



Part II Phase II Final Summary Report July 1, 2006 – June 30, 2008

**Commonwealth of Massachusetts
Contract CT EQE 0727040000000000435**

Department of Environmental Protection

Central Office – Boston
Northeast Regional Office – Wilmington
Southeast Regional Office – Lakeville
Western Regional Office – Springfield
Central Regional Office – Worcester

Massachusetts Coalition for Small System Assistance

Massachusetts Water Works Association
New England Water Works Association
RCAP Solutions

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I. FINAL SUMMARY REPORT

A. Overview

This report covers the period from July 1, 2006 through June 30, 2008 and is the final summary report under Part II Phase II of the contract. The operational framework for the Massachusetts Coalition for Small System Assistance (MCSSA) differs from Part I and Part II Phase I of the contract due to the dissolution of the Northeast Rural Water Association and subsequently the Massachusetts Rural Water Association. The three remaining members of the MCSSA are the Massachusetts Water Works Association (MWWA), the New England Water Works Association (NEWWA), and RCAP Solutions (Resources for Communities and People). An additional subcontractor, Sarian Company, Inc., is assisting with the 280 site visits required for the contract and to fulfill the use of MBE/WBE subcontractors. Sarian Company, Inc. is not a full partner in the coalition and is only responsible for 60 site visits. In addition, in August 2007, Mass Rural Water Association (MRWA) was hired as an additional subcontractor to assist with Operator Outreach Training and One-on-One Site Visits. They are responsible for 70 site visits and 7 Operator Outreach Trainings. An additional \$100,000 was added into the contract for Mass Rural Water Association's services.

The following is a summary of the milestones achieved for the contract (July 1, 2006 – June 30, 2008).

- Sixteen (16) of the 16 (or 100%) of the Group Trainings have been completed.
- Two hundred thirty (230) of the 280 (or 82%) One-on-One Site Visits have been completed.
- Thirty (30) of the 30 (or 100%) Mentoring Sessions have been completed.
- Seventeen (17) of the 17 (or 100%) Operator Training Workshops have been completed.
- Twelve (12) of the 12 (or 100%) On-Site Outreach activities have been completed.
- Thirty-two (32) Operator Reimbursement applications have been processed.
- The Small Systems Outreach Web Site was continually updated with event activities and information.
- With 100 percent of the contract extension completed, \$742,826.72, or 73 percent of the original budget has been expensed.

Part B contains monthly summaries.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract July 2006 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

No activity.

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – No activity.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

No activity.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract August 2006 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-07270400000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

No activity.

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – No activity.

Support Materials to Assist PWS:

A quote on a document to obtain STAG Grant funds was obtained. 300 copies will be printed.

Maintenance of Small System Web site:

The Web site was updated to reflect changes in this new contract.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract September 2006 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

No activity.

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – No activity.

Support Materials to Assist PWS:

No activity

Maintenance of Small System Web site:

No activity

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract October 2006 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

On site visit to Presentation of Mary Academy in Methuen, MA by RCAP solutions staff person.

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – Four training seminars held by NEWWA/MWWA on Preparing to Take the Very Small System Operator's Exam.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – One operator requested reimbursement for training in October and was approved.

Support Materials to Assist PWS:

No activity

Maintenance of Small System Web site:

No activity

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract November 2006 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Two on site visits were made by RCAP during November.

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – no activity
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – Three operators requested reimbursement for training or exam fees in November and their requests were approved.

Support Materials to Assist PWS:

Copies of the MA DEP Drinking Water Program “Emergency Response Guide for Public Drinking Water Systems” were given to MWWA, RCAP Solutions, Inc. and Sarian for distribution to water suppliers during site visits or mentoring sessions.

Maintenance of Small System Web site:

No activity

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract December 2006 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Four site visits were conducted by Sarian and two by RCAP.

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – no activity
- Outreach/On-site Training Sessions – MWWA participated in the Attleboro High School Career Fair
- Operator Training Expense Reimbursement Program – One operator reimbursement application was processed.

Support Materials to Assist PWS:

No activity

Maintenance of Small System Web site:

The small systems Web site was updated with four mentoring sessions scheduled for early 2007.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract January 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

One site visit was conducted by Sarian and ten by RCAP.

Mentoring Programs*:

One mentoring session: “Hands-on Pipe/Leak Detection and Box Locating” was conducted on January 26 in Haverhill.

Certified Drinking Water Operator Training*:

- Training Workshops – no activity
- Outreach/On-site Training Sessions – No activity
- Operator Training Expense Reimbursement Program – One operator reimbursement application was processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with upcoming mentoring session information.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract February 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Fourteen

RCAP: Two

Mentoring Programs*:

Four mentoring sessions on “Hands-on Pipe/Leak Detection and Box Locating” were conducted on February 2, 7, 13, and 27 in WERO, CERO, and NERO.

One mentoring session on “Creating a Winning Consumer Confidence Report” was conducted on February 22 in CERO.

Certified Drinking Water Operator Training*:

- Training Workshops – no activity
- Outreach/On-site Training Sessions – No activity
- Operator Training Expense Reimbursement Program – One operator reimbursement application was processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with upcoming mentoring session and group training information.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract March 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Seven

RCAP: Seven

Alternative Credits: Two Sarian, One RCAP

Mentoring Programs*:

One mentoring session on “Chemical Consortium – Buying Power for Communities” was conducted on March 1 in CERO.

Two mentoring sessions on “Small System Operations: Seasonal Start-up, Routine Maintenance, and End-of-Season Closing” were conducted on March 13 & 20 in SERO.

One mentoring session on “Creating a Winning Consumer Confidence Report” was conducted on March 6 in SERO.

Certified Drinking Water Operator Training*:

- Training Workshops – no activity
- Outreach/On-site Training Sessions – Three outreach sessions were held: One in WERO, one in CERO, and one in SERO.
- Operator Training Expense Reimbursement Program – Four operator reimbursement applications were processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with upcoming mentoring session and group training information.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract April 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: None

RCAP: Twenty One (21)

Alternative Credits: None

Mentoring Programs*:

One mentoring session on “Small System Operations: Seasonal Startup, Routine Maintenance, and End-of-Season Closing” was conducted on April 10 in SERO.

One mentoring session on “Creating a Winning Consumer Confidence Report” was conducted on April 10 in CERO.

Certified Drinking Water Operator Training*:

- Training Workshops – no activity
- Outreach/On-site Training Sessions – no activity
- Operator Training Expense Reimbursement Program – Three operator reimbursement applications were processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with upcoming mentoring session and group training information.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association and RCAP Solutions, Inc.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract May 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

Three group training exercises on “The Importance of Successful Meter Reading” were conducted on May 3 in NERO, May 8 in SERO, and May 10 in WERO. An additional session was omitted from the April monthly report, and took place on April 12 in CERO.

One-on-One Site Visits*:

Sarian: Three (3)

RCAP: Four (4)

Alternative Credits: None

Mentoring Programs*:

One mentoring session on “Chemical Consortium – Buying Power for Communities: A Regional Approach to Providing a Cost-Savings Benefit” was conducted on May 17 in SERO.

One alternative credit was granted for attending “The Importance of Successful Meter Reading” course on May 3 in NERO.

Certified Drinking Water Operator Training*:

- Training Workshops – no activity
- Outreach/On-site Training Sessions – Two outreach sessions were conducted: Athol High School Drinking Water Operations Instruction and Operator Outreach with the North Quabbin School-to-Career Partnership on May 9 and Athol High School Drinking Water Operations Instruction on May 15.
- Operator Training Expense Reimbursement Program – One operator reimbursement application was processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with upcoming mentoring session information.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association and RCAP Solutions, Inc.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract June 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Three (3)

RCAP: Four (4)

Alternative Credits: None

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – A VSS Exam Prep class was given on June 25 in Northampton to prepare for the July exams.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – No activity.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with upcoming mentoring session information.

*For further information, refer to the monthly summaries by Massachusetts Water Works Association, RCAP Solutions, Inc., and Sarian Company.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract July 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Six (6)

RCAP: Zero

Alternative Credits: None

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – No activity.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with upcoming mentoring session information.

*For further information, refer to the monthly summaries by Sarian Company.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract August 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

Two group training sessions on “How to Successfully Operate and Maintain Your Groundwater System” were conducted on August 22 in Holliston and August 30 in Amherst. Due to the trainings being full-day sessions, each counted for two group trainings.

One-on-One Site Visits*:

Sarian: Three (3)

RCAP: One (1)

Alternative Credits: None

Mentoring Programs*:

One alternative credit was granted to MWWA for attending the “How to Successfully Operate and Maintain Your Groundwater System” course on August 30.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – No activity.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site continues to be updated with course and session information.

*For further information, refer to the monthly summaries by RCAP, MWWA, and Sarian Company.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract September 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Ten (10)

RCAP: Two (2)

Alternative Credits: None

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – No activity.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site continues to be updated with course and session information.

*For further information, refer to the monthly summaries by RCAP and Sarian Company.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract October 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: None (0)

RCAP: Eleven (11)

MassRWA: Two (2)

Alternative Credits: None

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – Two (2) “Preparing to take the VSS Operator’s Exam” training workshops were held on October 23 in Northampton and October 31 in Mashpee.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – Four applications were processed and approved.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site continues to be updated with course and session information.

*For further information, refer to the monthly summaries by RCAP, MWWA, and MassRWA.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract November 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: None (0)

RCAP: Eight (8)

MassRWA: Eight (8)

Alternative Credits: One – RCAP for DEP Workshop in South Hadley on November 1.

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – Two applications were processed and approved.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site continues to be updated with course and session information.

*For further information, refer to the monthly summaries by RCAP and MassRWA.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract December 2007 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

Two group trainings on “Basic Accounting and Financial Planning for Small Water Systems” were held on December 11 in Mashpee and December 13 in Holliston.

One-on-One Site Visits*:

Sarian: Five (5)

RCAP: None (0)

MassRWA: Nine (9)

Alternative Credits: One –RCAP for Group Training Workshop in Mashpee on December 11.

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – Two applications were processed and approved.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site continues to be updated with course and session information.

*For further information, refer to the monthly summaries by RCAP, Sarian, and MassRWA.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract January 2008 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Zero (0)

RCAP: One (1)

MassRWA: Nine (5)

Alternative Credits: None

Mentoring Programs*:

A mentoring session on “Informational Meeting for Contract Operators” was held on January 31 in Millbury. 20 participants attended.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – No applications were processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site continues to be updated with course and session information.

*For further information, refer to the monthly summaries by MWWA, RCAP, and MassRWA.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract February 2008 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Zero (1)

RCAP: Zero (0)

MassRWA: Seven (7)

Alternative Credits: None

Mentoring Programs*:

Alternative credit for attending: “Annual Statistical Reporting: Changes to the Water Management Act Section, what you need to know” on February 12, 2008 in Littleton, MA.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – Two applications were processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site continues to be updated with course and session information.

*For further information, refer to the monthly summaries by MWWA, Sarian, and MassRWA.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract March 2008 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Zero (0)

RCAP: Zero (0)

MassRWA: Twenty Nine (29)

Alternative Credits: None

Mentoring Programs*:

One mentoring session on “Meter Management” was given on March 4 in Wilmington.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – An outreach session at the Tech Prep Career Fair at Holyoke Community College was given on March 20.
- Operator Training Expense Reimbursement Program – No applications were processed.

Support Materials to Assist PWS:

NEWWA printed 5,000 copies of a guide for TNCs to assist them in complying with new sanitary survey requirements.

Maintenance of Small System Web site:

The Web site was updated with course and session information for the spring.

*For further information, refer to the monthly summaries by MWWA and MassRWA.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract April 2008 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

No activity.

One-on-One Site Visits*:

Sarian: Zero (0)

RCAP: Zero (0)

MassRWA: Fifteen (15)

Alternative Credits: Two (RCAP)

Mentoring Programs*:

- One session on “Flow Measurement and Calibration for Venturi Meters” was given on April 9 in East Freetown.
- Two sessions on “Meter Management” were given on April 15 in Millbury and 16 in Lenox.
- One session on “GIS Applications” was given on April 23 in Westfield.
- Two sessions on “Tools for Small Water System Survival” were given on April 22 in Hamilton and the 24 in Mashpee.

Certified Drinking Water Operator Training*:

- Training Workshops – MassRWA conducted a workshop on “Leak Detection” on April 29 in Brookfield. MWWA conducted a workshop on “Math Review” on April 29 in Beverly.
- Outreach/On-site Training Sessions – Two outreach sessions were given on April 3 at Northbridge High School in Whitinsville and April 10 at DY Regional High School in Dennis.
- Operator Training Expense Reimbursement Program – No applications were processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with course and session information for the spring.

*For further information, refer to the monthly summaries by MWWA, MassRWA, and RCAP.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract May 2008 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

Two group trainings on “Source Water Protection” were given on May 16 in Holliston and May 29 in Mashpee. A group training on “Groundwater O&M” was given on May 28 in Beverly.

One-on-One Site Visits*:

Sarian: Zero (0)

RCAP: Zero (0)

MassRWA: Zero (0)

Alternative Credits: Three (RCAP)

Mentoring Programs*:

- One session on “Slow Sand Filtration” was given on May 20 in Blandford.
- Three session on “GIS Applications” were given on May 6 in Plymouth, May 21 in Chelmsford, and May 29 in Rutland.
- Two sessions on “Tools for Small Water System Survival” were given on May 13 in Littleton and May 15 in Amherst.

Certified Drinking Water Operator Training*:

- Training Workshops – MassRWA conducted a workshop on “Trench Safety” on May 1 in Groveland and May 2 in Orange. MassRWA also conducted a workshop on “Confined Space Safety” on May 7 in Clarksburg. MWWA conducted a workshop on “Math Review” on May 27 in Millbury and one on “VSS Exam Prep” on May 22 in Mashpee.
- Outreach/On-site Training Sessions –Three outreach sessions were conducted – May 2 at Turners Falls Career Fair, May 7 at Blackstone-Millville Regional High School Career Fair, and May 14 at Athol High School Drinking Water Operations Instruction.
- Operator Training Expense Reimbursement Program – One application was processed.

Support Materials to Assist PWS:

No activity.

Maintenance of Small System Web site:

The Web site was updated with course and session information for the spring.

*For further information, refer to the monthly summaries by MWWA, MassRWA, and RCAP.



Massachusetts Coalition for Small System Assistance Part II Phase II Contract June 2008 Monthly Summary

The Massachusetts Coalition for Small System Assistance continued to implement the diverse services under the Mass DEP Contract #CT-EQE-072704000000000000435-2. This billing is for Part II Phase II of the contract, which began on July 1, 2006.

Group Training:

A group training on “Groundwater O&M” was given on June 3 in Lakeville.

One-on-One Site Visits*:

Sarian: Zero (0)

RCAP: Thirteen (13)

MassRWA: Zero (0)

Alternative Credits: Zero

Mentoring Programs*:

No activity.

Certified Drinking Water Operator Training*:

- Training Workshops – No activity.
- Outreach/On-site Training Sessions – No activity.
- Operator Training Expense Reimbursement Program – Two applications were processed.

Support Materials to Assist PWS:

Reprints of NEWWA’s Sampling Guide to Assist Small Systems were created for distribution. Approximately 250 were sent to DEP.

Maintenance of Small System Web site:

No activity.

*For further information, refer to the monthly summaries by RCAP.

II. GROUP TRAINING

The distribution of all group trainings for this contract was as follows:

NEWWA 16

THE IMPORTANCE OF SUCCESSFUL METER READING

Held on:

April 12, 2007	Millbury Public Library, Millbury, MA
May 3, 2007	Salem-Beverly Water Treatment Plant, Beverly, MA
May 8, 2007	Plymouth Public Library, Plymouth, MA
May 10, 2007	Springfield Water and Sewer Commission, Springfield, MA

This course presented the importance of the *basics* of proper water metering techniques. In order to keep accurate account of water produced for consumption, and balance it with water actually used by those in a system, public water systems must account for as much water as possible. This course covered the importance of conducting a water audit; explained the use and basic functions of small meters as well as compound and turbine meters used for measuring large-water demands; discussed calibration techniques of each meter; demonstrated how large meters are calibrated; and presented various methods of reading meters. Participants received 0.4 CEUs upon completion.

The agenda was as follows:

- The Economic Benefits of Metering
- Conducting a Successful Water Audit
- Operation, Use, and Calibration of Small Water Meters
- Operation and Use of Large Turbine and Compound Meters
- Demonstration of Calibration of Large Meters “In Place”
- Reading Meters in the 21st Century

The instructor was:

Paul Riendeau, CET – education coordinator/ instructor, New England Water Works Association (NEWWA), Holliston, MA. Paul has been an instructor and education coordinator at NEWWA for the past 7 years. Previously he was employed by the Pawtucket Water Supply Board in Pawtucket, R.I., for 18 years as water quality supervisor. He is a Certified Environmental, Health, and Safety Trainer and holds a Massachusetts Full-Grade 4T Drinking Water Operators License.

Flyers were mailed to all public water systems serving less than 10,000 (1,507) across the state. Notice of the class was also posted to the Small Systems Web site.

Course stats were as follows:

<i>Date</i>	<i>Location</i>	<i>Number Attending</i>	<i>Pre-Test Results</i>	<i>Post-Test Results</i>
April 12	Millbury	29	N/A	N/A
May 3	Beverly	22	51	85
May 8	Plymouth	28	48	81
May 10	Springfield	21	42	83

Due to instructor error, pre- and post-test information is not available for the Millbury location on April 12. However, in looking at the results from the other three sessions, a

definitive, consistent pattern of a 30+ point increase from the pre- to post-test results is apparent (34 points in Beverly, 33 points in Plymouth, and 41 points in Springfield). This dramatic jump in participant knowledge is evidence that this course was extremely successful, taught well, and valuable to the participants. Overall, the course received 4.3 (Springfield), 4.2 (Plymouth), 4.3 (Beverly), and 4.4 (Millbury) ratings out of 5. To view the course evaluations in complete detail, please see Appendix D.

Please see Appendix C for a copy of the notice sent to all PWSs serving less than 10,000.

How to Successfully Operate and Maintain Your Groundwater System

Held on:

August 22, 2007	NEWWA Training Center, Holliston, MA
August 30, 2007	Amherst WWTP, Amherst, MA
May 28, 2008	Salem-Beverly WTP, Beverly, MA
June 3, 2008	DEP SERO, Lakeville, MA

This 6-hour, application-oriented learning program assisted operators of small water systems in recognizing and understanding the importance of operating and maintaining a small drinking water system. There were several instructional units that followed a building-block approach. In general, participants learned what is required to correctly and safely work components of their groundwater system. Most importantly, participants enriched their abilities to protect the public health as a drinking water provider. Participants received 0.6 CEUs upon completion (equivalent to 6 training contact hours).

Due to the nature of the material taught in this course, it was offered as a full-day (6 hours). As a result, for each class taught, NEWWA received credit for two group trainings (eight total for four days).

The agenda was as follows:

- Importance of Proper Station O&M
- Types of Centrifugal Pumps
- Feeding Chemicals in a Groundwater Pump Station
- Well Types and Construction Basics
- Do You Have to Disinfect?
- Groundwater System O&M
- Groundwater System Monitoring
- Proper Record Keeping and Administrative Duties

The instructors were:

Paul Riendeau, CET, Instructor/Education Coordinator, NEWWA, Holliston, MA. Paul had spent more than 18 years working in a drinking water treatment plant, and has more than 25 years experience as an adult education instructor. He holds a full Grade IV-T Drinking Water Operator's License in the commonwealth of Massachusetts.

Edward A. Silvia, President, The Sealing Connection, Bedford, NH. Mr. Silvia has more than 25 years in the field of mechanical packing, mechanical seals, pumps, and related systems. He has been the lead instructor in the NEWWA pumps programs for more than 10 years.

Flyers were mailed to all public water systems serving less than 10,000 (1,282) across the state. Notice of the class was also posted to the Small Systems Web site.

Course stats were as follows:

<i>Location</i>	<i>Date</i>	<i>Attendance</i>	<i>Pre-Test Average</i>	<i>Post-Test Average</i>
Holliston, MA	August 22, 2007	36	60	76
Amherst, MA	August 30, 2007	31	50	78

Beverly, MA	May 28, 2008	7	57	82
Lakeville, MA	June 3, 2008	17	55	81

Overall, the course received 4.5 (Holliston), 4.7 (Amherst), 4.8 (Beverly), and 4.2 (Lakeville) ratings out of 5. To view the course evaluations in complete detail, please see Appendix D. Please see Appendix C for a copy of the notice sent to all PWSs serving less than 10,000.

Basic Accounting and Financial Planning for Small Water Systems

Held on:

December 11, 2007 Mashpee Water District, Mashpee, MA

December 13, 2007 NEWWA Training Facility, Holliston, MA

This course discussed methods to estimate a water system's current financial status. The basics of the main accounting tools were covered as a prerequisite to financial planning. Participants received 0.3 CEUs, (equivalent to 3 TCHs) upon completion of the course.

The agenda was as follows:

- Water System Budgets
- Financial Statements: Balance Sheet, Income Statement, Cash Flow Statement
- Water Rates and Gross Revenues
- Costs – Fixed and Variable
- Financing Capital Projects – Tax base, Loans, Grants, etc.
- Computer Spread Sheet basics
- Financial Planning
- Management Strategies for Financial Efficiency

The instructor was:

Chris Collins of Comprehensive Environmental Inc. of Milford, MA and Merrimack, NH. Chris is an engineer with 17 years combined experience in water supply, construction, and engineering services. He is currently performing a number of water supply audits, assisting various water suppliers to reduce their unaccounted for water. He also is working on Water Supply Management Plan updates. Mr. Collins has over 8 years of municipal experience, with 3 years as the superintendent of the Cumberland, RI, Water Department. In Cumberland Chris oversaw a staff of 12 operators for this system serving 22,500 in population. He is a member of AWWA and NEWWA and is working on his Professional Engineering registration.

Flyers were mailed to all public water systems serving less than 10,000 (1,280) across the state. Notice of the class was also posted to the Small Systems Web site.

Course stats were as follows:

Location	Date	Attendance	Pre-Test Average	Post-Test Average
Mashpee	December 11, 2007	11	66	79
Holliston	December 13, 2007	19	62	83

Overall, the course received 3.5 (Mashpee) and 3.6 (Holliston) ratings out of 5. To view the course evaluations in complete detail, please see Appendix D.

Please see Appendix C for a copy of the notice sent to all PWSs serving less than 10,000.

Source Water Protection

Held on:

May 16, 2008 NEWWA Training Facility, Holliston, MA
May 29, 2008 Mashpee Water District, Mashpee, MA

This course discussed zoning and land use as methods to protect drinking water sources. Also discussed were mapping methods to determine a PWS's source recharge area. Participants received 0.3 CEUs, (equivalent to 3 TCHs) upon completion of the course.

The agenda was as follows:

- Introduction to Source Protection
- DEP Source Protection Areas: Zones I & II, and IWPA, Zone III
- Zone I Concerns/New Policy
- SWAP
- Protection Planning
- Small Systems Special Protection Issues

The instructor was:

Eileen Pannetier, president and CEO of Comprehensive Environmental Inc. of Milford, MA and Merrimack, NH. Ms. Pannetier is an AWWA and NEWWA member and a frequent speaker on various topics. She is a specialist in Source Water Protection and Environmental Planning for sustainability.

Flyers were mailed to all public water systems serving less than 10,000 (1,280) across the state. Notice of the class was also posted to the Small Systems Web site.

Course stats were as follows:

Location	Date	Attendance	Pre-Test Average	Post-Test Average
Holliston	May 16, 2008	21	63	93
Mashpee	May 29, 2008	19	65	94

Overall, the course received 4.6 (Holliston) and 4.5 (Mashpee) ratings out of 5. To view the course evaluations in complete detail, please see Appendix D.

Please see Appendix C for a copy of the notice sent to all PWSs serving less than 10,000.

III. ONE-ON-ONE SITE VISITS

The coalition was required to conduct 280 site visits this contract.

One partner, RCAP Solutions, and two subcontractors, Sarian Company, Inc., and Mass Rural Water Association (MRWA - added to the contract effective August 1, 2007) were responsible for this portion of the contract. The distributed total number of required visits was as follows:

RCAP	150
Sarian	60
MRWA	70

Individual site visit requests are received either by DEP, requested directly by the PWS, or received via word-of-mouth at other coalition trainings and events.

The site visit master list is updated on a monthly basis. Received requests are sent to providers, who then determine which provider would be assigned to each request. The total number of completed site visits during this contract was two hundred and thirty (230), which was comprised of 218 actual TA visits and 12 Alternative Credits.

Due to extenuating circumstances, Fifty (50) site visits were not completed by subcontractor RCAP Solutions. Unexpected and multiple turnovers at that organizations, then hiring and training time for new employees, resulted in an unavoidable situation which resulted in these site visits not being completed. However, it has been requested that the 50 remaining site visits be rolled over into the next round of this contract extension, which will run from 2008-2010.

Multiple Visits

It was agreed, during a conference call that took place with the coalition and DEP on 9/2/2004, that partners did not need to formally request authorization to perform multiple site visits to the same PWS during a contract period, up to three visits. When more than three site visits are requested, the partner will formally request additional site visit approvals from DEP. During this contract, this process was necessary only once.

Twenty-five systems received more than one site visit during this contract, with a total of thirty seven (37), or 16 percent of the 230 site visits conducted during this contract being multiple visits to the same PWS.

The following PWSs had at least two site visits during this contract (total number of site visits in parens):

- Acoaxet Water Company (2)
- Acton Water District (2)
- Alphabet Soup (3)
- Buzzards Bay Water District (3)
- Children's First (4)
- Clark Shores Corp (2)
- Country Aire Campground (2)
- Deerfield Fire District (3)
- Egremont Water Department (2)
- Freetown Water (3)

- Gould Farm (2)
- Hinsdale Water Department (3)
- Lancaster Water Department (3)
- LSGPO Association (2)
- Lunenburg Water District (2)
- Manchaug Water District (3)
- Monterey Water Company (2)
- Mt. St. Mary's Abbey (3)
- Oakham County Day School (3)
- Orange Water Department (2)
- Plainville Water Department (2)
- Royalston Village School (2)
- Sutton Medical Building (3)
- Van Rensselears Restaurant (2)
- Woodland Park (2)

Alternative Credits

This contract allows for 10 percent of site visits to be obtained through alternative credit requests. Twelve requests were received during this contract. The breakdown of potential alternative credits per site visit provider through the duration of this contract is:

RCAP	15
Sarian	6
MRWA	7

For the entire duration of the contract, RCAP received eight (8) alternative credits and Sarian received four (4). Details of the alternative credits can be viewed in Appendix A, Deliverables Data.

Appendices – Site Visit Tables and Data

Please see Appendix B to review the master site visit list for all site visits completed since the beginning of the contract and during this period. Appendix B also includes the site visit form used to document completed site visits.

Please see Appendix A for a complete list of all deliverables completed from July 2006 – June 2008.

IV. Mentoring Program

Implementation of the mentoring program in this contract continues by using the successful framework developed in the first phases of the program. During the initial phases of the program, efforts were dedicated to building cooperative partners through networking and recruiting volunteers. The mentoring program has been promoted through the regional water works associations, boards of health associations, and other organizations. The program is continuing to build on our partnerships.

A key component of the mentoring program is the water works professionals who volunteer and serve as “mentors” at the sessions. The recruitment of volunteers to participate in the program is ongoing. The “mentors” consist of experienced water works professionals, including consultants, engineers, and specialized staff from larger water systems. They serve as presenters and facilitators at the mentoring sessions, and share their knowledge and skills with the attendees.

The mentoring sessions are designed to provide pertinent information to assist small water systems maintain regulatory compliance. An additional benefit is that the sessions provide an opportunity for small water system owners and operators to meet experienced water works professionals and develop a network of resources and contacts for obtaining additional information in the future.

Mentoring Sessions

The distribution of all mentoring sessions is as follows:

MWWA 30

All mentoring sessions were completed for this contract. Details are on subsequent pages.

As provided in the contract, 10 percent (3) of the mentoring sessions can be accounted for through participation and attendance in other drinking water meetings and coalition building activities.

Three (3) alternative credits was requested and granted during this contract for MWWA attending “The Importance of Successful Meter Reading” on May 3, 2007 in Beverly, “How to Successfully Operate and Maintain your Groundwater System,” group training held on August 30, 2007 in Amherst, and “Annual Statistical Reporting,” held on February 12, 2008 in Littleton.

MCSSA – Mentoring Sessions – Part II Phase II Contract

Schedule of Mentoring Sessions – July 1, 2006 – June 30, 2008

Date	Topic	Location
January 26, 2007	Pipe/Leak Detection and Box Locating	Haverhill
February 2, 2007	Pipe/Leak Detection and Box Locating	Mashpee
February 7, 2007	Pipe/Leak Detection and Box Locating	Littleton
February 13, 2007	Pipe/Leak Detection and Box Locating	Northampton
February 22, 2007	CCR Preparation	Littleton
February 27, 2007	Pipe/Leak Detection and Box Locating	Littleton
March 1, 2007	Chemical Consortium	Millbury
March 6, 2007	CCR Preparation	Lakeville
March 13, 2007	Small System Operations	Eastham
March 20, 2007	Small System Operations	Lakeville
April 10, 2007	CCR Preparation	Rutland
April 10, 2007	Small System Operations	Lakeville
*May 3, 2007	Meter Reading	Beverly
May 17, 2007	Chemical Consortium	Mashpee
*August 30, 2007	How to O&M Your Groundwater System	Amherst
January 31, 2008	Contract Operations	Millbury
*February 12, 2008	Annual Statistical Reporting	Littleton
March 4, 2008	Meter Management	Wilmington
April 9, 2008	Flow Measurement	Hamilton
April 15, 2008	Meter Management	Millbury
April 16, 2008	Meter Management	Lenox
April 22, 2008	Small System Operations	Hamilton
April 23, 2008	GIS Applications	Westfield
April 24, 2008	Small System Operations	Mashpee
May 6, 2008	GIS Applications	Plymouth

May 13, 2008	Small System Operations	Littleton
May 15, 2008	Small System Operations	Amherst
May 20, 2008	Slow Sand Filtration	Blandford
May 21, 2008	GIS Applications	Chelmsford
May 29, 2008	GIS Applications	Rutland

*Coalition Building Activity

Mentoring Session

“Hands On” Pipe/Leak Detection and Box Locating

January 26, 2007 in Haverhill, MA

February 2, 2007 in Mashpee, MA.

February 7, 2007 in Littleton, MA.

February 13, 2007 in Northampton, MA

February 27, 2007 in Littleton, MA

The objective of this session was to give attendees a basic understanding of how pipe-locating equipment works, as well as leak detection basics. Theory of standard equipment and new technological developments were also discussed. Notice of the meeting was sent to all the public water systems (PWS) in Massachusetts serving populations of less than 10,000 people. There were 160 in attendance at these sessions; demand was so great that the February 27th session was added to accommodate participants. There were 17 in Haverhill, 39 in Mashpee, 33 Littleton on February 7th, 41 in Northampton and 30 in Littleton on the 27th. The presenter was available for one-on-one questions following the sessions. The session was 2.5 hours in length and all participants completed the session and received 2.0 TCHs under the MassDEP blanket approval.

- Topics covered included:
 - Pipe Location: History; Evaluation of Locators; Effects of Weather; Proper Hook-ups; Same Trench Issues; Non-metallic Tracing
 - Leak Detection: Overview of Popular Leak Detectors; Discussion of Leak Noise Frequencies; Pipe Materials; Making Use of Hydrants in Leak Detection
 - Discussion of Leak Surveys
 - Hands On Demonstration
- Distributed MassDEP information on Water Loss Prevention Grant.
- Questions and answer and discussion period followed on system specific issues.

Mentoring Session

Creating a Winning Consumer Confidence Report

February 22, 2007 in Littleton, MA

March 6, 2007 in Lakeville, MA

April 10, 2007 in Rutland, MA

The objective of this session was to assist small public water systems to prepare and improve their Consumer Confidence Reports which are required to be completed by July 1. Important tips to comply with the regulatory requirements and approaches to simplify the preparation of the CCR were provided during this session.

Notice of the meeting was sent to all the public water systems (PWS) in Massachusetts serving populations of less than 10,000 people. A total of 54 PWS owners and operators attended the sessions; 15 attended in Littleton, 20 attended in Lakeville, and 19 attended in Rutland. (At the request of DEP staff, 11 people who signed up were contacted and told that because they did not operate community systems they should seek alternate training related to their systems.) The session was 2 hours in length and 1 TCH was offered for completing the session under the DEP blanket approval. The presenters were available for one-on-one questions following the sessions.

- Topics covered included: The purpose of the CCR and the benefits of communicating with your customers; What you should report (information and required language to be included); How to report the data; Presentation and format; Meeting the CCR delivery and public notification requirements; Common errors and how to prevent them.
- Handouts included sample templates, tables, forms, and information on the preparation of the CCR.
- Questions and answer and discussion period followed on system specific issues related to producing an effective CCR and the feedback that systems receive from their communities.

Mentoring Session

Chemical Consortium – Buying Power for Communities **A Regional Approach Providing a Cost-Savings Benefit**

March 1, 2007 in Millbury, MA

May 17, 2007 in Mashpee, MA

The objective of this session was to inspire public water systems to consider forming a chemical consortium by presenting the Northeast Merrimac Valley Chemical Consortium's success story. The Northeast Merrimac Valley Chemical consortium began in 1984 with 10 water and wastewater departments. Today the Consortium has 48 member communities that purchase more than 80 different chemicals through the Consortium. The Consortium exerts buying power that provides significant monetary and management savings for the participating communities.

Notice of the meeting was sent to all the public water systems (PWS) in Massachusetts serving populations of less than 10,000 people. The May 17th session had been rescheduled from February because of a winter snowstorm. Because of the postponement, a follow-up mailing was sent to all PWS serving populations of less than 10,000 in the Massachusetts DEP Southeast Region and direct contact was made to all PWS operators who had registered for the postponed session. A total of 19 attended the sessions; 12 PWS operators and managers registered for the session in Millbury, and 11 attended the session, 18 PWS operators, and managers registered for the session in Mashpee, and 8 attended the session. The session was 2 hours in length and 1.0 TCH was offered for completing the session under the DEP blanket approval.

- The meeting focused on the advantages, learned experiences, pitfalls, and successes of the Northeast Merrimac Valley Chemical Consortium. Representatives of the Consortium provided valuable information about the process, administration, and cost savings benefits that they have experienced. There was excellent discussion among the Consortium representatives and the PWS managers and operators in attendance.
- At the Mashpee session, there was considerable discussion about past efforts to begin bulk chemical purchasing through the Barnstable County purchasing consortium. The utility managers were encouraged by the Coalition presenters because the presenters were able to offer advice and solutions to several of the concerns and obstacles that the Barnstable County group had encountered when pursuing bulk chemical purchasing in the past. The Coalition presenters offered their ongoing support and current materials relating to the bulk purchasing bid process.
- The presenters were available for questions and discussion after the session. Most of the group remained after the scheduled session to continue discussion with the Coalition presenters. Follow-up e-mails after the March 1st session in Millbury suggest that approximately 9 public water systems are investigating the formation of a chemical consortium.

Mentoring Session

Small System Operations: Seasonal Start-UP, Routine Maintenance, and End-of-Season Closing

March 13, 2007 in Eastham, MA

March 20, 2007 in Lakeville, MA

April 10, 2007 in Lakeville, MA

The objective of this session was to provide small public water system operators, especially seasonal water system operators, with information on spring start-up considerations, routine small system maintenance, well and storage tank disinfection and end-of-season closing procedures.

Notice of this meeting opportunity was sent to all the public water systems (PWS) in Massachusetts serving populations of less than 10,000 people and was scheduled for March 13 and March 20, 2007. Registration for the March 20th session exceeded 40 people. Because the response to this meeting was so large, an additional session was scheduled and half of the registrants were invited to attend this session scheduled for April 10, 2007. A total of 47 attended these sessions; 12 attended in Eastham, 17 attended in Lakeville on March 20th and 18 attended in Lakeville on April 10th. The presenter was available for individual questions and discussion after the session. Several participants took advantage of this opportunity. The session was 2 hours in length and 1.0 TCH was offered for completing the session under the DEP blanket approval.

- The session focused on discussing information that seasonal PWS operators should have available to them and that they should understand thoroughly before opening their public water system for the season. Recommended maintenance schedules, water quality monitoring schedules and common small system operation issues were discussed. The importance of source water protection and water quality monitoring as means of ensuring a safe and adequate supply of drinking water were also discussed.
- The sessions included excellent discussion among the small system operators who were present. Small system experiences with several water quality problems (e.g. coliform bacteria, lead and copper issues) were shared.
- The PWS operators also compared their water systems' operator license requirements. Most systems were operated under a VSS operator license and several systems present were required to be operated by a Grade 1 Treatment Operator. For some systems a change in operator license requirements was the result of water treatment changes at the PWS.
- Distributed modified guide booklet from EPA; handouts on disinfection of a well water supply; pamphlet on wellhead protection tips and pocket sampling guide for operators of small water systems.

Mentoring Session

Contract Operators

January 31, 2008—Millbury, MA

The objective of this session was to provide a forum for the contract operators to meet and discuss common issues, to provide them with updated regulatory information to assist them in performing their responsibilities, to review and assist with compliance issues, and to facilitate and improve communications.

Notice of the meeting was sent to the contract operators who have systems in the Central Region and also to laboratories that deal with the systems in the region. Notice of the session was also posted to the Small Systems Web site and the flyer was sent via email to selected operators to encourage attendance. There were 23 in attendance at the session, including 11 contract drinking water operators, 8 laboratory representatives, and representatives from DEP and MCSSA. The session was 2 hours in length and all participants completed the session and received 1.0 TCH under the MassDEP blanket approval.

Summary

- The agenda topics focused on regulatory programs and responsibilities of drinking water operators, water quality monitoring schedule and reporting updates, including asbestos monitoring, monitoring waivers, microscopic particulate analysis, total coliform monitoring, secondary contaminants, manganese, oxygenates, Disinfection By-Products Rule and Long Term 2 Enhanced Surface Water Treatment Rule and Lead and sampling multiple sources.
- A major part of the meeting consisted of the proper use of water quality sampling codes for routine vs. special sampling, VOC reports, Radionuclide Report, Total Coliform, DBPR, Chlorine/Chloramines, HAA5 and TTHM. DEP staff discussed the problems they see with how some things are reported and why they reject some of the reports.
- Responses to violations were discussed and the requirements for public notification.
- The Lead and Cooper Rule and DEP updates were also discussed. DEP staff distributed outstanding compliance issues to contract operators and handouts on all of the above topics.

There was a lot of opportunity for the operators and labs to ask questions of DEP staff. The session went longer than scheduled and evaluations from the session were very positive.

Mentoring Session

Meter Management

March 4, 2008--Wilmington, MA

April 15, 2008--Millbury, MA

April 16, 2008--Lenox, MA

The objective of this session was to discuss the management of a utility's water metering infrastructure. Topics included the proper selection, sizing, installation, routine testing, maintenance and rotation (change out) of the meters. Various metering technologies were presented including disc, turbine, compound, fire service and magnetic flow meters. Brief animations were used to demonstrate how each type of meter operates. An informal exercise with the participants addressed selection of turbine vs. compound meters as well as appropriate meter sizing. Proper installation was overviewed. AWWA's recommendations for meter testing intervals were presented along with the procedure for field testing small and large meters. A brief introduction to automatic meter reading was provided.

Notices of the meetings were sent to all systems serving under 10,000 population. Notice of the session was also posted to the Small Systems Web site and the flyer was sent via email to selected systems to encourage attendance. There were 9 in attendance at the session in Wilmington; 14 in attendance at the session in Millbury and 17 in attendance in Lenox. The session was 2 hours in length and all participants completed the session and received 1.0 TCH under the MassDEP blanket approval.

Summary

- ◆ Participants discussed issues relating to their own metering systems and received feedback from their colleagues on how they dealt with issues relative to metering systems and customer complaints.
- ◆ New technologies were discussed that might help detect leaks faster including data loggers and data profiling within a metering system
- ◆ Meter testing was discussed at great length and the emphasis was put on the meter being the "cash register" for the utility.
- ◆ Participants were given information on MassDEP's upcoming Water Conservation Grant.
- ◆ The presenter was available for one-on-one questions following the sessions.

Mentoring Session

Flow Measurement and Calibration for Venturi Meters

April 9, 2008—East Freetown, MA

The objective of this session was to discuss the management of a utility's Venturi metering infrastructure. Topics included: Applications of Flow Measurements; Equipment Used for Venturi's; Venturi Meter Installations; Hands On Installations and Calibration Techniques; Complete Venturi Meter Accuracy Testing: Typical meters to test; Flow measurement instrumentation and preparation; Meter testing procedures; Evaluation of results; Frequency of testing. The session concluded with a tour of the City of New Bedford's Quittacas Water Treatment Plant located in East Freetown, MA.

To target the discussion and make it more beneficial for participants, notice of the meeting was sent to all systems in the southeast region serving between 5,000 and 10,000 population. Notice of the session was also posted to the Small Systems Web site and the flyer was sent via email to selected systems to encourage attendance. There were 11 participants attending this session. The session was over 2 hours in length and all participants completed the session and received 1.0 TCH under the MassDEP blanket approval.

Summary

- ◆ Participants discussed issues relating to their own Venturi metering systems and received feedback from their colleagues on how they dealt with issues relative the location and sizing of Venturi meters.
- ◆ Actual testing instruments were shown and made available for participants to look at.
- ◆ Routine calibration and testing of the meters was highlighted as a way to increase the accountability within the system.
- ◆ The session ran well over the allotted time given the number of participants interested in looking at all aspects of the Quittacas Treatment Plant and asking questions.
- ◆ The presenters were available for one-on-one questions following the sessions.

Mentoring Session

Tools for Small Water System Survival: Understanding Asset Management

April 22, 2008—Hamilton, MA

April 24, 2008—Mashpee, MA

May 13, 2008—Littleton, MA

May 15, 2008—Amherst, MA

The objective of this session was to provide information about planning for their water system's financial future.

Notices of the meetings were sent to all systems serving under 10,000 population. Notice of the session was also posted to the Small Systems Web site and the flyer was sent via email to selected systems to encourage attendance. There were 2 in attendance at the session in Hamilton (4 were originally registered and 2 did not show that day); 10 in attendance at the session in Mashpee, 6 in attendance in Littleton and 12 in attendance in Amherst. The session was 2 hours in length and all participants completed the session and received 1.0 TCH under the MassDEP blanket approval.

Summary

- ◆ The presentation was designed to focus upon the need to manage the "water system's" assets, and to better define the true assets of this system.
- ◆ The presentation, materials, and subsequent discussions help to set a frame work for such an individualized assessment and management. A great deal of these materials came from the EPA STEP publications.
- ◆ The end result, (goal) of the sessions is to have a dynamic management system being utilized by the participants. This working document and evolving methodology should include such aspects of a "water system" as infrastructure, watershed protection, staff and public knowledge and communication, which affects the real time function of the existing system.
- ◆ The presenter was available for one-on-one questions following the sessions and will be following up with several systems who requested more info.

Mentoring Session

GIS Applications: Improving Water System Management for Public Water Systems

April 23, 2008—Westfield, MA

May 6, 2008—Plymouth, MA

May 21, 2008—Chelmsford, MA

May 29, 2008—Rutland, MA

The objective of this session was to provide information about a geographic information system, GIS, and its capabilities as an information management tool for small water systems.

Notice of the meetings was sent to all systems serving under 10,000 population. Notice of the session was also posted to the Small Systems Web site and the flyer was sent via email to selected systems to encourage attendance. There were 7 in attendance at the session in Westfield; 20 in attendance at the session in Plymouth, 6 in attendance in Chelmsford and 12 in attendance in Rutland. The session was 2 hours in length and all participants completed the session and received 1.0 TCH under the MassDEP blanket approval.

Summary

- ◆ The session provided an introduction to GIS and its applications for small water systems. An explanation was also given about the various data layers in GIS and how GIS differs from CAD.
- ◆ Through demonstrations, the attendees learned about GIS capabilities and how the data management system can be utilized in making critical decisions about water system repairs or expansion.
- ◆ The presentation included an explanation of how a GIS system can be developed, including methods to collect pertinent data, phases of development and costs.
- ◆ The importance of planning was reviewed, both in the preliminary development and for on-going maintenance, as new data will continually need to be added to the GIS system.
- ◆ The presentation included a demonstration of several GIS applications.
- ◆ Equipment needs and costs were also discussed.
- ◆ The fact that on-going maintenance and data updates are essential was emphasized.
- ◆ Several attendees indicated that their communities were currently evaluating a GIS system and that the information presented was helpful to them. Those who are using GIS shared their experiences with the other operators.
- ◆ Questions were raised about possible funding for start up.
- ◆ The presenters were available for one-on-one questions following the sessions.

Mentoring Session

Slow Sand Filtration Session and Tour

May 20, 2008—Blandford, MA

The focus of this session was to provide a forum for small water systems that operate slow sand filtration plants to hear about the design and construction of the new Long Pond Treatment Plant in Blandford and to tour the new facility. It also allowed these operators to share knowledge and experiences about their own facilities.

Notice of the meeting was sent to public water systems with slow sand filtration plants. Most of the slow sand filtration plants in Massachusetts include very small systems in Western Mass. In order to promote mentoring between water systems, an invitation to the meeting was also sent to larger systems in order to gain the benefit of their knowledge and experience.

There were 12 participants at the session. The attendees included slow sand filtration operators, water superintendents, MCSSA partners, consultants and DEP staff.

Summary

- The session included a presentation on the design and construction of the Long Pond Treatment Facility by the consulting engineers, Tighe and Bond.
- The time and frequency of backwashing was discussed, along the fact that this plant has minimal to no sand loss during the process. One of the attractive features of this type of plant is that it requires minimal labor.
- This plant uses ozone during the treatment process, so there was a lot of discussion about ozone, how it is measured and the testing process.
- DEP confirmed that the operator of this plant does not need a wastewater license for the lagoon that has a NPDES permit.
- There was an excellent exchange of information regarding design and operation issues of all the plants that the attendees manage.
- A tour of the plant followed the session and the operator and consulting engineers were available for one-on-one questions.

V. OPERATOR TRAINING/ON-SITE OPERATOR OUTREACH

The ERG portion of the grant contains three distinct deliverables – seventeen (17) operator training workshops, twelve (12) on-site/operator outreach sessions, and an operator reimbursement scholarship program.

The distribution is as follows:

Training Workshops

MWWA	10
MRWA	7 (as of August 1, 2007)

On-Site Outreach

MWWA	12
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Operator Reimbursement

NEWWA	ongoing
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TRAINING WORKSHOPS

Massachusetts Water Works Association

VSS Exam Prep

Eight VSS Exam Prep training workshops were held during this contract:

- October 24, 2006 in Chelmsford
- October 25, 2006 in Lakeville
- October 30, 2006 in Rutland
- October 31, 2006 in Lee
- June 25, 2007 in Northampton
- October 23, 2007 in Northampton
- October 31, 2007 in Mashpee
- May 22, 2008 in Mashpee

The VSS classes presented a review of what is typically covered on the MA small drinking water system exam, including test-taking skills and material to promote good operator skills. Sample test questions as a guide to review the various subject areas covered in the VSS and Grade 1 Operator Certification exams were used for pre- and post-testing. 0.2 CEUs, (equivalent to 2 TCHs) were offered for the 2-hour class.

Outreach for the classes included a mailing to all Very Small Systems serving <3,300 (1,472) 6-8 weeks before the first class. Notice of the class was also posted to the Small Systems Web site.

Attendance, as well as pre- and post-test results was as follows:

Date	Location	Number Attending	Pre-Test Result	Post-Test Result
October 24	Chelmsford	5	65	95
October 25	Lakeville	9	82	98
October 30	Rutland	5	60	93
October 31	Lee	17	55	85
June 25	Northampton	15	49	73
October 23	Northampton	16	55	88
October 31	Mashpee	16	62	80
May 22	Mashpee	4	69	75

Please see Appendix C to review the notice mailed to PWS systems serving 3,300 or less.

Please see Appendix D for course evaluations.

Referrals were made for one-on-one technical assistance with other partners.

Math Review

Two sessions were held on April 29, 2008 in Beverly and May 27, 2008 in Millbury.

The Math Review classes presented an overview of solving for the unknown value; using equations and formulas; ratios and proportions; unit conversions; calculating area, volume, pressure, head and flow; chemical dosage and temperature. Sample test questions as a guide to review the various math problems covered in the VSS and Grade 1 Operator Certification exams were used for pre- and post-testing. 2 TCHs were offered for the 2.5 hour class.

Outreach for the classes included a mailing to all Very Small Systems serving <3,300 in the Commonwealth. Notice of the class was also posted to the Small Systems Web site.

Attendance, as well as pre- and post-test results was as follows:

Date	Location	Number Attending	Pre-Test Result	Post-Test Result
April 29, 2008	Beverly	4	33	57
May 27, 2008	Millbury	6	25	50

*The length of the pre/post test caused students in these sessions to be unable to complete some of the problems within the allotted time.

MassRural Water Association

Confined Space Entry

Held on:

February 12, 2008 West Bridgewater Water Department, West Bridgewater, MA

May 7, 2008 Clarksburg Water Department, Clarksburg, MA

This course discussed confined spaces and entry into confined spaces. Participants received 0.4 CEUs, (equivalent to 4 TCHs) upon completion of the course.

The agenda was as follows:

- What is a Confined Space
- What is a Permit Required Confined Space
- Massachusetts Right to Know Law
- Public Sector Employee Health and Safety
- Confined Space Entry Programs
- Procedures for Confined Space Entry
- Trench Hazards

The instructor was:

Nancy Comeau, Hygiene/Indoor Air Quality Program Supervisor, Massachusetts Division of Occupational Safety.

Emails and flyers were mailed to public water systems in the area of the training.

Course stats were as follows:

<i>Location</i>	<i>Date</i>	<i>Attendance</i>	<i>Pre-Test Average</i>	<i>Post-Test Average</i>
West Bridgewater	February 12, 2008	14	67	92
Clarksburg	May 7, 2008	23	73	91

Overall, the course received 4.9 (West Bridgewater) and 4.9 (Clarksburg) ratings out of 5. To view the course evaluations in complete detail, please see Appendix D.

Please see Appendix C for a copy of the Agenda.

Line and Leak Detection

Held on:

November 27, 2007 Halifax Water Department, Halifax, MA

April 29, 2008 East Brookfield Water Department, Brookfield, MA

This course discussed methods of line locating and leak detection. Participants received 0.3 CEUs, (equivalent to 3 TCHs) upon completion of the course.

The agenda was as follows:

- Pipe Locating History
- Mother Nature Effects on Locating
- Ghost Signals
- Utilities in the same trench
- Leak locating history
- Problems with leak detection

The instructor was:

Alan Banks, President of C.A. Turner Co., of Leicester, Massachusetts and Metrotech-District Sales Manager Eastern Region Water Products of Santa Clara, California. Alan Banks has over 40 years of experience in the water supply field focusing on Line and Leak detection.

Emails and flyers were mailed to public water systems in the area of the training.

Course stats were as follows:

<i>Location</i>	<i>Date</i>	<i>Attendance</i>	<i>Pre-Test Average</i>	<i>Post-Test Average</i>
Halifax	November 27, 2007	23	62	98
Brookfield	April 29, 2008	43	92	94

Overall, the course received 4.2 (Halifax) and 4.6 (Brookfield) ratings out of 5. To view the course evaluations in complete detail, please see Appendix D.

Please see Appendix C for a copy of the Agenda.

Surface Water Training

Held on:

February 27, 2008 Springfield Water and Sewer Commission, Westfield, MA

This course discussed various topics related to surface water supplies with eight different speakers. Participants received 0.6 CEUs, (equivalent to 6 TCHs) upon completion of the course.

The agenda was as follows:

- Regulatory Update
- Introduction to MA Water/Wastewater Mutual Aid Agreement
- Chemical Treatment
- Control of Secondary Contaminants
- Calibrating of in-line analyzers
- Tour of SWSC Westfield Plant
- Dam Remediation
- Dam Upkeep and Record Keeping

The instructors were:

Dan Laprade, MA DEP Water Division

James Controvich, SWSC

John Tobiason, University of Massachusetts, Amherst

David Lenart, Tighe and Bond, Inc.

Christopher Haker, Tighe and Bond, Inc.

Ken Pousland, Hach Company

Ralph Tarnauskas, SWSC

Frank Zabaneh, SWSC

Emails and flyers were mailed to public water systems in the area of the training.

Course stats were as follows:

<i>Location</i>	<i>Date</i>	<i>Attendance</i>	<i>Pre-Test Average</i>	<i>Post-Test Average</i>
SWSC Westfield	February 27, 2008	33	68	83

Overall, the course received 4.4 ratings out of 5. To view the course evaluations in complete detail, please see Appendix D.

Please see Appendix C for a copy of the Agenda.

Trench Safety

Held on:

May 1, 2008 Groveland Water Department, Groveland, MA

May 2, 2008 Orange Water Department, Orange, MA

This course discussed trenching and entry into trenches. Participants received 0.3 CEUs, (equivalent to 3 TCHs) upon completion of the course.

The agenda was as follows:

- Trench Hazards
- How to properly secure a trench for entry
- Trench shoring equipment
- Massachusetts Trench Laws approved January 1, 2008

The instructor was:

Hilary Eustace, Environmental Engineer, Massachusetts Division of Occupational Safety.

Emails and flyers were mailed to public water systems in the area of the training.

Course stats were as follows:

<i>Location</i>	<i>Date</i>	<i>Attendance</i>	<i>Pre-Test Average</i>	<i>Post-Test Average</i>
Groveland	May 1, 2008	21	68	85
Orange	May 2, 2008	36	67	87

Overall, the course received 4.7 (Groveland) and 4.6 (Orange) ratings out of 5. To view the course evaluations in complete detail, please see Appendix D.

Please see Appendix C for a copy of the Agenda.

ON-SITE OUTREACH

Massachusetts Water Works Association

December 6, 2006 – Attleboro High School Career Fair Attleboro, MA

The Attleboro Career Fair provided an opportunity for the coalition to address 40 students during two class periods on December 6, 2006. The coalition presented students and teachers with an introduction to water supply career opportunities and instruction on drinking water operations.

During the coalition presentations, students participated in a surface water treatment filtration lab demonstration. The lab simulates chemical addition, flocculation, sedimentation, filtration, and clear well storage. The coalition also used a PowerPoint presentation to provide a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment. The following handouts were provided to each student: Instructions for performing the filtration lab demonstration titled: *EPA Environmental Education – WATER FILTRATION*; EPA’s surface water filtration handout titled: *Blue Thumb Water Treatment Plant*; career descriptions adopted from New England Water Works Association’s publication titled: *Careers in Drinking Water*; and a list of pertinent water supply related Web sites. Each session concluded with a question and answer period.

March 14, 2007 – Blackstone Valley Chamber of Commerce Education Foundation Regional Career Fair and Drinking Water Operations Instruction Northbridge High School, Whitinsville, MA

The Blackstone Valley Regional Career Fair provided an opportunity for the Coalition to address a very large number of students on March 14, 2007. Approximately 1,000 students representing nine Blackstone Valley high schools visited the Career Fair during a 3 ¼ -hour timeframe. The high schools that attended were: Uxbridge High School, Grafton High School, Millbury High School, Hopedale High School, Northbridge High School, Blackstone – Millville Regional High School, Nipmuc High School, Douglas High School, and Blackstone Valley Regional Vocational Technical High School.

Students visiting the Coalition booth were provided instruction on drinking water operations through an interactive surface water filtration lab demonstration and an associated PowerPoint presentation which provided a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment.

Numerous handouts were available for the students including copies of instructions for performing the filtration lab demonstration titled EPA Environmental Education – WATER FILTRATION, EPA’s surface water filtration handout titled Blue Thumb Water Treatment Plant, career descriptions adopted from New England Water Works Association’s publication titled *Careers in Drinking Water*, and a list of pertinent water supply related websites.

March 28, 2007 – Science Technology Engineering and Math (STEM) Convention and Drinking Water Operations Instruction Western New England College, Springfield, MA

The Science, Technology, Engineering, and Math (STEM) Convention provided an opportunity for the Coalition to address a very large number of students on March 28, 2007. Eight high schools, including students from Belchertown High School, Minnechaug Regional High School, Monson High School, Palmer High School, Pathfinder Regional Vocational Technical High School, Putnam High School, Smith Vocational High School, and Tantasqua High School attended the career fair during the 4 ½ hour timeframe. Approximately 200 students were selected by their teachers and counselors to attend

the STEM Convention. Students were selected to attend based upon their interest in science, technology, engineering and math, as well as their academic standing. Students visiting the Coalition booth were provided instruction on drinking water operations through an interactive surface water filtration lab demonstration and an associated PowerPoint presentation which provided a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment. Numerous handouts were available for the students including copies of instructions for performing the filtration lab demonstration titled *EPA Environmental Education – WATER FILTRATION*, EPA’s surface water filtration handout titled *Blue Thumb Water Treatment Plant*, career descriptions adopted from New England Water Works Association’s publication titled *Careers in Drinking Water*, and a list of pertinent water supply related websites.

March 29, 2007- Dennis-Yarmouth Regional High School Career Fair and Drinking Water Operations Instruction

Dennis-Yarmouth Regional High School, Dennis, MA

The Dennis-Yarmouth Regional High School Career Fair provided an opportunity for the Coalition to instruct 40 students during 2 class periods on March 29, 2007. Students enrolled in these 2 sessions had expressed interest in careers in engineering and science. The Coalition presented students and teachers with an introduction to water supply career opportunities and instruction on drinking water operations.

During the Coalition instruction, students participated in a surface water treatment filtration lab demonstration. The lab simulates chemical addition, coagulation, sedimentation, filtration, and clear well storage used in surface water treatment. The Coalition also used a PowerPoint presentation to provide a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment. The PowerPoint presentation was used to reinforce the filtration lab demonstration. Numerous handouts were available for the students including copies of instructions for performing a water filtration lab demonstration titled *EPA Environmental Education – WATER FILTRATION*, EPA’s surface water filtration handout titled *Blue Thumb Water Treatment Plant*, career descriptions adopted from New England Water Works Association’s publication titled *Careers in Drinking Water*, and a list of pertinent water supply related websites. The students were encouraged to utilize these websites to explore drinking water operation careers.

Athol High School Drinking Water Operations Instruction and Operator Outreach with the North Quabbin School to Career Partnership

May 9, 2007 at Athol High School, Athol, MA

This instruction at the Athol High School provided an opportunity for the Coalition to instruct approximately 25 students during a 90 minute class period on May 9, 2007. In addition to the Coalition’s instruction, the Coalition representative met with the Director of the North Quabbin School to Career Partnership. The purpose of the meeting was to discuss public sector career opportunities in water supply. The School to Career Partnership is working to emphasize public service careers as options that students may wish to consider as they make their career choices. In follow-up to the meeting, the Coalition provided public water supply educational materials to support the school to career program’s initiative.

The students receiving the instruction are members of an Environmental Science class. The Coalition presented students and their teacher with an introduction to water supply career opportunities and instruction on drinking water operations. The setting for this instruction was very good as students had received instruction from their classroom teacher on ground water as a source of drinking water and had toured the local public water supply ground water treatment facility and a sewage treatment plant. Students were familiar with the concepts of filtration, pH adjustment, source water protection, and water quality in general. The students were also preparing for a field trip to the Quabbin Reservoir for a tour and instruction on watershed management.

During the Coalition instruction, students performed a surface water treatment filtration lab. The lab simulates chemical addition, coagulation, sedimentation, filtration, and clear well storage used in surface water treatment. The Coalition also used a PowerPoint presentation to provide a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment. The PowerPoint presentation was used to reinforce the filtration lab demonstration.

A discussion of the water professional’s work setting; some time at a desk completing reports and paperwork, as well as the opportunity to work outdoors on a water supply watershed, reservoir, at a well field, or in the distribution system drew interest from the students. The students were quite aware of the sensitivity of ground water supplies to contamination. This created an opportunity to discuss the importance of source water protection programs in Massachusetts and nationally.

Numerous handouts were available for the students including copies of instructions for performing a water filtration lab demonstration titled *EPA Environmental Education – WATER FILTRATION*, EPA’s surface water filtration handout titled *Blue Thumb Water Treatment Plant*, career descriptions adopted from New England Water Works Association’s publication titled *Careers in Drinking Water*, and a list of pertinent water supply related websites. The students were encouraged to utilize these websites to explore drinking water operation careers.

May 15, 2007- Athol High School Drinking Water Operations Instruction
Athol High School, Athol, MA

This instruction at the Athol High School provided an opportunity for the Coalition to instruct approximately 28 students during a 90 minute class period on May 15, 2007. The students receiving the instruction were members of an Environmental Sciences class. The Coalition presented the students and their teacher with an introduction to water supply career opportunities and instruction on drinking water operations. The setting for this instruction was very good as students had received instruction from their classroom teacher on ground water as a source of drinking water and had toured the local public water supply ground water treatment facility and a sewage treatment plant previously. Students were familiar with the concepts of filtration, pH adjustment, source water protection, and water quality in general. The students were also preparing for a field trip to the Quabbin Reservoir for a tour and instruction on public water supply watershed management.

During the Coalition instruction, students performed a surface water treatment filtration lab demonstration. The lab simulates chemical addition, coagulation, sedimentation, filtration, and clear well storage used in surface water treatment. The Coalition also used a PowerPoint presentation to provide a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment. The PowerPoint presentation was used to reinforce the filtration lab demonstration.

A discussion of the water professional’s work setting; some time at a desk completing reports and paperwork, as well as the opportunity to work outdoors on a water supply watershed, reservoir, at a well field, or in the distribution system drew interest from the students. The students were quite aware of the sensitivity of ground water supplies to contamination. This created an opportunity to discuss the importance of source water protection programs in Massachusetts and nationally.

Numerous handouts were available for the students including copies of instructions for performing a water filtration lab demonstration titled *EPA Environmental Education – WATER FILTRATION*, EPA’s surface water filtration handout titled *Blue Thumb Water Treatment Plant*, career descriptions adopted from New England Water Works Association’s publication titled *Careers in Drinking Water*, and a list of pertinent water supply related websites. The students were encouraged to utilize these websites to explore drinking water operation careers.

March 20, 2008 – Tech Prep Career Fair—Holyoke Community College, Holyoke, MA

The 12th Annual Tech Prep Career Fair provided an opportunity for the Coalition to address a very large number of students on March 20, 2008. Approximately 700 students representing nineteen high schools visited the Career Fair during a 3 -hour timeframe. The high schools that attended were: Easthampton, Monson, Westfield, Career and Tech Ed, Minnechaug Regional, Holyoke, Putnam, Smith Vocational, Belchertown, Westfield Vocational, Palmer, Agawam, Tantasqua Regional, Hampshire Regional, Chicopee Comp, Chicopee, Pathfinder Regional, ECHS and Mt. Tom Academy.

Students visiting the Coalition booth were shown a PowerPoint presentation which provided a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment. EPA’s Safe Drinking Water Act - Protecting America’s Public Health illustration was also available to show how water gets from the source to the tap and the levels of protection along the way.

Numerous handouts were available for the students including copies of career descriptions adopted from New England Water Works Association’s publication titled *Careers in Drinking Water*, and copies of the Career Opportunities Reference Guide on Drinking Water and Wastewater Treatment Industries assembled by New England Water Works Association and New England Water Environment Association. Contacts were made with Holyoke Community College’s Kittredge Center for Business and Workforce Development and with the Dean of the Science, Engineering and Mathematics Division for the college.

April 3, 2008--Blackstone Valley Chamber of Commerce Education Foundation Regional Career Fair --Northbridge High School, Whitinsville, MA

The Blackstone Valley Regional Career Fair provided an opportunity for the Coalition to address a very large number of students on April 3, 2008. Approximately 1,000 students representing ten Blackstone Valley high schools visited the Career Fair during a 3 ¼ - hour timeframe. The high schools that attended were: Uxbridge High School, Grafton High School, Millbury High School, Hopedale High School, Northbridge High School, Blackstone – Millville Regional High School, Sutton High School, Nipmuc High School, Douglas High School, and Blackstone Valley Regional Vocational Technical High School.

Students were prescreened and encouraged to visit the top three areas that they scored highest on. Students came prepared to ask certain questions of the presenters in the cluster. Students visiting the Coalition booth were shown a PowerPoint presentation which provided a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment. EPA’s Safe Drinking Water Act - Protecting America’s Public Health poster was also available to show how water gets from the source to the tap and the levels of protection along the way.

Numerous handouts were available for the students including copies of career descriptions adopted from New England Water Works Association’s publication titled *Careers in Drinking Water*, and copies of the Career Opportunities Reference Guide on Drinking Water and Wastewater Treatment Industries assembled by New England Water Works Association and New England Water Environment Association.

**April 10, 2008—Dennis/Yarmouth Regional High School Career Fair
Dennis-Yarmouth Regional High School, Dennis, MA**

The Dennis-Yarmouth Regional High School Career Fair provided an opportunity for the Coalition to instruct 26 students during 2 class periods on April 10, 2008. Students enrolled in these 2 sessions had expressed interest in careers in environmental/science field. It is interesting to note that this sector had among the lowest interest. Fields like sports, business and health/medical had greater numbers of participants, highlighting the need to bring greater awareness to the opportunities in this industry.

Bill Chapman, Superintendent of the Falmouth Water Department discussed the various aspects of his job and of the water professional's work setting; some time at a desk completing reports and paperwork, as well as the opportunity to work outdoors on a water supply watershed, reservoir, at a well field, or in the distribution system drew interest from the students. The possibilities and sources of contamination and the water analysis that is required by public water suppliers was discussed and this generated further discussion about the difference between tap and bottled water. Education and training and future job opportunities were highlighted.

Numerous handouts were available for the students including copies of career descriptions adopted from New England Water Works Association's publication titled *Careers in Drinking Water*, and copies of the Career Opportunities Reference Guide on Drinking Water and Wastewater Treatment Industries assembled by New England Water Works Association and New England Water Environment Association.

May 2, 2008—Turners Falls Career Exploration and Information Fair –Turners Falls High School, Montague, MA

The Turners Falls Career Fair provided an opportunity for the Coalition to address a very large number of students on May 2, 2008. Approximately 320 students from grades 9-12 visited the Career Fair during a 3 hour timeframe.

Students visiting the Coalition booth were shown a PowerPoint presentation which provided a "virtual tour" through a surface water treatment plant that utilizes complete conventional treatment. EPA's Safe Drinking Water Act - Protecting America's Public Health poster was also available to show how water gets from the source to the tap and the levels of protection along the way. Student from all grades were very engaged and asked a lot of questions about the industry and how one might enter the profession.

Numerous handouts were available for the students including copies of career descriptions adopted from New England Water Works Association's publication titled *Careers in Drinking Water*, and copies of the Career Opportunities Reference Guide on Drinking Water and Wastewater Treatment Industries assembled by New England Water Works Association and New England Water Environment Association. Contacts were made with the Franklin Hampshire Career Center; they are interested in helping post open jobs in the industry.

May 7, 2008—Blackstone-Millville Regional High School Career Fair, Blackstone, MA

The Blackstone/Millville Regional High School Career Fair provided an opportunity for the Coalition to address approximately 350 students from grades 10-12 during a 2 hour timeframe. Robert Sims, Senior Engineer from Pare Corporation spoke to students about careers in the drinking water industry.

Numerous handouts were available for the students including copies of career descriptions adopted from New England Water Works Association's publication titled

Careers in Drinking Water, and copies of the Career Opportunities Reference Guide on Drinking Water and Wastewater Treatment Industries assembled by New England Water Works Association and New England Water Environment Association.

May 14, 2008- Athol High School Drinking Water Operations Instruction
Athol High School, Athol, MA

This instruction at the Athol High School provided an opportunity for the Coalition to speak with approximately 25 students during two class periods at the High School.

The first group of students were members of a chemistry class while the second group of students had signed up for the session based on their interest in exploring the field. The Coalition presented the students and their teacher with an introduction to water supply career opportunities and instruction on drinking water operations.

During the Coalition instruction, a PowerPoint presentation was shown to provide a “virtual tour” through a surface water treatment plant that utilizes complete conventional treatment. Students also viewed a PowerPoint presentation on Water Supply Professionals being developed by MWWA.

A discussion of the water professional’s work setting; some time at a desk completing reports and paperwork, as well as the opportunity to work outdoors on a water supply watershed, reservoir, at a well field, or in the distribution system drew interest from the students. The diversity of careers was highlighted. The importance and value of drinking water and protection of water supplies was discussed in length. Students were very interested in the availability of supply for the future and wanted to understand about the use of reclaimed water.

Numerous handouts were available for the students including copies of career descriptions adopted from New England Water Works Association’s publication titled *Careers in Drinking Water*, and copies of the Career Opportunities Reference Guide on Drinking Water and Wastewater Treatment Industries assembled by New England Water Works Association and New England Water Environment Association.

OPERATOR REIMBURSEMENT

This portion of the grant was designed to reimburse operators and/or potential operators who are affiliated with PWSs that serve 3,300 or less for the cost of attending a full-day (or two half-day) training seminars, including exam fees for the VSS and D1 exams, as well as travel expenses up to \$30.00 (with the exception of the VSS and D1 exams). Reimbursement is limited to one per person during the 24-month contract.

The coalition updated the application for operators to complete and return to NEWWA for reimbursement. This form is included in all mailings to PWSs serving less than 3,300 and is also posted on the MCSSA Web site. During this contract, thirty-two (32) forms were submitted for reimbursement and approved with a total amount of \$5,772.71 reimbursed.

To review the operator reimbursement application form and spreadsheet of forms processed from the beginning of the contract, please see Appendix E.

VI. Small Systems Web site

The small system's Web site provides information about the MCSSA, the services it provides, a calendar/schedule of programs and events for both group and operator training, and links to other pertinent sites, such as the Web sites of the MCSSA member organizations.

The MCSSA Web site name is registered as www.masmallwatersystem.org.

All training-related events (mentoring sessions, operator training, and group trainings) are posted as they are scheduled, and visitors to the site can also download the operator reimbursement scholarship application.

VII. National Theatre for Children

2007-2008

During this contract, The "National Theatre for Children" troupe performed across Massachusetts during Drinking Water Week 2007, which was May 6-12, and 2008, which was May 4-10. Through the MCSSA contract, eight days were sponsored for both years. Troupes and locations included:

2007

- "Showdown at Dry Gulch" in Fall River, Orange, Amherst, and Sunderland
- "Hercules: The Poseidon Puzzle" in Brookfield, Paxton, Leicester, Danvers, and Beverly
- "Ocean's 3.5" in Dorchester

2008

- "Showdown at Dry Gulch" – three locations within Mass.
- "Hercules" – three locations within Mass.
- "Ocean's 3.5" – one location within Mass.
- "A Boatload of Trouble" – one location within Mass.

All four regions were represented and had troupes performing during Drinking Water Week. As always the troupes are very well received and the subject matter of the performances is relevant to water conservation, wise water use, water resources, and environmental protection.

To view the complete schedule of National Theatre for Children performances during Drinking Water Weeks 2007 & 2008, please see Appendix F.

VIII. Materials to Assist PWS

NEWWA assisted with the editing and coordinated the printing of 3,000 copies of "A Business Owner's Guide to Complying with MA State Drinking Water Rules," which is a "How-to-Guide" for transient non-community water systems. This document is a simple, easy-to-read piece that will give owners of TNCs complete and comprehensive information on what is required of them in order to keep their system within compliance. Each MassDEP region received copies of this booklet, and it will also be distributed during one-on-one site visits, as well as at water supplier trainings and events.

NEWWA also coordinated the reprinting of 250 copies of the "Pocket Sampling Guide for Operators of Small Water Systems" for distribution to small systems during trainings and TA visits. This guide was produced by NEWWA approximately 5 years ago and due to

its popularity and simplicity, more were needed to continue to provide small system operators and owners of facilities the resources they needed for regulatory compliance.

IX. Project Assessment

At the 24-month mark of this 24-month contract, all deliverables are complete with the exception of 50 site visits, which is explained in the Site Visit section (III). All programs ran smoothly throughout the duration of the contract, with extremely high attendance and positive post-test results as well as evaluations at all training events. This is indicative of proper selection of topics that are most applicable to small systems, as well as the caliber of those instructing the courses. By offering high quality, half-day courses to those serving small systems, who normally do not have the time or funding to attend other courses, the coalition is helping to ensure that the operators and owners of these systems receive the intellectual capital needed to run their system safely and securely.

The site visits conducted are valuable to the coalition partner and subcontractors as well as the systems receiving the assistance. Many systems have received assistance on how to properly manage their system, to source water protection, to compliance with the lead and copper rule. Individual, one-on-one contact with these operators, most of which operate alone, is an invaluable asset not only for those receiving the assistance, but for the overall safety and protection of public health.

The addition of Mass Rural Water Association as a subcontractor effective August 1, 2007, has also proven to be a valuable addition. All partners and subcontractors worked well together to ensure the maximum benefits to public water systems receiving services.

At the end of this period the total remaining budget was \$268,182.83. The original budgeted amount for the period of July 1, 2006 through June 30, 2008 was \$1,011,009.55. This is in addition to a leftover amount of \$137,824.48 from the previous phase being rolled over into the current phase to fund the operator reimbursement scholarship program as well as the materials to assist public water supplier's line items. The addition of Mass Rural Water Association also brought an additional \$100,000 into the contract.

With 100 percent of the contract extension completed, a total of \$742,826.72, or 73 percent of the original budget has been expensed.

The final project budget can be found in Appendix G .