressing drinking water losses through local water conservation programs, water audits, leak detection surveys, leak detection equipment, and rebates for low-flow fixtures and retrofit kits.

# COMMONWEALTH of MASSACHUSETTS RIVER BASINS and COASTAL DRAINAGE AREAS



**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-01/WLP**

PROJECT TITLE: Millis Water Loss Prevention Grant Project

INVESTIGATOR: Town of Millis

LOCATION: Charles River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Millis' drinking water works and distribution system. The Town has sources of supply that are located in a stressed subwatershed. The Town's goal is to reduce unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 42 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs.
3. Review and evaluate maintenance, calibration and reading practices existing master production meters. Sample those commercial meters not yet sampled with data-logging devices to determine whether or not the meter needs to be downsized or replaced with a different type of meter. Estimate water losses associated with the commercial meters and recommend additional steps for meter analysis and replacement.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$42,766

FUNDING: \$31,600 by the U.S. Environmental Protection Agency  
\$11,166 by the Town of Millis

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-02/WLP**

PROJECT TITLE: Walpole Water Loss Prevention Grant Project

INVESTIGATOR: Town of Walpole

LOCATION: Charles River and Boston Harbor Basins

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town's drinking water works and distribution system. The Town has sources of supply that are located stressed subwatersheds. The Town proposes to reduce its unaccounted-for water loss to 10 percent or less in order to satisfy its Water Management Act Program permit requirements.

The Town will quantify the water savings from project related activities in both gallons per year and an approximate dollar value.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of the 149 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs.
3. Evaluate Water Meters. Review and evaluate information on meters, water consumption by meter size and use category. Test meters by isolating and comparing to a certified and calibrated meter. Recommend additional steps for meter analysis and evaluation. Retrofit or replace approximately 10 meters with new transmitter units.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$54,595

FUNDING: \$40,000 by the U.S. Environmental Protection Agency  
\$14,595 by the Town of Walpole

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-03/WLP**

PROJECT TITLE: West Boylston Water Loss Prevention Grant Project

INVESTIGATOR: West Boylston Water District

LOCATION: Nashua River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the West Boylston Water District's drinking water works and distribution system, and reduction of the amount of water withdrawal of their sources. Reducing the amount of water withdrawn from their sources will assist in alleviating stress on the river basin.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection program. purchase leak detection equipment. conduct a comprehensive field survey of 53 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs.
3. Replace approximately 480 service meters in fiscal year 2006.
4. Water Conservation Program: Distribute Low Impact Development (LID) concepts to agricultural, commercial, industrial, and residential consumers. Conduct at least two public meetings to provide residents and high-volume water users with an overview of conservation program. Conduct at least two meetings with West Boylston High School staff and administrators. Purchase and distribute selected water conservation pamphlets to encourage residential, commercial and industrial water conservation within the District. Broadcast local cable announcement on water conservation.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$49,050

FUNDING: \$30,050 by the U.S. Environmental Protection Agency  
\$19,000 by the West Boylston Water District

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-04/WLP**

PROJECT TITLE: Halifax Water Loss Prevention Grant Project

INVESTIGATOR: Town of Halifax

LOCATION: Taunton River Watershed

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Halifax's drinking water works and distribution system. The Town proposes to reduce its unaccounted-for water loss to 10 percent or less in order to satisfy Water Management Act Program permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of the 60 miles of water mains and appurtenances of the water distribution system network that may include source of supply transmission lines.
3. Develop and implement a water conservation education and outreach program. Water conservation plans should include water conservation measures, universal metering, water accounting and loss control, costing and pricing, information and education, pressure management, landscape efficiency, reuse and recycling, water-use regulation, and integrated resource management. Conservation efforts can include water use reduction plans, working with public schools, and distributing conservation outreach and education information.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$49,000

FUNDING: \$39,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Halifax

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-05/WLP**

PROJECT TITLE: Barre Water Loss Prevention Grant Project

INVESTIGATOR: Town of Barre

LOCATION: Chicopee River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Barre's drinking water works and distribution system. The Town has sources of supply that are located in stressed subwatersheds within the Chicopee River Watershed. The Town proposes to reduce its unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 23 miles of water mains and appurtenances of the water distribution system.
3. Replace approximately 225 service meters.
4. Develop and implement a water conservation education and outreach program. Water conservation plans should include but is not limited to water conservation measures, universal metering, water accounting and loss control, costing and pricing, information and education, pressure management, landscape efficiency, reuse and recycling, water-use regulation, and integrated resource management.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$49,000

FUNDING: \$39,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Barre

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-06/WLP**

PROJECT TITLE: Avon Water Loss Prevention Grant Project

INVESTIGATOR: Town of Avon

LOCATION: Taunton River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Avon's drinking water works and distribution system. The Town has sources of supply that are located in a stressed subwatershed within the Taunton River Watershed. The Town proposes to reduce its unaccounted-for water loss to 10 percent or less in order to satisfy Water Management Act Permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of the 42.5 miles of water mains and appurtenances of the water distribution system.
3. Implement a rate structure that would generate revenue required to cover operating and maintenance expense, debt service payment and projected future capital outlay. Rate structure should distribute revenue requirement on an equitable basis to customers. Water-use charges should be based on increasing block rates.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$31,420

FUNDING: \$23,000 by the U.S. Environmental Protection Agency  
\$8,420 by the Town of Avon

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-07/WLP**

PROJECT TITLE: Worcester Water Loss Prevention Grant Project

INVESTIGATOR: City of Worcester

LOCATION: Blackstone and Nashua River Basins

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the City of Worcester's drinking water works and distribution system. The City is attempting to reduce its unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a leak detection survey of 300 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs.
3. Review records on the existing master production meters to evaluate maintenance, calibration, and reading practices. Master meters will be calibrated in conjunction with the leak detection work survey. Test approximately 100 larger commercial meters, 3-inches and larger. Estimate water losses associated with the commercial meters and recommend additional steps for meter analysis and replacement.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$18,500

FUNDING: \$14,000 by the U.S. Environmental Protection Agency  
\$4,500 by the City of Worcester

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-08/WLP**

PROJECT TITLE: Department of Correction Water Loss Prevention Grant Project

INVESTIGATOR: Massachusetts Department of Correction

LOCATION: Charles, Nashua, South Coastal, and Taunton Basins

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Massachusetts Department of Correction's drinking water works and distribution systems that serve MCI-Bridgewater, MCI-Norfolk, MCI-Shirley, and MCI-Plymouth.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss) at each of the four project sites: MCI-Bridgewater, MCI-Norfolk, MCI-Shirley, and MCI-Plymouth.
2. Conduct comprehensive leak detection surveys, including all water mains, transmission lines, and appurtenances of the water systems at each of the four project sites.
3. Review production meters, discharge meters, and building meters in use at MCI-Bridgewater, MCI-Norfolk, MCI-Shirley, and MCI-Plymouth. Review records on the existing master production and discharge meters to evaluate maintenance, calibration, and reading practices for MCI-Bridgewater, MCI-Norfolk, MCI-Shirley, and MCI-Plymouth. The accuracy of the meters will be field verified by measuring actual flows in the distribution pipe leaving the pump stations compared with the meter readings. Estimate water losses associated with the meters and recommend additional steps for meter analysis and replacement.
4. Replace up to a total of 300 priority faucets, 100 showerheads, and 100 electronic toilet controls to reduce water consumption.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$42,000

FUNDING: \$31,000 by the U.S. Environmental Protection Agency  
\$11,000 by the Massachusetts Department of Correction

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-09/WLP**

PROJECT TITLE: Milford Water Loss Prevention Grant Project

INVESTIGATOR: Milford Water Company

LOCATION: Charles River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Milford Water Company's drinking water works and distribution system. The Company's goal is to reduce its unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of approximately 102 miles of water mains and appurtenances of the drinking water distribution system. Establish a priority system to implement leak repairs. Repair identified leaks in accordance with the current Water Management Act Permit requirements.
3. Review records on the existing master production meters to evaluate maintenance, calibration, and reading practices. The accuracy of the meters will be field verified by measuring actual flows in the distribution pipe leaving the pump stations compared with the meter readings. This will be performed as part of the zoning work under Task 1 and will indicate whether the meters require servicing. Sample those commercial meters not yet sampled with data-logging devices to determine whether or not the meter needs to be downsized or replaced with a different type of meter. Estimate water losses associated with the commercial meters and recommend additional steps for meter analysis and replacement.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$24,300

FUNDING: \$12,300 by the U.S. Environmental Protection Agency  
\$12,000 by the Milford Water Company

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-10/WLP**

PROJECT TITLE: Lynnfield Center Water Loss Prevention Grant Project

INVESTIGATOR: Lynnfield Center Water District

LOCATION: Ipswich and North Coastal Basins

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Lynnfield Center Water District's drinking water works and distribution system. The District proposes to reduce its unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Purchase leak detection equipment; leak correlator, interface module, and six sensing correlator 'pods'.
2. Conduct a comprehensive leak detection survey of 47 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs. Repair identified leaks within a year of discovery as per the MassDEP 2001 Guidance and Policies for Public Water Supplies.
3. Prepare quarterly reports and other deliverables to the Department.
4. Prepare a draft and a final project report.

COST: \$30,000

FUNDING: \$24,000 by the U.S. Environmental Protection Agency  
\$6,000 by the Lynnfield Center Water District

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-11/WLP**

PROJECT TITLE: Wilmington Water Loss Prevention Grant Project

INVESTIGATOR: Town of Wilmington

LOCATION: Ipswich River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Wilmington's drinking water works and distribution system. The Town proposes to reduce its unaccounted-for water loss to 10 percent or less in order to satisfy Water Management Act Program permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a leak detection survey of 125 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs.
3. Evaluate maintenance, calibration and, reading practices for the two master production meters. The accuracy of meters will be field verified by measuring actual flows in the distribution pipe leaving the pump stations compared with the meter readings. Sample those commercial meters not yet sampled with data-logging devices to determine whether or not the meter needs to be downsized or replaced with a different type of meter. Estimate water losses associated with commercial meters and recommend additional steps for meter analysis and replacement.
4. Conduct individual water audits for at least the ten largest industrial water users for the previous calendar year. Audits will include detailed analysis of the water use process, identifying points of loss, and recommendations for water conservation and savings techniques.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$49,450

FUNDING: \$23,050 by the U.S. Environmental Protection Agency  
\$26,400 by the Town of Wilmington

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-12/WLP**

PROJECT TITLE: Ashland and Hopkinton Water Loss Prevention Grant Project

INVESTIGATOR: Town of Ashland

LOCATION: Blackstone, Charles, and Sudbury River Basins

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Towns of Ashland's and Hopkinton's drinking water works and distribution systems. The Towns of Ashland and Hopkinton commit to the repair of identified leaks in accordance with their respective current Water Management Act Permit requirements.

Specific tasks include:

1. Conduct a water audit for the Town of Ashland to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a leak detection survey of 68 miles of water mains and appurtenances of the Town of Ashland's water distribution system. Establish a priority system to implement leak repairs. Repair identified leaks in accordance with the current Water Management Act Permit requirements.
3. Conduct a leak detection survey of 80 miles of water mains and appurtenances of the Town of Hopkinton's water distribution system. Establish a priority system to implement leak repairs. Repair identified leaks in accordance with the current Water Management Act Permit requirements.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$38,000

FUNDING: \$22,000 by the U.S. Environmental Protection Agency  
\$16,000 by the Town of Ashland

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-13/WLP**

PROJECT TITLE: West Springfield Water Loss Prevention Grant Project

INVESTIGATOR: Town of West Springfield

LOCATION: Connecticut River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of West Springfield's drinking water works and distribution system. The Town will quantify the water savings from project related activities in both gallons per year and dollars per year.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a leak detection survey of 50 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs.
3. Develop a Geographic Information System map and data layers of portion of the Town's drinking water supply infrastructure lacking adequate maps.
4. Implement a water conservation education and outreach program. Water conservation public education and outreach programs should include bill stuffers or mailers, public service announcements, providing educational materials and presentations to schools, and speakers for community groups.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$39,000

FUNDING: \$31,000 by the U.S. Environmental Protection Agency  
\$8,000 by the Town of West Springfield

DURATION: 2005-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 04-14/WLP**

PROJECT TITLE: Holyoke Water Loss Prevention Grant Project

INVESTIGATOR: City of Holyoke

LOCATION: Connecticut River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the City of Holyoke's drinking water works and distribution system. The City of Holyoke commits to the repair of identified leaks.

Specific tasks include:

1. Conduct a leak detection program. conduct a comprehensive field survey of 200 miles of water mains and appurtenances of the water distribution system network that may include source of supply transmission lines. Establish a priority system to implement leak repairs.
2. Prepare quarterly reports and other deliverables to the Department.
3. Prepare a draft and a final project report.

COST: \$50,000

FUNDING: \$40,000 by the U.S. Environmental Protection Agency  
\$10,000 by the City of Holyoke

DURATION: 2005-2006

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-01/WLP**

PROJECT TITLE: Easton Water Loss Prevention Grant Project

INVESTIGATOR: Town of Easton

LOCATION: Taunton River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Easton's drinking water works and distribution system. The Town has sources of supply that are located in a stressed subwatershed. The Town's goal is to reduce unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs, and repair leaks within a year of discovery.
3. Conduct a water conservation seminar for Town employees and other water departments within the Canoe River sub-basin of the Taunton River Basin.
4. Conduct a public outreach program including the purchase and distribution of a water conservation pamphlet and book cover, and an "In-home" water audit program.
5. Prepare quarterly reports and other deliverables for submittal to the Department.
6. Prepare a draft and a final project report.

COST: \$51,360

FUNDING: \$31,000 by the U.S. Environmental Protection Agency  
\$20,360 by the Town of Easton

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-03/WLP**

PROJECT TITLE: Hamilton Water Loss Prevention Grant Project

INVESTIGATOR: Town of Hamilton

LOCATION: Ipswich River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Hamilton's drinking water works and distribution system, and reduce the amount of water withdrawal of their sources.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Review past 3-years of backup calculations for water produced (pumped), metered water sold, and unaccounted-for water, etc.
3. Conduct leak detection survey. Measure water system demands and leakage, compile and review data collection equipment, and evaluate the suitability of the equipment, and past data to allow for future trending and calculation of system demand.
4. Evaluate compiled data and prepare summary report of analysis and findings.
5. Present findings of water audit and make recommendations to reduce water use and loss in system.
6. Review existing distribution network maps and comment on suitability for use in leakage detection program.
7. Develop program to create district-metering areas in water system to measure leakage.
8. Analyze leakage measurement data and prepare summary report of analysis and findings.
9. Repair the leaks identified and quantify results.
10. Prepare quarterly reports and other deliverables for submittal to the Department.
11. Prepare a draft and a final project report.

COST: \$43,000

FUNDING: \$31,000 by the U.S. Environmental Protection Agency  
\$12,000 by the Town of Hamilton

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-04/WLP**

PROJECT TITLE: Grafton Water Loss Prevention Grant Project  
INVESTIGATOR: Grafton Water District  
LOCATION: Blackstone River Watershed

DESCRIPTION: This project will consist of a water audit, leak detection survey, and implementation of a water conservation education and outreach program. The Grafton Water District commits to the repair of identified leaks in accordance with the current Water Management Act Permit requirements. The District will quantify the water savings from project related activities in both gallons per year and an approximate dollar value.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Review past 3-years of backup calculations for water produced (pumped), metered water sold, and unaccounted-for water, etc.
3. Conduct a leak detection survey. Review usage records to target areas for water conservation and public outreach efforts.
4. Conduct workshops to promote and educate the largest water users about water conservation.
5. Implement new conservation-based rate structure to encourage conservation.
6. Promote conservation message and methods, implement public outreach program.
7. Present findings of water audit and make recommendations to reduce water use and loss in system.
8. Repair the leaks identified and quantify results.
9. Prepare quarterly progress reports and other deliverables for submittal to the Department.
10. Prepare a draft and a final project report.

COST: \$42,000  
FUNDING: \$31,000 by the U.S. Environmental Protection Agency  
\$11,000 by the Grafton Water District  
DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-05/WLP**

**PROJECT TITLE:** Upton Water Loss Prevention Grant Project

**INVESTIGATOR:** Town of Upton

**LOCATION:** Blackstone River Basin

**DESCRIPTION:** This project will identify and reduce unaccounted-for water loss from the Town of Upton's drinking water works and distribution system. The Town proposes to reduce unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of the 30 miles of water mains and appurtenances of the water distribution system network that may include source of supply transmission lines.
2. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
3. Purchase and install up to 100 replacement service meters.
4. Purchase and distribute water conservation pamphlets.
5. Prepare quarterly reports and other deliverables for submittal to the Department.
6. Prepare a draft and a final project report.

**COST:** \$37,000

**FUNDING:** \$28,000 by the U.S. Environmental Protection Agency  
\$9,000 by the Town of Upton

**DURATION:** 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-06/WLP**

PROJECT TITLE: Georgetown Water Loss Prevention Grant Project

INVESTIGATOR: Town of Georgetown

LOCATION: Parker River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Georgetown's drinking water system. The Town proposes to reduce unaccounted-for water loss to 10 percent or less in order to satisfy Water Management Act Program permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Review past 3-years of backup calculations for water produced (pumped), metered water sold, and unaccounted-for water, etc.
3. Conduct a comprehensive leak detection survey. Measure water system demands and leakage, compile and review data collection equipment, and evaluate the suitability of the equipment, and past data to allow for future trending and calculation of system demand.
4. Evaluate compiled data from Task 3 and prepare summary report of analysis and findings.
5. Present findings of water audit and make recommendations to reduce water use and loss in system.
6. Review existing distribution network maps and comment on suitability for use in leakage detection program.
7. Develop program to create district-metering areas in water system to measure leakage.
8. Analyze leakage measurement data and prepare summary report of analysis and findings.
9. Repair the leaks identified and quantify results.
10. Prepare quarterly reports and other deliverables for submittal to the Department.
11. Prepare a draft and a final project report.

COST: \$43,000

FUNDING: \$31,000 by the U.S. Environmental Protection Agency  
\$12,000 by the Town of Georgetown

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-07/WLP**

PROJECT TITLE: North Attleborough Water Loss Prevention Grant Project

INVESTIGATOR: Town of North Attleborough

LOCATION: Blackstone and Ten Mile River Basins

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of North Attleborough's drinking water works and distribution system. The Town is attempting to reduce unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Develop and implement a Water Conservation Plan.
3. Purchase and install 100 remote read meter adapters for service meters.
4. Prepare quarterly reports and other deliverables for submittal to the Department.
5. Prepare a draft and a final project report.

COST: \$47,000

FUNDING: \$37,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of North Attleborough

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-08/WLP**

PROJECT TITLE: Southbridge Water Loss Prevention Grant Project

INVESTIGATOR: Town of Southbridge

LOCATION: Quinebaug River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Southbridge's drinking water works and distribution systems. The Town is attempting to reduce unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 75 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs. Repair identified leaks within a year of discovery as per the MassDEP 2001 Guidance and Policies for Public Water Supplies.
3. Prepare quarterly reports and other deliverables for submittal to the Department.
4. Prepare a draft and a final project report.

COST: \$36,465

FUNDING: \$25,000 by the U.S. Environmental Protection Agency  
\$11,465 by the Town of Southbridge

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-09/WLP**

PROJECT TITLE: Gloucester Water Loss Prevention Grant Project

INVESTIGATOR: City of Gloucester

LOCATION: North Coastal Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the City of Gloucester's drinking water works and distribution system. The City's goal is to reduce unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of all City water mains and appurtenances of the water distribution system network that may include source of supply transmission lines. Establish a priority system to implement leak repairs. Repair identified leaks within a year of discovery as per the MassDEP 2001 Guidance and Policies for Public Water Supplies.
2. Implement a public outreach program. Produce and distribute newsletters and posters to promote water conservation through a simple and consistent message and advertise the changes to the billing rate to encourage conservation as described, raise awareness of seasonal restrictions locally and regionally, raise awareness of the connection between water bill and the amount of water consumed.
3. Purchase and install two new distribution valves to provide more accurate accounting of the volume of finished water delivered.
4. Prepare quarterly reports and other deliverables for submittal to the Department.
5. Prepare a draft and a final project report.

COST: \$44,000

FUNDING: \$32,000 by the U.S. Environmental Protection Agency  
\$12,000 by the City of Gloucester

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-10/WLP**

PROJECT TITLE: Rockport Water Loss Prevention Grant Project

INVESTIGATOR: Town of Rockport

LOCATION: North Coastal Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Rockport's drinking water works and distribution system. The Town proposes to reduce its unaccounted-for water loss to 10 percent or less in order to satisfy Water Management Act Program permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Review past 3-years of calculations for water produced, metered, sold, unaccounted for (before known adjustments), etc.
3. Review public sewer service area and past sewer flows for additional source for comparison. Review findings of past Inflow/Infiltration studies if available to calculate or estimate of sanitary flow.
4. Conduct a comprehensive leak detection survey. Establish a priority system and repair leaks within a year of discovery.
5. Evaluate compiled data and prepare summary report of analysis and findings.
6. Present findings of water audit and make recommendations to reduce water use and loss in system.
7. Review existing distribution network maps and comment on suitability for use in leakage detection program.
8. Develop program to create district-metering areas in water system to measure leakage.
9. Analyze leakage measurement Data and Prepare summary report of analysis and findings.
10. Repair identified leaks and calculate savings.
11. Prepare quarterly reports and other deliverables for submittal to the Department.
12. Prepare a draft and a final project report.

COST: \$50,000

FUNDING: \$36,000 by the U.S. Environmental Protection Agency  
\$14,000 by the Town of Rockport

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-11/WLP**

PROJECT TITLE: Mattapoisett Water Loss Prevention Grant Project

INVESTIGATOR: Town of Mattapoisett

LOCATION: Buzzards Bay Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Mattapoisett's drinking water works and distribution system. The Town proposes to reduce its unaccounted-for water loss to 10 percent or less in order to satisfy Water Management Act Program permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a leak detection survey of 55 miles of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs. identified leaks will be repaired within 6 months of detection.
3. Develop and implement a Water Conservation Plan to reduce the volume of water lost in the system by increasing community awareness and implementing water saving practices throughout the Town.
4. Prepare quarterly reports and other deliverables for submittal to the Department.
5. Prepare a draft and final project report.

COST: \$47,000

FUNDING: \$37,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Mattapoisett

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-12/WLP**

PROJECT TITLE: Ipswich Water Loss Prevention Grant Project

INVESTIGATOR: Town of Ipswich

LOCATION: Ipswich and Parker River Basins

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of Ipswich's drinking water works and distribution systems. Although the Town lies across two watersheds it withdraws its drinking water only from within the Parker River Watershed.

Specific tasks include:

1. Conduct a water audit for the Town of Ipswich to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment. Repair leaks and breaks identified in accordance with their Water Management Act Permit.
3. Prepare quarterly reports and other deliverables for submittal to the Department.
4. Prepare a draft and a final project report.

COST: \$46,000

FUNDING: \$35,000 by the U.S. Environmental Protection Agency  
\$11,000 by the Town of Ipswich

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-01/WLP**

PROJECT TITLE: Millis Water Loss Prevention Grant Project

INVESTIGATOR: Town of Millis

LOCATION: Charles River Basin

DESCRIPTION: The goals of this project are to encourage water conservation, and identify and reduce unaccounted-for water loss from the Town of Millis' drinking water works and distribution system. The Grantee's goal is to reduce its unaccounted-for water loss to 10 percent or less: unaccounted volume reported as 26% in 2005.

Specific tasks include:

1. Implement a Water Conservation Education in local public schools, the Millis Garden Club, and large commercial and industrial water users.
2. Implement a landscape irrigation water conservation demonstration project at the Town Hall or a similar high profile site.
3. Review and calibrate master production meters. Document the process, how meters are tested, calibrated, and/or replaced, make, model, type, and number of meters addressed, and requisite reduction in unaccounted-for water.
4. Conduct a comprehensive leak detection survey of 42 miles of water mains and appurtenances of the water distribution system.
5. Repair leaks will be repaired in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$37,500

FUNDING: \$30,000 by the U.S. Environmental Protection Agency  
\$7,500 by the Town of Millis

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-02/WLP**

PROJECT TITLE: Groton Water Loss Prevention Grant Project

INVESTIGATOR: Town of Groton

LOCATION: Merrimack River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Groton's drinking water works and distribution system, and reduce its unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Purchase leak detection equipment. leak correlator and leak detection loggers: to be shared with Westford, West Groton, Pepperell, and Littleton. Provide for training specific to the leak correlator and leak detection loggers purchased.
2. Conduct a comprehensive leak detection survey of 43 miles of water mains and appurtenances of the water distribution system.
3. Establish a priority system to implement leak repairs. Leaks will be repaired in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
4. Conduct a total of three Water Conservation Workshops to Educate the Largest Water Users and Promote a Water Conservation Message. Implement one-hour conservation training workshops at each institutional customer location and provide information on how they can reduce their use.
5. Replace 2-inch and Larger Meters. Purchase and install up to eleven 2-inch and larger replacement water meters.
6. Conduct rebate program. Provide reimbursement for properly documented purchase and installation of water savings fixtures, appliances, and other devices.
7. Prepare quarterly reports and other deliverables to the Department.
8. Prepare a draft and a final project report.

COST: \$41,946

FUNDING: \$35,000 by the U.S. Environmental Protection Agency  
\$6,946 by the Town of Groton

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-03/WLP**

PROJECT TITLE: Dedham-Westwood Water Loss Prevention Grant Project

INVESTIGATOR: Dedham-Westwood Water District

LOCATION: Charles and Boston Harbor Watersheds

DESCRIPTION: This project will promote water conservation and identify and reduce unaccounted-for water loss from the Dedham-Westwood Water District's drinking water works and distribution system, and reduce its unaccounted-for water loss to 10 percent or less; UAW was reported as 19% in 2005.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of 195 miles of water mains and appurtenances of the water distribution system. Use a correlator to detect, record, analyze, and pinpoint the sound created by underground water leakage. Upon the identification of a leak, a flow rate can be estimated. Upon completion of the survey, the Grantee shall provide a report summarizing the locations of the identified leaks, the type of leak (i.e., main, hydrant, service connection, etc.), estimated flow rates for all leaks, etc.
2. Establish a priority system to implement leak repairs. Leaks will be repaired in accordance with the terms of the Grantee's current Water Management Act Permit requirements. Leakage repairs will be documented with leak repair reports including estimates of leakage rates based on visual observation once infrastructure is exposed.
3. Prepare quarterly reports and other deliverables to the Department.
4. Prepare a draft and a final project report.

COST: \$46,500

FUNDING: \$21,500 by the U.S. Environmental Protection Agency  
\$25,000 by the Dedham-Westwood Water District

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-04/WLP**

PROJECT TITLE: Plymouth Water Loss Prevention Grant Project

INVESTIGATOR: Town of Plymouth

LOCATION: Buzzards Bay and South Coastal Watersheds

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Plymouth's drinking water works and distribution system, and comply with water conservation standards by reducing their unaccounted-for water loss of 16.4% to 10% and demand from 79 residential gallons per capita day (rgpcd) to 65 rgpcd.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 210 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
4. Implement a Water Conservation Education and Outreach program. The goal of the water conservation plan is to reduce the volume of water lost in the system by increasing community awareness and implementing water saving practices throughout the Town.
5. Calibrate up to 50 service meters over ten-years old. Summarize the process as well as the requisite savings from accurate billing statements as the result of calibrated, repaired, and/or replaced meters.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$49,500

FUNDING: \$39,000 by the U.S. Environmental Protection Agency  
\$10,500 by the Town of Plymouth

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-05WLP**

PROJECT TITLE: Bridgewater Water Loss Prevention Grant Project

INVESTIGATOR: Town of Bridgewater

LOCATION: Taunton River Basin

DESCRIPTION: This project will implement a water audit, purchase leak detection equipment, conduct a leak detection survey, leak repair, inventory and evaluate water-using facilities in the municipal buildings, and update and implement the Grantee's Water Conservation Plan.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Purchase leak detection equipment: to be shared with the Towns of Halifax and East Bridgewater. Train appropriate staff on proper use of newly purchased leak detection equipment.
3. Conduct a comprehensive leak detection survey of 200 miles of water mains and appurtenances of the water distribution system.
4. Establish a priority system to implement leak repairs. Leaks will be repaired in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
5. Inventory and evaluate water-using facilities in the Grantee's municipal buildings: repair, replace, or retrofit as appropriate.
6. Update and implement the Grantee's Water Conservation Plan. the implementation to include a water conservation education and outreach program engaging area schools. The Plan should include but not be limited to water conservation measures, universal metering, water accounting and loss control, costing and pricing, information and education, pressure management, landscape efficiency, reuse and recycling, water-use regulation, and integrated resource management.
7. Prepare quarterly reports and other deliverables to the Department.
8. Prepare a draft and a final project report.

COST: \$47,000

FUNDING: \$36,500 by the U.S. Environmental Protection Agency  
\$10,500 by the Town of Bridgewater

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-06/WLP**

PROJECT TITLE: Medfield Water Loss Prevention Grant Project

INVESTIGATOR: Town of Medfield

LOCATION: Charles and Boston Harbor Watersheds

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Medfield's drinking water works and distribution system, and comply with water conservation standards by reducing demand, currently 81 residential gallons per capita day to 65 rgpcd.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 80 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
4. Purchase and install up to 500 new replacement water meters. Document the meter evaluation, testing, replacement, repair, or calibration work conducted. Summarize the process and the requisite savings from accurate billing statements as the result of calibrated, repaired, and/or replaced meters.
5. Implement a water conservation education and outreach program to reduce the volume of water lost in the system by increasing community awareness and implementing water saving practices throughout the Town.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$50,000

FUNDING: \$40,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Medfield

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-07/WLP**

PROJECT TITLE: Fairhaven Water Loss Prevention Grant Project

INVESTIGATOR: Town of Fairhaven

LOCATION: Buzzards Bay Watershed

DESCRIPTION: This project will promote water conservation and identify and reduce unaccounted-for water loss from the Town of Fairhaven's drinking water works and distribution system, continue water loss reduction efforts, and remain in compliance with their Water Management Act standards of 65 rgpcd, an unaccounted-for water percentage of 10% or less, and a seasonal water cap.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 100 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the Grantee's current Water Management Act Permit requirements.
4. Test up to 100 service and large commercial meters over ten years old. Document the meter inspection process and how the decision is made whether to replace or rehab an existing meter, how meters are tested, calibrated, and/or replaced. Document the make, model, type (i.e., 4-inch meter), and number of meters addressed. Summarize the requisite savings from accurate billing statements as the result of calibrated, repaired, and/or replaced meters.
5. Prepare quarterly reports and other deliverables for submittal to the Department.
6. Prepare a draft and a final project report.

COST: \$33,500

FUNDING: \$26,500 by the U.S. Environmental Protection Agency  
\$7,000 by the Town of Fairhaven

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-08/WLP**

PROJECT TITLE: Marion Water Loss Prevention Grant Project

INVESTIGATOR: Town of Marion

LOCATION: Buzzards Bay Watershed

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Marion's drinking water works and distribution system, and reduce the percentage of unaccounted-for water and reducing demand from 75 rgpcd to 65 rgpcd, especially in the summer months.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 90 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
4. Implement a water conservation education and outreach program. A water conservation plans should include but is not limited to water conservation measures, universal metering, water accounting and loss control, costing and pricing, information and education, pressure management, landscape efficiency, reuse and recycling, water-use regulation, and integrated resource management.
5. Test up to 50 large meters over ten years old. Summarize the process and the requisite savings from accurate billing statements as the result of calibrated, repaired, and/or replaced meters.
6. Prepare quarterly reports and other deliverables to the Department.,
7. Prepare a draft and a final project report.

COST: \$45,000

FUNDING: \$35,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Marion

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-09/WLP**

PROJECT TITLE: Ayer Water Loss Prevention Grant Project

INVESTIGATOR: Town of Ayer

LOCATION: Nashua and Merrimack River Basins

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Ayer's drinking water works and distribution system, continue their water loss reduction efforts, and thus remain in compliance with the Water Management Act standards of 65 rgpcd and unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Implement a water conservation education and outreach program. Water conservation plans should include but is not limited to water conservation measures, universal metering, water accounting and loss control, costing and pricing, information and education, pressure management, landscape efficiency, reuse and recycling, water-use regulation, and integrated resource management.
3. Purchase and install up to 150 service meters as part of the ongoing meter replacement program. Document the meter inspection process and how the decision is made whether to replace or rehab an existing meter, how meters are tested, calibrated, and/or replaced, and summarize the requisite savings from accurate billing statements as the result of calibrated, repaired, and/or replaced meters.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$40,000

FUNDING: \$31,000 by the U.S. Environmental Protection Agency  
\$9,000 by the Town of Ayer

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-10/WLP**

**PROJECT TITLE:** Lancaster Water Loss Prevention Grant Project

**INVESTIGATOR:** Town of Lancaster

**LOCATION:** Nashua River Basin

**DESCRIPTION:** The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Lancaster's drinking water works and distribution system. The Town's goals are to comply with water conservation standards by reducing their unaccounted-for water loss of 18% to 10% or less, and demand to 65 residential gallons per capita day.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 45 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks will be repaired in accordance with their prioritized status: leaks of 3 gallons per minute or more shall be repaired as soon as possible and no later than within twelve months of detection. Leaks of less than 3 gpm at hydrants and appurtenances shall be repaired promptly and no later than within twelve months of detection. Leaks of less than 3 gpm in local roadways, freeway, arterial, or collector roadways shall be repaired when related work on the roadway is being performed.
4. Purchase and install up to fifteen replacement water meters.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

**COST:** \$25,170

**FUNDING:** \$19,920 by the U.S. Environmental Protection Agency  
\$5,250 by the Town of Lancaster

**DURATION:** 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-12/WLP**

PROJECT TITLE: Holliston Water Loss Prevention Grant Project

INVESTIGATOR: Town of Holliston

LOCATION: Charles River Basin

DESCRIPTION: This project will promote water conservation and identify and reduce unaccounted-for water loss from the Town of Holliston's drinking water works and distribution system, and reduce unaccounted-for water loss to 10 percent or less; currently estimated as 18%.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 114 miles of water mains and appurtenances of the water distribution system.
3. Establish a priority system to implement repairs. Leaks will be repaired in accordance with the terms of the Grantee's current Water Management Act Permit requirements. Leakage repairs will be documented with leak repair reports including estimates of leakage rates based on visual observation once infrastructure is exposed. After leaks are repaired, the Grantee will re-survey the repair sites to confirm that no other leaks remain.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$38,750

FUNDING: \$31,000 by the U.S. Environmental Protection Agency  
\$7,750 by the Town of Holliston

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-13/WLP**

PROJECT TITLE: Paxton Water Loss Prevention Grant Project

INVESTIGATOR: Town of Paxton

LOCATION: Blackstone and Nashua River Basins

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Paxton's drinking water works and distribution system. The Town purchases water from Worcester whose sources are located in the medium-stressed Nashua River Basin and the low-stressed portion of the Blackstone River Basin. The Grantee's goal is to reduce its unaccounted-for water loss to 10 percent or less; unaccounted-for water percentage was reported as 15% in 2005.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of 40 miles of water mains and appurtenances of the water distribution system.
2. Repair leaks in accordance with their prioritized status: leaks of 3 gallons per minute or more shall be repaired as soon as possible and no later than within twelve months of detection. Leaks of less than 3 gpm at hydrants and appurtenances shall be repaired promptly and no later than within twelve months of detection. Leaks of less than 3 gpm in local roadways, freeway, arterial, or collector roadways shall be repaired when related work on the roadway is being performed. Leakage repairs will be performed in conformance with industry standards and will be documented with leak repair reports including estimates of leakage rates based on visual observation once infrastructure is exposed. After leaks are repaired, the Grantee will re-survey the repair sites to confirm that no other leaks remain
3. Prepare quarterly reports and other deliverables to the Department.
4. Prepare a draft and a final project report.

COST: \$6,700

FUNDING: \$5,200 by the U.S. Environmental Protection Agency  
\$1,500 by the Town of Paxton

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 06-14/WLP**

PROJECT TITLE: Hatfield Water Loss Prevention Grant Project

INVESTIGATOR: Town of Hatfield

LOCATION: Connecticut River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Hatfield's drinking water works and distribution system, and reduce the unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 37.5 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status: leaks of 3 gallons per minute or more shall be repaired as soon as possible and no later than within twelve months of detection. Leaks of less than 3 gpm at hydrants and appurtenances shall be repaired promptly and no later than within twelve months. Leaks of less than 3 gpm in local roadways, freeway, arterial, or collector roadways shall be repaired when related work on the roadway is being performed. After repair re-survey the repair sites to confirm that no other leaks remain.
4. Implement a conservation education program in the elementary school.
5. Evaluate water meters for the five largest water users for appropriateness of type, sizing, and configuration relative to usage, etc. Estimate water losses associated with the large water user meters and recommend additional steps for meter analysis and replacement. Document meter evaluation, testing, replacement, repair, or calibration work. Summarize the requisite savings from accurate billing statements as the result of calibrated, repaired, and/or replaced meters.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$34,300

FUNDING: \$27,300 by the U.S. Environmental Protection Agency  
\$7,000 by the Town of Hatfield

DURATION: 2007-2008

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-01/WCG**

PROJECT TITLE: Hadley Water Conservation Grant Project

INVESTIGATOR: Town of Hadley

LOCATION: Connecticut River Basin

DESCRIPTION: The goals are to promote water conservation and reduce unaccounted-for water loss from the Town of Hadley's drinking water works and distribution system, continue water loss reduction efforts, and remain in compliance with the Water Management Act standards of 65 residential gallons per capita day and an unaccounted-for water percentage of 15% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 65 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
4. Purchase and install up to 1,000 replacement service meters. Describe the meter inspection and decision making process and summarize requisite savings from accurate billing statements as the result of calibrated, repaired, and/or replaced meters.
5. Implement a conservation education program in the elementary school. The curriculum will focus on the water cycle and the effects of human activities on the cycle. The program will encourage the students and their families to look at the way that they use water and look for ways to reduce their consumption. A water conservation -based webpage will be linked to the town's website.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$64,200

FUNDING: \$34,600 by the U.S. Environmental Protection Agency  
\$29,600 by the Town of Hadley

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-02/WCG**

PROJECT TITLE: Wareham Water Conservation Grant Project

INVESTIGATOR: Wareham Fire District

LOCATION: Buzzards Bay Watershed

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Wareham Fire District's drinking water works and distribution system, continue their water loss reduction efforts, and reduce their unaccounted-for water loss from approximately 18% to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 160 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
4. Implement a conservation education program in five local elementary schools. The curriculum will focus on the water cycle and the effects of human activities on the cycle. The program will introduce simple water conservation techniques and provide educational materials for the students and their families. The program will encourage the students and their families to look at the way that they use water and look for ways to reduce their consumption. A water conservation webpage will be linked to the District's website.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$53,700

FUNDING: \$40,000 by the U.S. Environmental Protection Agency  
\$13,700 by the Wareham Fire District

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-03/WCG**

PROJECT TITLE: MWRA Water Conservation Grant Project

INVESTIGATOR: Massachusetts Water Resources Authority

LOCATION: MWRA Service Watersheds

DESCRIPTION: The goals of this project are to promote drinking water conservation and reduce water usage within the member communities of the Massachusetts Water Resources Authority. The goals and specific work elements of each grant program are provided below.

Specific tasks include:

1. Purchase of Educational Materials for the Water Conservation Program. Print 200,000 MassDEP approved water conservation brochures. Purchase 6,000 low-flow water conservation kits. Purchase/print informational flyers and forms for low-flow toilet rebates.
2. Distribute approved informational flyers, letters, and emails to local communities, watershed groups, housing authorities, environmental groups, retailers, local newspapers, etc.
3. Distribute water conservation materials and outreach/education brochures (see Task 2) to local communities, watershed associations, etc. based on response from Task 2.
4. Process Rebate Requests. Rebate will require a copy of the sales receipt and photographs to document installation. A \$100 rebate will be provided for purchase and installation per toilet or toilet flush valves for tankless toilets that replace less efficient toilets.
5. Select pilot water audit communities. MWRA member communities with unaccounted-for water rates greater than 10% will be given priority to apply for a pilot water audit.
6. Conduct two to three water audits to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
7. Prepare quarterly reports and other deliverables to the Department.
8. Prepare a draft and a final project report.

COST: \$110,000

FUNDING: \$80,000 by the U.S. Environmental Protection Agency  
\$30,000 by the Massachusetts Water Resources Authority

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-04/WCG**

PROJECT TITLE: Concord Water Conservation Grant Project

INVESTIGATOR: Town of Concord

LOCATION: SuAsCo Watershed

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Concord's drinking water works and distribution system, and continue water loss reduction efforts by enhancing an existing rebate program for low-flow toilets and other appliances. Thus, the Town would remain in compliance with their Water Management Act standards of 65 residential gallons per capita day and an unaccounted-for water percentage of 15% or less.

Specific tasks include:

1. Provide rebates for low-flow toilets purchased and installed.
2. Provide a \$100 rebate to 40 eligible water customers for installing CEE-approved clothes washers.
3. Advertise the rebate program via 7,000 direct mail brochures, newspaper articles, advertisements, Internet, and at public events.
4. Upgrade 12 older toilets in Town buildings that do not meet today's 1.6 gallons per flush standard. Quantify the savings as the result of the new fixtures. At the location of each installation affix a small sign to educate and promote the use of such water savings devices.
5. Conduct a comprehensive leak detection survey of 60 miles of water mains and appurtenances of the water distribution system.
6. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
7. Prepare quarterly reports and other deliverables to the Department.
8. Prepare a draft and a final project report.

COST: \$44,440

FUNDING: \$34,375 by the U.S. Environmental Protection Agency  
\$10,065 by the Town of Concord

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-05/WCG**

PROJECT TITLE: Norfolk Water Conservation Grant Project

INVESTIGATOR: Town of Norfolk

LOCATION: Charles River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Norfolk's drinking water works and distribution system, continue water loss reduction efforts and thus remain in compliance with the Water Management Act standards of 65 gpcd (residential gallons per capita day) and reduce their unaccounted-for water percentage to 10% or less from the current UAW of 11.9%.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 57 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit.
4. Implement a water conservation plan to reduce the volume of water lost in the system by increasing community awareness and implementing water saving practices throughout the Town.
5. Evaluate up to 50 existing service meters over 10 years old to evaluate maintenance calibration and reading practices. The results will be used for calibration and to determine if the venturis require servicing.
6. Implement a meter replacement program and replace all 5/8" customer service water meters greater than 15 years old. Document the inspection and decision making processes, and summarize the requisite savings from accurate meters.
7. Prepare quarterly reports and other deliverables to the Department.
8. Prepare a draft and a final project report.

COST: \$49,500

FUNDING: \$37,125 by the U.S. Environmental Protection Agency  
\$12,375 by the Town of Norfolk

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-06/WCG**

PROJECT TITLE: Middleborough Water Conservation Grant Project

INVESTIGATOR: Town of Middleborough

LOCATION: Taunton River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Middleborough's drinking water works and distribution system. The Grantee's goal is reduce their unaccounted-for water loss to 10 percent or less, and reduce their summer to winter water usage ratio (it was 1.43 in 2006).

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 126 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit requirements.
4. Implement a water conservation and demand management education program for purposes of educating consumers about water conservation and demand management.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$49,180

FUNDING: \$32,380 by the U.S. Environmental Protection Agency  
\$16,800 by the Town of Middleborough

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-07/WCG**

PROJECT TITLE: Haverhill Water Conservation Grant Project

INVESTIGATOR: City of Haverhill

LOCATION: Merrimack River Basin

DESCRIPTION: The project will promote water conservation, and identify and reduce unaccounted-for water loss from the City of Haverhill's drinking water works and distribution system. The Grantee's goal is to reduce their unaccounted-for water loss to 10 percent or less, and reduce their residential gallons per capita day to 65 rgpcd (it was approximately 80 rgpcd in 2006).

Specific tasks include:

1. Conduct a comprehensive leak detection survey of 210 miles of water mains and appurtenances of the water distribution system.
2. Repair leaks in accordance the Grantee's current Water Management Act Permit requirements.
3. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$47,200

FUNDING: \$34,000 by the U.S. Environmental Protection Agency  
\$13,200 by the City of Haverhill

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-08/WCG**

PROJECT TITLE: Holden Water Conservation Grant Project

INVESTIGATOR: Town of Holden

LOCATION: Nashua River Basin

DESCRIPTION: The goals of this project are to identify and reduce unaccounted-for water loss from the Town of Holden's drinking water works and distribution system. The Grantee's unaccounted-for water loss has ranged from 5% to 29% over the past four years. The Grantee's goal is to continue their water loss reduction efforts and reduce their unaccounted-for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss). Use the MassDEP guidance available through the Water Management Act Program – *Water Management Act Program Guidance Document for a Water Audit and Leak Detection Survey*.
2. Prepare quarterly reports and other deliverables to the Department.
3. Prepare a draft and a final project report.

COST: \$24,600

FUNDING: \$18,450 by the U.S. Environmental Protection Agency  
\$6,150 by the Town of Holden

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-09/WCG**

PROJECT TITLE: Sharon Water Conservation Grant Project

INVESTIGATOR: Town of Sharon

LOCATION: Taunton and Boston Harbor River Basins

DESCRIPTION: The goals of this project are to expand the Town of Sharon's existing water conservation program through outreach, education, and social marketing, remain in compliance with their Water Management Act standards of 65 rgpcd, and achieve an unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Implement a water conservation education and outreach program to increase community awareness and support water saving practices.
2. Deliver water conservation curriculum to be utilized in the Sharon Schools based on the adaptation of existing models and reflecting the MCAS Science and Technology Standards.
3. Conduct outreach to civic, neighborhood, and youth groups and to help engage a wider circle of their members and personal contacts.
4. Conduct outreach to private vendors who can influence consumer water use. Target groups include plumbers, septic haulers, irrigation contractors, and nurseries.
5. Purchase and install six ultra low-flow toilets on municipal property that can be utilized as demonstration sites for water saving retrofits.
6. Post information on water conservation on the Town's website. Publish prepare a monthly newspaper column on water resource issues and conservation.
7. Develop a program of technical performance standards for irrigation systems.
8. Prepare quarterly reports and other deliverables to the Department.
9. Prepare a draft and a final project report.

COST: \$68,299

FUNDING: \$44,000 by the U.S. Environmental Protection Agency  
\$24,299 by the Town of Sharon

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-10/WCG**

PROJECT TITLE: Department of Correction Water Conservation Grant Project

INVESTIGATOR: Massachusetts Department of Correction

LOCATION: Charles, Nashua, South Coastal, and Taunton Basins

DESCRIPTION: The goal of this project is to identify and reduce unaccounted-for water loss from the Massachusetts Department of Correction drinking water systems that serve MCI-Bridgewater, MCI-Norfolk, MCI-Shirley, and MCI-Plymouth.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 22 miles of water mains and appurtenances of the water distribution systems.
3. Repair leaks in accordance with their prioritized status.
4. Retrofit approximately 15 priority fixtures, rated at 2.0 gallons per minute or less, in 3 bathrooms at the Shirley complex. These fixtures were prioritized due to their location and usage. Calculate the savings from the fixture replacement in gallons per year and approximate dollar value.
5. Distribute water conservation-related materials to encourage water conservation and to promote public awareness of long-term economics and environmental benefits of water conservation.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$31,400

FUNDING: \$23,600 by the U.S. Environmental Protection Agency  
\$7,800 by the Massachusetts Department of Correction

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-11/WCG**

PROJECT TITLE: Pembroke Water Conservation Grant Project

INVESTIGATOR: Town of Pembroke

LOCATION: South Coastal Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for-water loss from the Town of Pembroke's drinking water system, continue their water loss reduction efforts, and reduce unaccounted-for water loss from 17% to 10% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Purchase leak detection equipment - leak correlator and leak detection loggers: to be shared with the Town of Hanover and the Abington & Rockland Joint Water Works. Train appropriate staff on proper use of newly purchased leak detection equipment.
3. Conduct a comprehensive leak detection survey of 120 miles of water mains and appurtenances of the water distribution system.
4. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit.
5. Replace the raw water meter at Town Well #4. This will allow the Grantee to accurately record the volume of water pumped from Well #4 and determine by subtraction, the volume pumped from Well #5.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$45,100

FUNDING: \$20,000 by the U.S. Environmental Protection Agency  
\$25,100 by the Town of Pembroke

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-12/WCG**

PROJECT TITLE: Danvers Water Conservation Grant Project

INVESTIGATOR: Town of Danvers

LOCATION: Ipswich River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Danvers' drinking water system, and continue their conservation efforts and thus remain in compliance with their Water Management Act standards.

Specific tasks include:

1. Distribute water conservation-related materials to encourage water conservation and to promote public awareness of long-term economics and environmental benefits of water conservation. The goal of this task is to reduce the volume of water lost in the system by increasing community awareness and implementing water saving practices throughout the Town.
2. Provide reimbursement for properly documented purchase and installation of low-flow toilets. Only toilets meeting the Uniform North American Requirements for toilet performance are eligible for rebates. Confirm the installation of each device.
3. Provide rebates to 100 eligible water customers for installing Consortium of Energy Efficiency approved clothes washers (*with a Water Efficiency rating of 7.5 or less*).
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$37,500

FUNDING: \$30,000 by the U.S. Environmental Protection Agency  
\$7,500 by the Town of Danvers

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-13/WCG**

PROJECT TITLE: New Bedford Water Conservation Grant Project

INVESTIGATOR: City of New Bedford

LOCATION: Taunton River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of New Bedford's drinking water works and distribution system, and reduce their unaccounted-for-water loss from approximately 12.6% to 10 percent or less.

Specific tasks include:

1. Purchase two portable residential water meter-testing kits. Implement a residential meter-testing program. begin testing meters with the oldest meters and test up to 200 water meters during the course of the project. Train appropriate staff on proper use of newly purchased leak detection equipment.
2. Conduct a comprehensive leak detection survey of 286 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with the terms of the Grantee's current Water Management Act Permit.
4. Purchase, distribute, and confirm the installation of up to 500 new indoor water conservation kits. Summarize the requisite savings as the result of water conservation kits.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$55,460

FUNDING: \$43,298 by the U.S. Environmental Protection Agency  
\$12,162 by the City of New Bedford

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-14/WCG**

PROJECT TITLE: West Boylston Water Conservation Grant Project

INVESTIGATOR: West Boylston Water District

LOCATION: Nashua River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the West Boylston Water District's drinking water system, continue their water loss reduction efforts, and remain in compliance with the Water Management Act standards of 65 residential gallons per capita day and unaccounted-for-water percentage of 10% or less.

Specific tasks include:

1. Purchase leak detection equipment - leak correlator and leak detection loggers- to be shared with the Towns of Sterling and Boylston. Training to include staff from the Towns of Sterling and Boylston.
2. Conduct a comprehensive leak detection survey of 53 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status: Leaks of 3 gallons per minute or more shall be repaired as soon as possible and no later than within twelve months of detection. Leaks of less than 3 gpm at hydrants and appurtenances shall be repaired promptly and no later than within twelve months of detection. Leaks of less than 3 gpm in local roadways, freeway, arterial, or collector roadways shall be repaired when related work on the roadway is being performed.
4. Purchase and install up to 480 new service meters. Describe the inspection and decision making process, and summarize the requisite savings from accurate meters.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$49,000

FUNDING: \$39,000 by the U.S. Environmental Protection Agency  
\$10,000 by the West Boylston Water District

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-15/WCG**

PROJECT TITLE: Lexington Water Conservation Grant Project

INVESTIGATOR: Town of Lexington

LOCATION: SuAsCo River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Lexington's drinking water system, continue water loss reduction efforts, and reduce usage among the targeted market of consumers by 5%. The Grantee's source of supply is from the Massachusetts Water Resources Authority.

Specific tasks include:

1. Water Conservation Public Outreach Program. increase community awareness about the importance of water conservation and measures that can be taken to reduce water consumption. Encourage water and promote public awareness of the economic and environmental benefits of conservation through a community wide social marketing campaign.
2. Conduct a comprehensive leak detection survey of 154 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status: Leaks of 3 gallons per minute or more shall be repaired as soon as possible and no later than within twelve months of detection. Leaks of less than 3 gpm at hydrants and appurtenances shall be repaired promptly and no later than within twelve months. Leaks of less than 3 gpm in local roadways, freeway, arterial, or collector roadways shall be repaired when related work on the roadway is being performed.
4. Test and evaluate the venturi in-line water meters for water sold to the Town of Bedford. Estimate any water losses associated with erroneous metered data. Describe the inspection and decision making process, and summarize the requisite savings from accurate meters.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$32,500

FUNDING: \$22,500 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Lexington

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-16/WCG**

**PROJECT TITLE:** Hopedale Water Conservation Grant Project

**INVESTIGATOR:** Town of Hopedale

**LOCATION:** Blackstone and Charles River Basins

**DESCRIPTION:** The goals of this project are to promote water conservation, and identify and reduce unaccounted-for water loss from the Town of Hopedale's drinking water works and distribution system, and remain in compliance with the Water Management Act standards of 65 rgpcd and unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Distribute water conservation-related materials to encourage conservation and to promote public awareness of the long-term economics and environmental benefits of water conservation.
3. Install a minimum of two new low-flow toilets; one in the Town Hall and the other in the Highway Department building - prioritized due to their location and high usage. At each installation site affix a small descriptive sign to educate and promote the use of such water savings devices.
4. Distribute up to 500 low-flow retrofit kits. Document the number and type of kits distributed, and summarize the water savings, as appropriate.
5. Install up to 100 replacement service meters. Describe the inspection and decision making process, and summarize the requisite savings from accurate meters.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

**COST:** \$40,500

**FUNDING:** \$28,000 by the U.S. Environmental Protection Agency  
\$12,500 by the Town of Hopedale

**DURATION:** 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-17/WCG**

PROJECT TITLE: Freetown Water Conservation Grant Project

INVESTIGATOR: Town of Freetown

LOCATION: Taunton River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Freetown's drinking water system, to continue their water loss reduction efforts, and remain in compliance with their Water Management Act standards of 65 rgpcd and an unaccounted-for-water percentage of 10% or less.

Specific tasks include:

1. Encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation through a community wide social marketing campaign. This will be conducted through the distribution of newsletter and bulletin. Customers will be asked to return a *Household Audit Checklist* showing steps they have taken to conserve water.
2. Conduct a school-based water conservation education initiative aimed at enhancing student involvement regarding water conservation. Elementary students will produce posters focusing on the need to provide, protect, and preserve today's water supplies for tomorrow's consumers. Introduce water conservation techniques and provide educational materials for the students and their families.
3. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
4. Conduct a comprehensive leak detection survey of 16 miles of water mains and appurtenances of the water distribution system.
5. Repair leaks in accordance with their prioritized status.
6. Conduct a water meter inventory. The inventory will be used to target and enhance future meter replacement programs.
7. Prepare quarterly reports and other deliverables to the Department.
8. Prepare a draft and a final project report.

COST: \$45,000

FUNDING: \$35,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Freetown

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-18/WCG**

PROJECT TITLE: Shrewsbury Water Conservation Grant Project

INVESTIGATOR: Town of Shrewsbury

LOCATION: Blackstone and SuAsCo River Basins

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce water loss from the Town of Shrewsbury's drinking water works and distribution system, and remain in compliance with the Water Management Act standards of 65 residential gallons per capita day and an unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Print and distribute a water conservation newsletter quarterly and distribute a water conservation newsletter to each water customer in the Town of Shrewsbury. The goal of the water conservation plan is to reduce the volume of water lost in the system by increasing community awareness and implementing water saving practices.
2. Present approximately fourteen water conservation-based theatrical presentations in approximately seven local elementary schools and provide information to the students on how they can reduce their water use. Purchase and distribute 2,500 brochures. The curriculum will be focused on the water cycle and the effects of human activities on the cycle and water resources, and simple water conservation techniques.
3. Distribute up to a total 1,700 water conservation related brochures, and other educational and promotional items. Document the number and type of materials distributed. Provide educational materials, references, and links to related websites.
4. Confirm the installation of up to 250 low-flow WaterSense labeled faucets (rated at 1.5 gallons per minute). Document their installation and quantify the water loss reduction.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$30,674

FUNDING: \$23,069 by the U.S. Environmental Protection Agency  
\$7,605 by the Town of Shrewsbury

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 07-20/WCG**

PROJECT TITLE: Pepperell Water Conservation Grant Project

INVESTIGATOR: Town of Pepperell

LOCATION: Nashua River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Pepperell's drinking water works and distribution system, continue water loss reduction efforts, and thus remain in compliance with their Water Management Act standards of 65 gpcd and an unaccounted-for water percentage (UAW) of 10% or less.

Specific tasks include:

1. Purchase and install a minimum of fifty low-flow plumbing fixtures in a total of fifteen public buildings. Document the make, model, type, and number of fixtures replaced. Quantify the savings as the result of the new fixtures. At the location of each low-flow fixtures installation, affix a small sign or plaque to educate and promote the use of such water savings devices.
2. Prepare quarterly reports and other deliverables to the Department.
3. Prepare a draft and a final project report.

COST: \$24,000

FUNDING: \$18,000 by the U.S. Environmental Protection Agency  
\$6,000 by the Town of Pepperell

DURATION: 2008-2009

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-01/WCG**

PROJECT TITLE: North Reading Water Conservation Grant Project

INVESTIGATOR: Town of North Reading

LOCATION: Ipswich River Basin

DESCRIPTION: The goals of this project are to promote water conservation and reduce unaccounted-for water loss from the Town of North Reading's drinking water works and distribution system, continue their water loss reduction efforts to remain in compliance with their Water Management Act limitations, and promote water conservation, reduce peak (summer) water demands, decrease rgpcd, and decrease UAW from 13.6% to 10% or less.

Specific tasks include:

1. Conduct water conservation education and outreach to encourage water conservation through simple and consistent messages. Explain ideas of how to conserve and reasons to conserve, locally and regionally, raise awareness of the connection between water bills and the amount of water consumed, and list references and websites
2. Analyze water billing records and conduct a direct mailing targeting the 150 highest residential water users advising them of their status as one of the community's users and the impact this practice has on the water resources of the Ipswich river basin, and provide them with a direct economic analysis of their water use practices on the household.
3. Conduct a comprehensive leak detection survey of 80 miles of water mains and appurtenances of the water distribution system.
4. Repair leaks in accordance with their prioritized status.
5. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$49,200

FUNDING: \$31,200 by the U.S. Environmental Protection Agency  
\$18,000 by the Town of North Reading

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-02/WCG**

PROJECT TITLE: Hanson Water Conservation Grant Project

INVESTIGATOR: Town of Hanson

LOCATION: Taunton River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Hanson's drinking water works and distribution system, reduce their unaccounted-for water (UAW) percentage of 17% to 10% or less, and comply with their MWA limits through a water audit, leak detection survey, and a water conservation plan.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 64 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Test the master meters and select service meters. Describe and document the inspection and decision making process, how meters are tested, calibrated, or replaced, the model, type, and number of meters addressed. Summarize the requisite savings from accurate billings' statements as the result of calibrated, repaired, and/or replaced meters.
5. Implement a water conservation plan to reduce the volume of water lost by increasing community awareness and implementing water saving practices throughout the Town. Water conservation plans should include but are not limited to water conservation measures, universal metering, water accounting and loss control, costing and pricing, information and education, pressure management, landscape efficiency, reuse and recycling, water-use regulation, and integrated resource management.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$47,600

FUNDING: \$37,600 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Hanson

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-03/WCG**

PROJECT TITLE: Hopkinton Water Conservation Grant Project

INVESTIGATOR: Town of Hopkinton

LOCATION: Blackstone, Charles, and SuAsCo River Basins

DESCRIPTION: The goals of this project are to identify and reduce unaccounted-for water loss from the Town of Hopkinton's drinking water works and distribution system, continue water loss reduction efforts, and reduce unaccounted-for water percentage of approximately 24% to 10% or less through a water audit, leak detection survey, and the repair of leaks.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Purchase leak detection equipment - leak correlator and leak detection loggers: to be shared with the Towns of Ashland and Upton. Train appropriate staff on proper use of newly purchased leak detection equipment. Training to include staff from the neighboring Towns of Ashland and Upton.
3. Conduct a comprehensive leak detection survey of 80 miles of water mains and appurtenances of the water distribution system.
4. Repair leaks in accordance with their prioritized status.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$44,673

FUNDING: \$26,500 by the U.S. Environmental Protection Agency  
\$18,173 by the Town of Hopkinton

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-04/WCG**

PROJECT TITLE: Harwich Water Conservation Grant Project

INVESTIGATOR: Town of Harwich

LOCATION: Cape Cod Basin

DESCRIPTION: The goals of this project are to identify and reduce unaccounted-for water loss from the Town of Harwich's drinking water works and distribution system, and continue their water loss reduction efforts to minimize their residential gallons per capita day usage rate and an unaccounted-for water percentage. This project will purchase leak detection equipment, conduct a leak detection survey, and leak repair.

Specific tasks include:

1. Purchase leak detection equipment - leak correlator and leak detection loggers: to be shared with the Town of Orleans. Train appropriate staff on proper use of newly purchased leak detection equipment. Training to include staff from the Town of Orleans.
2. Conduct a comprehensive leak detection survey of 270 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$45,000

FUNDING: \$36,000 by the U.S. Environmental Protection Agency  
\$9,000 by the Town of Harwich

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-05/WCG**

PROJECT TITLE: Walpole Water Conservation Grant Project

INVESTIGATOR: Town of Walpole

LOCATION: Boston Harbor Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Walpole's drinking water works and distribution system, and reduce UAW of 13% to 10% or less and usage rates from 72 rgpcd to 65 rgpcd or less as per their Water Management Act requirements.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of 150 miles of water mains and appurtenances of the water distribution system.
2. Repair leaks in accordance with their prioritized status.
3. Prepare newspaper articles on water conservation for publication in local newspapers. Prepare public service announcements for local cable television. Establish a water conservation section on the Water Department's website. Conduct public lectures and workshops on water conservation opportunities, and distribute informational materials, water saving devices and rebate information to interested attendees.
4. Deliver classroom programs on the water cycle, watersheds and water conservation for fifth grade students in the local public schools. Provide students with how-to materials, free water saving devices and rebate information.
5. Provide reimbursement for the purchase and installation of washing machines with a CEE water factor of 6.0 or less, high efficiency toilets using 1.28 gallons per flush or less, and improved irrigation system controllers and other approved low-flow devices. It is anticipated that this task will result in the installation of at least 30 washing machines, 23 toilets and 23 irrigation controllers.
6. Reporting
7. Submit a Draft and a Final Project Report.

COST: \$76,734

FUNDING: \$40,000 by the U.S. Environmental Protection Agency  
\$36,734 by the Town of Walpole

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-06/WCG**

PROJECT TITLE: Concord Water Conservation Grant Project

INVESTIGATOR: Town of Concord

LOCATION: SuAsCo Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Concord's drinking water works and distribution system, continue water loss reduction efforts through a rebate program for low-flow toilets, and conducting outreach to the commercial sector in an effort remain in compliance with Water Management Act standards of 65 residential gallons per capita day and an unaccounted-for water percentage of 15% or less.

Specific tasks include:

1. Provide rebates for 75 eligible water customers for WaterSense labeled toilets purchased. Grantee will verify installation of each device and provide additional water conservation outreach.
2. Increase community awareness about the importance of water conservation and measures that can be taken to reduce water consumption. Encourage water conservation and awareness of the long-term economic and environmental benefits of water conservation through a community wide social marketing campaign. Conduct outreach via direct mail, newspaper articles, advertisements, internet, public events, installation of irrigation rain sensors and landscape water efficiency outreach, distribution of low-flow retrofit kits, and installation of water efficient pre-rinse spray nozzles in commercial and industrial facilities (nozzles supplied by Grantee), and outreach to 25 commercial and industrial facilities
3. Prepare quarterly reports and other deliverables to the Department.
4. Prepare a draft and a final project report.

COST: \$41,050

FUNDING: \$32,475 by the U.S. Environmental Protection Agency  
\$8,575 by the Town of Concord

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-07/WCG**

PROJECT TITLE: Quincy Water Conservation Grant Project

INVESTIGATOR: City of Quincy

LOCATION: Boston Harbor Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of Quincy's drinking water works and distribution system, promote a school-based water conservation program, and identify and reduce unaccounted-for water percentage from 20% to 10% or less.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of 230 miles of water mains and appurtenances of the water distribution system.
2. Repair leaks in accordance with their prioritized status.
3. Conduct a water rate study to assure sustainability into the future and present the completed increasing block rate for adoption
4. Implement a conservation education program in the local elementary schools. The curriculum will focus on the water cycle and the effects of human activities on the cycle and local water resources. The program will introduce simple water conservation techniques and provide educational materials for the students and their families, and encourage the students and their families to look at the way that they use water and look for ways to reduce their consumption.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$81,287

FUNDING: \$49,000 by the U.S. Environmental Protection Agency  
\$32,287 by the City of Quincy

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-08/WCG**

PROJECT TITLE: Malden Water Conservation Grant Project

INVESTIGATOR: City of Malden

LOCATION: Charles and North Coastal Basins

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of Malden's drinking water works and distribution system, reduce unaccounted-for water percentage from 33% to 10% or less as per their Water Management Act Permit, and reconcile seemingly conflicting sets of residential gallons per capita day data.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 120 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$48,750

FUNDING: \$39,000 by the U.S. Environmental Protection Agency  
\$9,750 by the City of Malden

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-09/WCG**

PROJECT TITLE: Wayland Water Conservation Grant Project

INVESTIGATOR: Town of Wayland

LOCATION: SuAsCo Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Wayland's drinking water works and distribution system, reduce unaccounted-for water from 21% to 10% or less and residential gallons per capita day from 87 to 65 rgpcd or less as per their Water Management Act registration standards.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 100 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Purchase and install up to 100 radio read adapters on service meters. Describe how candidate sites are selected. Document the make, model, type (i.e., 4-inch meter), and number of adapters installed. Summarize the requisite savings from accurate billings' statements as the result of the installation of radio read meters.
5. Encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation through a community wide social marketing campaign. Post water conservation-related public services announcements on local cable TV, purchase and distribute 100 low-flow retrofit kits, 100 low-flow garden hose nozzles, and 50 rain barrels.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$44,000

FUNDING: \$34,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Wayland

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-10/WCG**

PROJECT TITLE: Lowell Water Conservation Grant Project

INVESTIGATOR: City of Lowell

LOCATION: Merrimack River Basin

DESCRIPTION: The goals of this project are to identify and reduce unaccounted-for water loss from the City of Lowell's drinking water works and distribution system and to continue its water conservation efforts, and reduce unaccounted-for water loss from 18% to 10% or less as per their Water Management Act Permit.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 204 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Develop and implement a water conservation plan for the City of Lowell. The goal of the water conservation plan is to reduce the volume of water lost in the system by increasing community awareness and implementing water saving practices throughout the City.
5. Replace up to 500 commercial and industrial meters sized 1.5 inches and larger. Document the make, model, type (i.e., 4-inch meter), and number of meters addressed. Summarize the requisite savings from accurate billings' statements as the result of replaced meters.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$62,500

FUNDING: \$50,000 by the U.S. Environmental Protection Agency  
\$12,500 by the City of Lowell

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-11/WCG**

PROJECT TITLE: North Attleborough Water Conservation Grant Project

INVESTIGATOR: Town of North Attleborough

LOCATION: Blackstone and Ten-Mile River Basins

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of North Attleborough's drinking water works and distribution system, and reduce unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of 130 miles of water mains and appurtenances of the water distribution system.
2. Repair leaks in accordance with their prioritized status.
3. Increase community awareness about the importance of water conservation as well as measures that can be taken to reduce water consumption. Distribute water conservation materials including information about the retrofit program.
4. Purchase and distribute up to 1,000 new low-flow water saving retrofit kits. Provide educational materials and reference information along with the water conservation kits.
5. Purchase and distribute up to 100 new water saving moisture-sensitive irrigation system switches for existing underground sprinkler systems. Provide educational materials and reference information along with the moisture-sensor switches.
6. Purchase and install a total of 63 low-flow toilets (1.28 gallons per flush), 14 waterless urinals, and 109 faucet aerators, and one low-flow showerhead in a total of sixteen municipal buildings. Document the make, model, type, and number of fixtures replaced. Quantify the savings as the result of the new fixtures.
7. Prepare quarterly reports and other deliverables to the Department.
8. Prepare a draft and a final project report.

COST: \$124,765

FUNDING: \$96,835 by the U.S. Environmental Protection Agency  
\$27,930 by the Town of North Attleborough

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-12/WCG**

PROJECT TITLE: Onset Water Conservation Grant Project

INVESTIGATOR: Onset Fire District

LOCATION: Buzzard Bay Watershed

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Onset Fire District's drinking water works and distribution system, and reduce unaccounted-for water and water demand, especially during the summer months in Wareham.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 41 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Test or replace up to 50 service meters over 10 years old. Describe the meter inspection process and how the decision is made whether to replace or rehab an existing meter, how meters are tested, calibrated, and/or replaced. Document the make, model, type (i.e., 4-inch meter), and number of meters addressed. Summarize the requisite savings as the result of calibrated, repaired, and/or replaced meters.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$39,186

FUNDING: \$24,600 by the U.S. Environmental Protection Agency  
\$14,586 by the Onset Fire District

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-13/WCG**

PROJECT TITLE: Milton Water Conservation Grant Project

INVESTIGATOR: Town of Milton

LOCATION: Boston Harbor Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Milton's drinking water works and distribution system, and reduce unaccounted-for water percentage to 10% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 230 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Conduct a water rate study to assure sustainability into the future and present the completed increasing block rate for adoption.
5. Implement a water conservation education program in four local elementary schools. The curriculum will focus on the water cycle and the effects of human activities on the cycle. The program will introduce simple water conservation techniques and provide educational materials for the students and their families. The program will encourage the students and their families to look at the way that they use water and ways to reduce their consumption and how to provide, protect and preserve today's water supplies for tomorrow's consumers. References and websites for additional information will be provided as well.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$61,250

FUNDING: \$49,000 by the U.S. Environmental Protection Agency  
\$12,250 by the Town of Milton

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-14/WCG**

PROJECT TITLE: Cherry Valley & Rochdale Water Conservation Grant Project

INVESTIGATOR: Cherry Valley & Rochdale Water District

LOCATION: French River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Cherry Valley and Rochdale Water District's drinking water works and distribution system, and reduce their UAW from 18% to 10% or less as required by their Water Management Act Permit.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 19 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Broadcast water conservation-based public service announcements on local community access television. Distribute 100 low-flow water saving retrofit kits. Distribute 100 water miser garden nozzles, and 50 rain barrels. Provide educational materials, references, and website information along with the water conservation kits. Demonstrate water loss reduction achieved.
5. Install up to 100 new service meters. Describe the selection process for choosing which meters to replace. Document the make, model, type (i.e., 4-inch meter), and number of meters addressed. Summarize the requisite savings from accurate billings' statements as the result of replaced meters.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$40,500

FUNDING: \$25,500 by the U.S. Environmental Protection Agency  
\$15,000 by the Cherry Valley & Rochdale Water District

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-15/WCG**

PROJECT TITLE: Marlborough Water Conservation Grant Project

INVESTIGATOR: City of Marlborough

LOCATION: SuAsCo Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of Marlborough's drinking water works and distribution system, and reduce UAW from 19% to 10% or less as required by their MWA permit through a water audit, and a leak detection survey and repair.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 139 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$47,250

FUNDING: \$35,000 by the U.S. Environmental Protection Agency  
\$12,250 by the City of Marlborough

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-16/WCG**

PROJECT TITLE: North Chelmsford Water Conservation Grant Project

INVESTIGATOR: North Chelmsford Water District

LOCATION: Merrimack River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the North Chelmsford Water District's drinking water works and distribution system, and reduce UAW from 12% to 10% or less as required by their Water Management Act registration through a water audit, leak detection survey and repair, and low-flow retrofits and public service announcements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 40 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Broadcast public service announcements on local community access television. Topics will include irrigation tips, water conservation tips, and the importance of water conservation. Distribute 100 low-flow water saving retrofit kits. Distribute 100 water miser garden nozzles and 50 rain barrels. Provide educational materials, references, and website links along with the water conservation kits. Demonstrate water loss reduction achieved as a result of Task 4 activities.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$46,000

FUNDING: \$33,000 by the U.S. Environmental Protection Agency  
\$16,000 by the North Chelmsford Water District

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-17/WCG**

PROJECT TITLE: Holyoke Water Conservation Grant Project

INVESTIGATOR: City of Holyoke

LOCATION: Connecticut River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of Holyoke's drinking water works and distribution system, and reduce UAW from 25% to 10% or less through a water audit, leak detection and survey and repair.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 140 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$40,000

FUNDING: \$32,000 by the U.S. Environmental Protection Agency  
\$8,000 by the City of Holyoke

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-18/WCG**

PROJECT TITLE: Hatfield Water Conservation Grant Project

INVESTIGATOR: Town of Hatfield

LOCATION: Connecticut River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Hatfield's drinking water system, and reduce demand and UAW through the development of a conservation-based water rate, replacement of service meters, and testing/calibration of master meters.

Specific tasks include:

1. Evaluate the current water rate to determine the effectiveness of the existing rate structure. Anticipate capital needs of the Town's water system in conjunction with current operations and maintenance costs and future expenses. Consider changes in meter reading and billing frequency. costs for any change in meter reading frequency will be considered in the development of conservation-based rate structures.
2. Develop a conservation-based water rate in conjunction with current and future costs, and potential changes in the meter reading/billing frequency. Distribute educational water conservation materials in an effort to support the new water rate. Present the conservation-based rate for adoption by the appropriate Town authorities and document its fate.
3. Install up to 25 new service meters including a new meter and meter pit installation for a larger account. Describe the selection process for choosing which meters to replace. Document the make, model, type (i.e., 4-inch meter), and number of meters addressed.
4. Test and calibrate the master meters that collect data. Describe how meters are calibrated. Document the make, model, type (i.e., 4-inch meter), and number of meters addressed.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$50,000

FUNDING: \$40,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Hatfield

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-19/WCG**

PROJECT TITLE: Maynard Water Conservation Grant Project

INVESTIGATOR: Town of Maynard

LOCATION: SuAsCo Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Maynard's drinking water works and distribution system, and reduce UAW from 12% to 10% or less as required by their Water Management Act permit through a water audit, leak detection survey and repair, and public outreach.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 102 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Distribute water conservation brochures and flyers in up to 9 classes in 2 local schools to encourage water conservation and promote public awareness of long-term economic and environmental benefits of water conservation. Introduce simple water conservation techniques and focus on the water cycle and the effects of human activities on local water resources. Encourage the students and their families to look at the way that they use water and look for ways to reduce their consumption.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$58,900

FUNDING: \$43,900 by the U.S. Environmental Protection Agency  
\$15,000 by the Town of Maynard

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-20/WCG**

PROJECT TITLE: Easthampton Water Conservation Grant Project

INVESTIGATOR: City of Easthampton

LOCATION: Connecticut River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Easthampton's drinking water works and distribution system, and help implement of their 2005 Water Conservation Plan through a water audit, a leak detection survey and repair, and meter replacement.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Purchase leak detection equipment - leak correlator and data loggers: to be shared with the Towns of Southamptton and Northampton. Train appropriate staff on proper use of newly purchased leak detection equipment. Training to include staff from the Towns of Southamptton and Northampton.
3. Conduct a comprehensive leak detection survey of 130 miles of water mains and appurtenances of the water distribution system.
4. Repair leaks in accordance with their prioritized status.
5. Purchase and install up to 480 new service meters. Describe and document the inspection and decision making process, how meters are tested, calibrated, or replaced, the model, type, and number of meters addressed. Summarize the requisite savings from accurate billings' statements as the result of replaced meters.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$68,000

FUNDING: \$50,000 by the U.S. Environmental Protection Agency  
\$18,000 by the City of Easthampton

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-21/WCG**

PROJECT TITLE: Spencer Water Conservation Grant Project

INVESTIGATOR: Town of Spencer

LOCATION: Chicopee and Nashua River Basins

DESCRIPTION: The goals of this project are to locate and repair leaks, identify and reduce unaccounted-for water from 27% to 10% or less, recommend conservation alternatives, and develop appropriate water rates for the Town of Spencer. This project will conduct a water audit, calibrate master meter, purchase leak detection equipment, conduct a leak detection survey, and leak repair.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Calibrate the master meter. Estimate any water losses associated with erroneous metered data. Describe the meter calibration process, document the make, model, type (i.e., 4-inch meter), and number of meters addressed. Summarize the requisite savings from accurate billings' statements as the result of calibrated meters.
3. Conduct a comprehensive leak detection survey of 33 miles of water mains and appurtenances of the water distribution system.
4. Repair leaks in accordance with their prioritized status.
5. Conduct a water rate study; evaluate existing and future maintenance and capital needs, and the existing water rate structure. Develop water rate and block division options to assure sustainability into the future and develop them in conjunction an evaluation of impacts from potential billing changes. Develop a plan for the implementation of the water rate adjustments. Present the completed increasing block rate for adoption.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$49,375

FUNDING: \$39,500 by the U.S. Environmental Protection Agency  
\$9,875 by the Town of Spencer

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-22/WCG**

PROJECT TITLE: Buzzards Bay Water Conservation Grant Project

INVESTIGATOR: Buzzards Bay Water District

LOCATION: Buzzards Bay Watershed

DESCRIPTION: The goals of this project are to locate and repair leaks, identify and reduce unaccounted-for water and water demand - especially during the summer months in Bourne - from the Buzzards Bay Water District's drinking water works and distribution system. This project will conduct a water audit, test service meters, conduct a leak detection survey, and repair leak repairs.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Test 50 service meters over 10 years old. Describe and document the inspection and decision making process, how meters are tested, calibrated, or replaced, the model, type, and number of meters addressed. Summarize the requisite savings from accurate billings' statements as the result of calibrated, repaired, and/or replaced meters.
3. Conduct a comprehensive leak detection survey of 53 miles of water mains and appurtenances of the water distribution system.
4. Repair leaks in accordance with their prioritized status.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$36,970

FUNDING: \$25,000 by the U.S. Environmental Protection Agency  
\$11,970 by the Buzzards Bay Water District

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 08-24/WCG**

PROJECT TITLE: Gloucester Water Conservation Grant Project

INVESTIGATOR: City of Gloucester

LOCATION: North Coastal Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of Gloucester's drinking water works and distribution system, and continue their water loss reduction efforts to decrease their unaccounted-for water percentage from 20% to 10% or less. This project will conduct a water audit, leak detection survey and leak repair, and complete a rate study to support capital and maintenance needs.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of 130 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$61,250

FUNDING: \$49,000 by the U.S. Environmental Protection Agency  
\$12,250 by the City of Gloucester

DURATION: 2009-2010

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-01/WCG**

PROJECT TITLE: Mansfield Water Conservation Grant Project

INVESTIGATOR: Town of Mansfield

LOCATION: Taunton and Ten-Mile River Basins

DESCRIPTION: The goals of this project are to promote water conservation, and identify and reduce unaccounted-for water loss from the Town of Mansfield's drinking water works and distribution system.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of the 139 miles of water mains and appurtenances of the water distribution system.
2. Repair leaks in accordance with their prioritized status.
3. Water Conservation Retrofits; replace water intensive fixtures with 210 low-flow toilets, 200 clothes washing machines with a water factor of 6.0 or less, 165 low-flow dishwashers, and 15 moisture sensitive irrigation system controllers.
4. Water Conservation Public Outreach Program. Encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation through a community wide social marketing campaign.
5. Meter Replacement Program. Evaluate, test, and replace up to 178 service meters. Document the meter inspection process and how the decision is made whether to replace or rehab an existing meter, how meters are tested, calibrated, and/or replaced. Document the make, model, type (i.e., 4-inch meter), and number of meters addressed. Summarize the requisite savings from accurate billing statements as the result of calibrated, repaired, and/or replaced meters.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$62,500

FUNDING: \$50,000 by the U.S. Environmental Protection Agency  
\$12,500 by the Town of Mansfield

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-02/WCG**

PROJECT TITLE: North Andover Water Conservation Grant Project

INVESTIGATOR: Town of North Andover

LOCATION: Merrimack River Basin

DESCRIPTION: This project will identify and reduce unaccounted-for water loss from the Town of North Andover's drinking water works and distribution system, continue their water loss reduction efforts, and reduce unaccounted-for water percentage (UAW) from 16% to 10% or less.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of the 145 miles of water mains and appurtenances of the water distribution system.
2. Repair leaks in accordance with their prioritized status.
3. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
4. Large Meter Testing and Calibration; Test and calibrate up to 33 large meters. Describe the meter testing process and how the decision is made whether to calibrate or replace, right-size, or repair an existing meter.
5. Water Conservation Retrofits; replace water intensive fixtures with a total of 38 low-flow toilets to replace those using five or more gallons per flush and 59 low-flow WaterSense certified faucets to replace those using 2 or more gallons per minute in eight municipal buildings.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$81,600

FUNDING: \$46,600 by the U.S. Environmental Protection Agency  
\$35,000 by the Town of North Andover

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-03/WCG**

PROJECT TITLE: Bridgewater Water Conservation Grant Project

INVESTIGATOR: Town of Bridgewater

LOCATION: Taunton River Basin

DESCRIPTION: This project will promote water conservation and identify and reduce unaccounted-for water loss from the Town of Bridgewater's drinking water works and distribution system, continue their water loss reduction efforts, and remain in compliance with their Water Management Act standards of 65 rgpcd and an unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Provide rebates for up to 60 low-flow WaterSense-labeled toilets, 40 CEE-approved replacement clothes washers with a CEE water efficiency rating of 7.1 or less, and up to 10 low-flow dishwashers.
2. Install a total of six low-flow toilets, 1 waterless urinal, and six low-flow automatic sinks, and a CEE-approved clothes washer in municipal buildings.
3. Develop an integrated water management plan educational program that integrates water supply, wastewater, and stormwater planning at the community level.
4. Water Conservation Public Outreach Program. Encourage water conservation and promote public awareness of the economic and environmental benefits of water conservation through a community wide social marketing campaign.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$55,805

FUNDING: \$41,000 by the U.S. Environmental Protection Agency  
\$14,805 by the Town of Bridgewater

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-04/WCG**

PROJECT TITLE: Danvers Water Conservation Grant Project

INVESTIGATOR: Town of Danvers

LOCATION: Ipswich River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Danvers's drinking water works and distribution system.

Specific tasks include:

1. Outreach and Education Program. Encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation through a community wide social marketing campaign. Increase community awareness about the importance of water conservation and measures that can be taken to reduce water consumption. This will be conducted through the distribution of water conservation brochures and other related information mailed directly to the homes of water customers, and posting them on the Grantee's website.
2. Provide water conservation rebates for properly documented installation of up to 175 low-flow toilets to replace those using five or more gallons per flush. Provide \$50 rebates for the properly documented purchase and installation of up to 125 clothes washing machines on the CEE list with a water factor of 6.0 or less to replace those with a water factor of 10.0 or more.
3. Prepare quarterly reports and other deliverables to the Department.
4. Prepare a draft and a final project report.

COST: \$49,999

FUNDING: \$40,000 by the U.S. Environmental Protection Agency  
\$9,999 by the Town of Danvers

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-05/WCG**

PROJECT TITLE: Sharon Water Conservation Grant Project

INVESTIGATOR: Town of Sharon

LOCATION: Taunton and Boston Harbor Watersheds

DESCRIPTION: The goals of this project are to promote water conservation, and identify and reduce unaccounted-for water loss from the Town of Sharon's drinking water works and distribution system.

Specific tasks include:

1. Retrofit a total of 135 toilets with dual-flush replacement valves, 226 0.5 gallons per minute faucet aerators, and six low-flow kitchen spray nozzles in municipal buildings.
2. Provide rebates for up to 10 high efficiency replacement toilets.
3. Provide up to 35 rebates for CEE-approved replacement clothes washers.
4. Install up to 12 eligible moisture sensitive irrigation controls for the highest consumers.
5. Provide rebates for up to 3 eligible water customers for the permanent decommissioning of automated irrigation systems.
6. Provide rebates for up to 12 irrigation system audits conducted by a WaterSense certified auditor.
7. Distribute 250 bags of drought tolerant grass seed, and provide additional water conservation outreach as appropriate.
8. Distribute self-audit documents to encourage water conservation and public awareness of the long-term economic and environmental benefits of water conservation.
9. Prepare quarterly reports and other deliverables to the Department.
10. Prepare a draft and a final project report.

COST: \$44,400

FUNDING: \$35,400 by the U.S. Environmental Protection Agency  
\$9,000 by the Town of Sharon

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-06/WCG**

PROJECT TITLE: Georgetown Water Conservation Grant Project

INVESTIGATOR: Town of Georgetown

LOCATION: Parker River Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Georgetown's drinking water works and distribution system, continue their water loss reduction efforts, and reduce unaccounted-for water percentage from 12% to 10% or less.

Specific tasks include:

1. Purchase leak correlator and leak detection loggers: to be shared with the Towns of Groveland, Byfield, West Newbury, and Rowley. Training to include Groveland, Byfield, West Newbury, and Rowley.
2. Conduct a comprehensive leak detection survey of the 64 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Provide up to \$200 rebates for the properly documented purchase and installation of 25 or more high-efficiency toilets to replace those using 3.5 or more gallons per flush. Provide rebates for up to 30 low-flow replacement clothes washers.
5. Conduct a public outreach program to encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation through a community wide social marketing campaign.
6. Implement a water conservation education program in the Penn Brook Elementary School. The program will educate students about the need for water conservation and practical steps their families can take to conserve water at home. Provide references and websites for additional information.
7. Prepare quarterly reports and other deliverables to the Department.
8. Prepare a draft and a final project report.

COST: \$77,500

FUNDING: \$49,900 by the U.S. Environmental Protection Agency  
\$27,600 by the Town of Georgetown

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-07/WCG**

PROJECT TITLE: Lawrence Water Conservation Grant Project

INVESTIGATOR: City of Lawrence

LOCATION: Merrimack and Shawsheen River Watersheds

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of Lawrence's drinking water works and distribution system, reconcile the differences between the City's reported unaccounted-for water percentage and the MassDEP-adjusted UAW, and reduce UAW to 10% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss). Use the MassDEP guidance available through the Water Management Act Program – *Water Management Act Program Guidance Document for a Water Audit and Leak Detection Survey*
2. Conduct a comprehensive leak detection survey of the 154 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Prepare quarterly reports and other deliverables to the Department.
5. Prepare a draft and a final project report.

COST: \$48,125

FUNDING: \$38,500 by the U.S. Environmental Protection Agency  
\$9,625 by the City of Lawrence

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-08/WCG**

PROJECT TITLE: Provincetown Water Conservation Grant Project

INVESTIGATOR: Town of Provincetown

LOCATION: Cape Cod Watershed

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Provincetown's drinking water works and distribution system, and to continue their water loss reduction efforts and reduce their unaccounted-for water loss percentage of 24.6% to 10% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of the 40 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Conduct a water rate study; evaluate existing and future maintenance and capital needs, and the existing water rate structure. Develop an increasing block rate system to assure sustainability into the future. Develop a plan for the adoption and implementation of the water rate adjustments. Distribute educational water conservation materials in an effort to support the new water rate. Present the completed rate study for adoption.
5. Conduct a water conservation public outreach program to encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation through a community wide social marketing campaign.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$62,741

FUNDING: \$47,741 by the U.S. Environmental Protection Agency  
\$15,000 by the Town of Provincetown

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-09/WCG**

PROJECT TITLE: Abington Water Conservation Grant Project

INVESTIGATOR: Town of Abington

LOCATION: South Coastal and Taunton Watersheds

DESCRIPTION: The goals of this project are to promote water conservation, identify and reduce unaccounted-for water loss from the Town of Abington's drinking water works and distribution system, and remain in compliance with their Water Management Act standards of 65 rgpcd and an unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of the 60 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Conduct a conservation-based water rate study; evaluate existing and future maintenance and capital needs, and the existing water rate structure. Develop an increasing block rate system to assure sustainability into the future. Develop a plan for the adoption and implementation of the water rate adjustments. Distribute educational water conservation materials in an effort to support the new water rate. Present the completed rate study for adoption.
5. Conduct public outreach and education campaign through the distribution of educational brochures to the approximately 5,000 customers to encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$38,500

FUNDING: \$27,500 by the U.S. Environmental Protection Agency  
\$11,000 by the Town of Abington

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-10/WCG**

PROJECT TITLE: Rockland Water Conservation Grant Project

INVESTIGATOR: Town of Rockland

LOCATION: South Coastal and Taunton Watersheds

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Town of Rockland's drinking water works and distribution system, and remain in compliance with their Water Management Act standards of 65 residential gallons per capital day and an unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss).
2. Conduct a comprehensive leak detection survey of the 60 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Conduct a conservation-based water rate study; evaluate existing and future maintenance and capital needs, and the existing water rate structure. Develop an increasing block rate system to assure sustainability into the future. Develop a plan for the adoption and implementation of the water rate adjustments. Present the completed rate study for adoption.
5. Conduct public outreach and education campaign through the distribution of educational brochures to the approximately 6,000 customers to encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation.
6. Prepare quarterly reports and other deliverables to the Department.
7. Prepare a draft and a final project report.

COST: \$38,500

FUNDING: \$27,500 by the U.S. Environmental Protection Agency  
\$11,000 by the Town of Rockland

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-11/WCG**

PROJECT TITLE: Marlborough Water Conservation Grant Project

INVESTIGATOR: City of Marlborough

LOCATION: SuAsCo Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of Marlborough's drinking water works and distribution system, and reduce their unaccounted-for water loss percentage from 19% to 10% or less.

Specific tasks include:

1. Purchase Correlating Leak Detection Equipment: to be shared with the Towns of Northborough and Sudbury. Train appropriate staff on proper use of newly purchased leak detection equipment. Training to include staff from the Towns of Northborough and Sudbury.
2. Conduct a comprehensive leak detection survey of the 139 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Share the data logger unit with the Towns of Northborough and Sudbury for their use in performing leak detection surveys.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$47,500

FUNDING: \$38,000 by the U.S. Environmental Protection Agency  
\$9,500 by the City of Marlborough

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-12/WCG**

PROJECT TITLE: New Bedford Water Conservation Grant Project

INVESTIGATOR: City of New Bedford

LOCATION: Taunton Basin

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the City of New Bedford's drinking water works and distribution system.

Specific tasks include:

1. Conduct a comprehensive leak detection survey of the 286 miles of water mains and appurtenances of the water distribution system.
2. Repair leaks in accordance with their prioritized status.
3. Retrofit a total of 15 water intensive toilets with low-flow toilets. Retrofit a total of 24 faucets with metering faucets in four municipal buildings. Document the make, model, type, and number of particular fixtures replaced.
4. Water Conservation Public Outreach Program to encourage water conservation and promote public awareness of the long-term economic and environmental benefits of water conservation through a community wide social marketing campaign. Increase community awareness throughout the community about the importance of water conservation and measures that can be taken to reduce water consumption.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$75,767

FUNDING: \$59,034 by the U.S. Environmental Protection Agency  
\$16,733 by the City of New Bedford

DURATION: 2010-2011

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER CONSERVATION GRANT PROJECT 09-13/WCG**

PROJECT TITLE: Buzzards Bay Water Conservation Grant Project

INVESTIGATOR: Buzzards Bay Water District

LOCATION: Buzzards Bay Watershed

DESCRIPTION: The goals of this project are to promote water conservation and identify and reduce unaccounted-for water loss from the Buzzards Bay Water District's drinking water works and distribution system, and remain in compliance with the Water Management Act standards of 65 residential gallons per capita day and an unaccounted-for water percentage of 10% or less.

Specific tasks include:

1. Purchase correlating leak detection equipment: to be shared with the Onset and North Sagamore Water Districts. Training to include staff from the Onset and North Sagamore Water Districts.
2. Conduct a comprehensive leak detection survey of the 53 miles of water mains and appurtenances of the water distribution system.
3. Repair leaks in accordance with their prioritized status.
4. Water Conservation Outreach; expand upon the current public educational program and conservation policies through the establishment and implementation of a water conservation program. This program will include a half day workshop on water loss reduction and water conservation for the Water District operators, staff, commissioners, and other area stakeholders. Provide educational support for the local school working on an art contest with a water conservation theme. Prepare and staff an educational both at the annual *Operator Appreciation Day* festival.
5. Prepare quarterly reports and other deliverables to the Department.
6. Prepare a draft and a final project report.

COST: \$49,425

FUNDING: \$36,825 by the U.S. Environmental Protection Agency  
\$12,600 by the Buzzards Bay Water District

DURATION: 2010-2011