New England Drinking Water Quality Assurance Project Plan

CT Department of Public Health, ME Department of Health and Human Services, MA Department of Environmental Protection, NH Department of Environmental Services, RI Department of Health, VT Department of Environmental Conservation, and US Environmental Protection Agency.

NEW ENGLAND STATES DRINKING WATER PROGRAMS QUALITY ASSURANCE PROJECT PLAN (QAPP)

Revision 3.3

July 2008

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Rev. 2.0, Sept. 7, 2001
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Rev. 2.2, Mar. 28, 2002
Rev. 2.3, Aug. 12, 2002

This QAPP was prepared jointly by representatives of
the Drinking Water Programs of the six New England States
with assistance from EPA New England.

Concurrence Page

New England States' Drinking Water Programs Quality Assurance Project Plan
Rev. 3.3
July 2008

Program Managers

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Signature Date

Maine Department of Health & Human Services — Roger Crouse, P.E.

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New England States Drinking Water Programs
Quality Assurance Project Plan (QAPP)
Workgroup

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Marie Tennant of the Massachusetts Department of Environmental Protection produced the original artwork on the cover of this document as well as provided formatting assistance.

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EXECUTIVE SUMMARY

The quality of environmental data generated and used to support management decisions under the Safe Drinking Water Act (SWDA) must be of known and documented quality. The purpose of this New England Drinking Water Quality Assurance Project Plan (QAPP) is to document a process for generating, using and recording data that are appropriate, accurate and usable. In other words, this QAPP is a comprehensive and systematic process to:

- ✓ Get the Right Data,
- ✓ Get the Data Right and,
- ✓ Keep the Data Right.

The NE DW QAPP applies to all environmental data gathering activities that are intended to generate compliance data under the SDWA.

EPA and all six New England States contributed to the development of this document. Each state contributed specific quality assurance and quality control practices used by each environmental agency providing the flexibility to incorporate QA/QC practices on a state-specific basis. EPA's Quality Assurance Unit reviewed and approved the content of this document that ensures that each state incorporates all of the essential elements necessary to generate and control data of known and documented quality.

Specifically, this QAPP documents the roles and responsibilities of policy and technical quality assurance staff for executing quality requirements including:

- ✓ identifying data quality objectives,
- ✓ choosing and executing analytical methods and
- ✓ performing data usability reviews.

The audience for this document includes environmental regulators and scientists, risk assessors and risk managers.

This document is effective as of the date of approval by all six New England State drinking water administrators and EPA New England. Updates to this QAPP will be included to reflect any improvements in analytical methods or changes in quality policies or practices. Data quality is an essential element of an indefatigable commitment to environmental stewardship.

Connecticut

EPA-NE QAPP Worksheet #1

Site Name/Project Name: NE States' DW QAPP
Site Location: Connecticut

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Document Title: State of Connecticut Drinking Water Program Quality Assurance Project Plans

Lead Organization (Agency, State, Tribe, Federal Facility, PRP, or Grantee): CT Department of Public Health (CT/DPH)

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Investigative Organization's Project QA Officer:

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Lead Organization's Project Manager:

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Other Approval Signatures:

Printed Name/ Organization Signature/Date

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Document Control Number: _____

Massachusetts

EPA-NE QAPP Worksheet #1

Site Name/Project Name: NE States' DW QAPP
Site Location: Massachusetts

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Document Title: State of Massachusetts Drinking Water Program Quality Assurance Project Plans

Lead Organization (Agency, State, Tribe, Federal Facility, PRP, or Grantee): Massachusetts Department of Environmental Protection

Preparer's Name and Organizational Affiliation: Nicholas D. Anastas, Ph. D., Mass DEP- DWP

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Document Control Number:

Maine

EPA-NE QAPP Worksheet #1

Site Name/Project Name: NE States' DW QAPP
Site Location: Maine

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Document Title: State of Maine Drinking Water Program Quality Assurance Project Plans

Lead Organization (Agency, State, Tribe, Federal Facility, PRP, or Grantee): Maine Drinking Water Program

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Lead Organization's Project Manager:

Carlton Gardner, Compliance Manager, Maine Drinking Water Program Signature/Date

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Document Control Number:

New Hampshire

EPA-NE QAPP Worksheet #1

Site Name/Project Name: NE States' DW QAPP
Site Location: New Hampshire

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Document Title: New England States, Drinking Water QAPP 2007, New Hampshire

Lead Organization (Agency, State, Tribe, Federal Facility, PRP, or Grantee): New Hampshire Department of Environmental Services (NHDES), Drinking Water & Groundwater Bureau

Preparer's Name and Organizational Affiliation: Richard Thayer, SE II, NHDES Drinking Water & Groundwater Bureau

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Document Control Number: _____

Rhode Island

EPA-NE QAPP Worksheet #1

Site Name/Project Name: NE States' DW QAPP
Site Location: Rhode Island

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Document Title: Rhode Island Drinking Water Quality Assurance Plan

Lead Organization (Agency, State, Tribe, Federal Facility, PRP, or Grantee): Rhode Island Department of Health

Preparer's Name and Organizational Affiliation: June A. Swallow, P.E., Chief, Office of Drinking Water Quality, RI

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Preparation Date (Day/Month/Year): January 23,2007

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Investigative Organization's Project QA Officer:

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Printed Name/ Organization Signature/Date

Document Control Number: _____

Vermont

EPA-NE QAPP Worksheet #1

Site Name/Project Name: NE States' DW QAPP
Site Location: Vermont

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Document Title: Vermont Drinking Water Quality Assurance Project Plan

Lead Organization (Agency, State, Tribe, Federal Facility, PRP, or Grantee): State of Vermont, Agency of Natural Resources, Department of Environmental Conservation, Water Supply Division

Preparer's Name and Organizational Affiliation: Jean M. Nicolai, Water Supply Division Operations and Compliance Chief

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Document Control Number: _____

EPA-NE QAPP Worksheet #2

Site Name/Project Name: NE States' Drinking Water Programs
Site Location: The six New England States
Anticipated date of QAPP Implementation: Upon approval

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page: of

1. Identify Guidance used to prepare QAPP: EPA NE Compendium of Quality Assurance, Oct. 1999

2. Identify EPA Program: Safe Drinking Water Act

3. Identify approval entity: EPA-NE or State: EPA New England Quality Assurance Unit or other entity:

4. Indicate whether the QAPP is a generic program QAPP or a project specific QAPP. (underline one)

5. List dates of scoping meetings that were held: Monthly or biweekly meetings from Nov. 2006 through September 2007

6. List title of QAPP documents and approval dates written for previous site work, if applicable:

Title	Approval Date
New England States' Drinking Water Programs Quality Assurance	Rev. 2.3 – August 12, 2002

7. List organizational partners (stakeholders) and connection with EPA and/or State: The drinking water programs of the following state agencies worked with the EPA New England Regional Office to prepare this document: Connecticut Dept. of Public Health; Maine Dept. of Health & Human Services; Massachusetts Dept. of Environmental Protection; New Hampshire Dept. of Environmental Services; Rhode Island Dept. of Health; and Vermont Dept. of Environmental Conservation

8. List data users: EPA, the above state agencies and the public.

9. If any required QAPP Elements (1-20), Worksheets and/or Required Information are not applicable to the project, then circle the omitted QAPP Elements, Worksheets and Required Information on the attached Table. Provide an explanation for their exclusion below:

Worksheets 14 & 15: No field equipment is used. All samples are collected as grab samples directly into sample containers.

Worksheets 17, 18, 19, 23a & 23b: No field analyses are performed.

Worksheet 25: Non-direct measurements are not performed.

Distribution List

QAPP Recipients	Title	Organization	Telephone Number	Document Control Number
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Darrell B. Smith	Acting Chief	Department of Public Health, Drinking Water Section	860.509.7333	
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John Fontana, Ph.D.	Acting Director	CT Dept. of Public Health Laboratory	860.509.8500	
Mark Sceery	CT PWSS Coordinator	Environmental Protection Agency, Region 1	617.918.1559	

EPA-NE QAPP Worksheet #3 List people who will receive approved QAPP, QAPP revisions, addenda and/or amendments.	**Title**: MA-DWP-QAPP **Revision Number**: B **Revision Date**: 7/12/08 **Page**: 1 of 1

Distribution List

Distribution List

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Damon Guterman	DWP QA Manager	MA Department of Environmental Protection	(617) 574-6811	Project Specific
Yvette dePeiza	WQA Manager	MA Department of Environmental Protection	(617) 292-5857	Project Specific
Deirdre Cabral	DWP Point of Contact-Western Regional Office	MA Department of Environmental Protection	(413) 755-2148	Project Specific
Marielle Stone	DWP Point of Contact-Central Regional Office	MA Department of Environmental Protection	(508) 767-2784	Project Specific
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EPA-NE QAPP Worksheet#3 –
List people who will receive approved QAPP, QAPP revisions, addenda and/or amendments.

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page:1 of 1

QAPP Recipients	Title	Organization	Telephone Number
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Nate Saunders	DWP Field Services Manager	MECDC, Division of Environmental Health Drinking Water Program	(207) 287-5685
Matthew Sica	DWP Quality Assurance Officer	MECDC, Division of Environmental Health Drinking Water Program	(207) 287-1929
Robin Frost	SDWIS Administrator	MECDC, Division of Environmental Health Drinking Water Program	(207) 287-8411
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Scott Whitney	Compliance Staff DWP D & G	MECDC, Division of Environmental Health Drinking Water Program	(207) 287-8487
Dawn Carpenter	Compliance Staff DWP E	MECDC, Division of Environmental Health Drinking Water Program	(207) 287-6471
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QAPP Recipients	Title	Organization	Telephone Number	Document Control Number
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Richard Thayer	Sanitary Engineer	NHDES-DWGB	603-271-2950	
Vincent Perelli	QC Assurance Manager	NHDES-Commission's Office	603-271-8989	

EPA-NE QAPP Worksheet #3 – **L**ist people who will receive approved QAPP, QAPP revisions, addenda and/or amendments	**Title**: RI DOH **Revision Number:**:B **Revision Date**: 7/12/08 **Page**: 1 of 1

Distribution List

QAPP Recipients	Title	Organization	Telephone Number	Document Control Number
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Frederick Kurdziel	Chief Sanitarian	Rhode Island Department of Health, 3 Capitol Hill Rm 209, Providence, RI 02908	401-222-6867	
Ewa King, Ph.D.	Associate Director, Division of Laboratories	Rhode Island Department of Health, Chapin Laboratory, 50 Orms Street, Providence, RI 02908	401-222-5600	
Henry Leibovitz	Quality Assurance Officer	Rhode Island Department of Health, Chapin Laboratory, 50 Orms Street, Providence, RI 02908	401-222-5600	
Ellie Kwong	EPA-NE Rhode Island State Office Drinking Water Program Officer	EPA-NE	617-918-1592	

Distribution List

QAPP Recipients	Title	Organization	Telephone Number	Document Control Number
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Jean M. Nicolai	Operations and Compliance Chief	DEC Water Supply Division	802-241-3405	
Mary Celotti	Laboratory Director	Dept. of Health Laboratory	802-863-7570	
George Mills	Program Chief and Laboratory Certification Officer	Dept. of Health Laboratory	802-863-7612	

EPA-NE QAPP Worksheet #4 –
Copies of this form must be signed by project personnel from each organization to indicate that they have read the QAPP and will implement the QAPP as prescribed. Each organization must keep the original signed "Sheets" in their organization's project file and forward copies of the signed "Sheets" to the Lead Organization.

Project Personnel Sign-Off Sheet

Organization:

Project Personnel	Title	Telephone Number	Signature	Date QAPP Read	QAPP Acceptable as Written
Darrell B. Smith	Chief, Drinking Water Section	860.509.7333		10/25/07	
John Fontana, Ph.D.	Acting Director, CT Dept. of Public Health Laboratory	860.509.8500			
State personnel will sign this sheet upon completion of appropriate sampling training.					

Project Personnel Sign-Off Sheet

MassDEP

Project Personnel	Title	Telephone Number	Signature	Date QAPP Read	QAPP Acceptable as Written
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Robert Serabian	DEP Lab Quality Assurance Officer	(978) 682-5237x322			
Damon Guterman	DEP Lab Liaison Monitoring Compliance Officer	(617) 574-6811			

State personnel will sign this sheet upon completion of appropriate sampling training

EPA-NE QAPP Worksheet #4 – Copies of this form must be signed by project personnel from each organization to indicate that they have read the QAPP and will implement the QAPP as prescribed. Each organization must keep the original signed "Sheets" in their organization's project file and forward copies of the signed "Sheets" to the Lead Organization.		**Title**: NE States' DW QAPP **Revision Number**: B **Revision Date**: 7/12/08 **Page**: 1 of 1

Project Personnel Sign-Off Sheet

Organization:

Project Personnel	Title	Telephone Number	Signature	Date QAPP Read	QAPP Acceptable as Written
Roger Crouse, P.E.	DWP Acting Director	(207) 287-5684			
Carlton Gardner	Compliance Manager	(207) 287-8403			
Nate Saunders	Field Services Manager	(207) 287-5685			
Matthew Sica	Quality Assurance Officer	(207) 287-1929			
Jack Krueger	Chief of Lab Operations	(207) 287-2727			

EPA-NE QAPP Worksheet #4 –
Copies of this form must be signed by project personnel from each organization to indicate that they have read the QAPP and will implement the QAPP as prescribed. Each organization must keep the original signed "sheets" in their organization's project file and forward copies of the signed Sheets to the Lead Organization.

Project Personnel Sign-Off Sheet

Organization:

Project Personnel	Title	Telephone Number	Signature	Date QAPP Read	QAPP Acceptable as Written
Sarah Pillsbury	DES, DWGB Administrator	603-271-1168			
Richard Thayer	DES, DWGB Sanitary Engineer II	603-271-2950			
Vincent Perelli	DES, Quality Assurance Manager	603-271-8989			

Project Personnel Sign-Off Sheet

Organization:

Project Personnel	Title	Telephone Number	Signature	Date QAPP Read	QAPP Acceptable as Written
Ewa King, PhD	Associate Director of Health (Laboratories)	401-222-1999			
Henry Leibovitz, PhD	Quality Assurance Officer	401-222-5578			
Frederick Kurdziel	Chief Sanitarian	401-222-7775			
State personnel will sign this sheet upon completion of appropriate sampling training.					

Project Personnel Sign-Off Sheet

Organization:

Project Personnel	Title	Telephone Number	Signature	Date QAPP Read	QAPP Acceptable as Written
Gary Schultz	Acting Director, Water Supply Division	802-241-3434			
Jean M. Nicolai	Operations and Compliance Chief	802-241-3405			
Mary Celotti	VDH Laboratory Director	802-863-7570			
George Mills	VDH Lab Program Chief and Certification Officer	802-863-7612			
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Worksheet 5a

All organizational Charts are located in Appendix 1.

EPA-NE QAPP Worksheet #5b
Use this worksheet to outline communication pathways and modes of communication that will be used during the project. Provide a detailed discussion of communication pathways in Section 4.2 of the QAPP document. Describe procedures that will be followed when previously approved project activities require real-time modification to achieve project goals.

Title: Connecticut
Revision Number: B
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Communication Pathways

The CT Department of Public Health's (CTDPH) Drinking Water Section (DWS) directs utilities to do routine monitoring according to a predetermined schedule. When necessary the DWS directs the public water utility or DWS Sanitary Engineer to perform re-sampling, follow-up sampling, increased sampling or treatment process control sampling as the result of a violation, an exceedance of a trigger level or MCL, or a report from a utility or a consumer. Laboratories or utilities report data to the CTDPH/DWS. Public water systems (PWS) are mailed a schedule of water quality testing requirements each year. The schedule, including parameters and sampling frequency, is issued by the Sanitary Engineer 3 of the DWS. Also included with the schedule are sampling data results forms to be returned to the DWS, signed by the Laboratory Director, within 9 days following the end of each applicable monitoring period. A PWS that has exceeded the Maximum Contaminant Level for total coliforms shall report the violation to the Supervising Sanitary Engineer and the local director of health of each city, town, borough, or district served by the system no later than the end of the next business day after it learns of the violation. The Sanitary Engineer or Sanitary Engineer 2 reviews the sampling data for completeness and accuracy. The data is then entered into the Safe Drinking Water Information System (SDWIS). Directives to collect repeat samples, increase monitoring or decrease monitoring are issued by the Sanitary Engineer 3 verbally and followed by a letter. A copy of the change in monitoring frequency is also mailed to the local director of health and private certified laboratory. Either the Sanitary Engineer 3 or Supervising Sanitary Engineer of the DWS directs any repeat sampling. Repeat sampling is carried out by technical personnel employed by an environmental laboratory approved by the CTDPH, a certified distribution system operator, a certified treatment plant operator, a sanitarian or either a Sanitary Engineer I, 2 or 3 of the DWS.

EPA-NE QAPP Worksheet #5b
Use this worksheet to outline communication pathways and modes of communication that will be used during the project. Provide a detailed discussion of communication pathways in Section 4.2 of the QAPP document. Describe procedures that will be followed when previously approved project activities require real-time modification to achieve project goals.

Title: MA-DEP-QAPP
Revision Number: B
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Communication Pathways

The typical communication pathway:

a. The state program directs utilities to do routine monitoring according to a predetermined schedule.
b. When necessary, the state program directs the public water utility or the state agency's own staff to perform resampling, follow-up sampling, increased sampling or treatment process control sampling as the result of a violation, an exceedance of some trigger level or MCL, or a report from a utility or a consumer.
c. Laboratories or utilities report data to the state program.

To address problems that may develop in field or laboratory procedures, the MassDEP Drinking Water Program (DWP) has established the following points of contact that vary depending on the nature of the problem.
MassDEP Drinking Water (DW) staff: This group, based at the four regional DEP offices, reviews the monitoring reports for completeness and accuracy. Problems with these submittals are directed to the PWS by mail, phone, e-mail, and fax or in person (e.g. sanitary survey). DW staff provides additional technical assistance via circuit rider and capacity development staff. Staff in each of the four regions provide technical assistance to the Public Water Systems (PWSs), either by phone, e-mail, and fax or in person during one-to-one training or during sanitary surveys.
MassDEP Lab Liaison: Program lead in the Boston Office. Determines if a laboratory issue is to be referred to the Wall Experiment Station (WES) for more extensive review or if it can be resolved directly with the laboratory.
MassDEP Lab Personnel WES: Certifies MA Laboratories, provides technical assistance and serves as the lead in enforcement cases against laboratories.

In the event sampling is delayed, the PWS, usually the system operator, has to notify the project manger/DW staff at the DEP regional office in writing of the delay and the proposed actions. The DEP regional staff will make a determination and will inform the Boston office by copying the appropriate Boston contact person on the determination letter.

Monitoring data are tracked in the Water Quality Testing System (WQTS). Reports to managers are produced on request. The public can access information by contacting the project manager, scheduling a file review or by accessing EPA Envirofacts web page: Safe Drinking Water Query (Violations/Enforcements) http://www.epa.gov/enviro/html/sdwis_query.html and the National Drinking Water Contaminant Occurrence Database (limited water quality data) at http://www.epa.gov:9966/ncod/rpt_options_pws_pkg.national_state_selection .

In general, in the state of Massachusetts, drinking water testing is the public drinking water supplier responsibility. Based on a sampling schedule provided by the MassDEP, lab samples are collected either by the system's operator or by the contracted lab (both have to be MA certified), depending on

the PWS choice. The MA certified lab, contracted by the system, performs the analysis, following the required protocols of the SDWA. The sample results are submitted in duplicate to the MassDEP Regional Office via mail, fax or via eDEP (the Department's electronic reporting portal on the internet). One copy stays in the region and the second copy is to be filed in the Boston office. MassDEP DW staff reviews the data for completeness and accuracy, accordingly to the DWP Monitoring Review SOP. The DWP is hoping to undertake a more thorough data usability review process, if EPA expands its Region I Data Validation Guideline to drinking water. Acceptable data is entered in (WQTS) by either Boston or regional staff. If there is the need for corrections and/or re-testing, MassDEP DW staff requires the system to resubmit sample results. This request is made either by a formal letter, phone call, fax, or e-mail depending on nature of the program/project. If the lab performing the test disputes the MassDEP determination(s) about lab procedures or results, the DW staff will direct the problem to the MassDEP Lab liaison in Boston. The Lab liaison will assess the problem, provide guidance, solutions or refer the problem to WES. There have been few instances where the MassDEP WES intervened in monitoring sampling and analysis.

Maine

EPA-NE QAPP Worksheet #5b
Use this worksheet to outline communication pathways and modes of communication that will be used during the project. Provide a detailed discussion of communication pathways in Section 4.2 of the QAPP document. Describe procedures that will be followed when previously approved project activities require real-time modification to achieve project goals.

Title: NE States' DW QAPP, Maine
Revision Number: B
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Communication Pathways

The MECDC Drinking Water Program directs utilities to do routine monitoring according to a predetermined schedule. Public water systems (PWS) are mailed a schedule of water quality testing requirements each year. The schedule, including parameters and sampling frequency, is issued by the Compliance Officer of the DWP. When necessary the DWP directs the public water utility or DWP Field Staff to perform re-sampling, follow-up sampling, increased sampling the result of a violation, an exceedance of a trigger level or MCL, or a report from a utility or a consumer. Laboratories or utilities report data to the MEDWP.

Communication Pathways

The DWGB assists water systems with regards to their monitoring requirements by the use of master sampling schedules that are specific for each water system. Each master sampling schedule includes chemical, microbiological and lead and copper samples. All master sampling schedules are located on the DES web site within the One Stop data retrieval site which is located at www2.des.state.nh.us/OneStop/Public Water Systems Query.aspx. For water systems that have no web site access master sampling schedules are mailed to them. Notice of Violations, Reminder letters and Letters of Deficiency are used to ensure that samples are taken in a timely manner.

Tracking of compliance is for the most part computerized. For chemical monitoring, any sample that is above the MCL, a confirmation sample is required unless the system is already on increased monitoring. A confirmed chemical monitoring MCL violation requires that a Notice of Violation be issued explaining the meaning of the MCL, what water customers can do and the steps that are being taken to correct the problem. For microbiological sampling a standard MCL violation for total coliform for community systems requires notice consisting of one or more notification methods consisting of door-to-door, mail, broadcast, or news publication. For non-community systems either hand delivery or continuous posting is required. For both these procedures there is periodic review by the Monitoring and Enforcement Program Manager and staff. A Sanitary Engineer reviews both lead and copper samples that seem to be out of place, quality-wise, for a water system. This is done to ensure that the samples are complete and accurate.

Disinfection Byproducts are tracked on Excel spread sheets by Sanitary Engineers. When a water system exceeds a byproduct parameter and/or fails to submit quarterly residual or quality results in a timely manner that water system is entered into the enforcement program tracking.

Sanitary survey staff will, at the request of the Monitoring and Enforcement Program Manager, perform an emergency sanitary survey of a water system when there could be the possibility of an immediate threat to health as a result of the MCL violation. Once the survey is completed the surveyor will consult with DWGB engineers to determine the best course of action needed for that water system.

EPA-NE QAPP Worksheet #5b
Use this worksheet to outline communication pathways and modes of communication that will be used during the project. Provide a detailed discussion of communication pathways in Section 4.2 of the QAPP document. Describe procedures that will be followed when previously approved project activities require real-time modification to achieve project goals.

Communication Pathways

- Routine sampling directives are issued by the Chief Sanitarian/ Sr. Environmental Scientist.
- Repeat sampling directives are issued by the Chief Sanitarian/ Sr. Environmental Scientist.
- Both routine and repeat sampling is conducted by water system staff, or by staff of the Office of Drinking Water Quality, RI Department of Health.
- Job titles of HEALTH staff who conduct sampling include Sanitarian, Hydrogeologist, Environmental Scientist, and Sr. Environmental Scientist.

EPA-NE QAPP Worksheet #5b
Use this worksheet to outline communication pathways and modes of communication that will be used during the project. Provide a detailed discussion of communication pathways in Section 4.2 of the QAPP document. Describe procedures that will be followed when previously approved project activities require real-time modification to achieve project goals.

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Communication Pathways

Several personnel in the Operations and Compliance Section, particularly the Compliance and Certification sub-section and Transient non-community sub-section issue routine monitoring directives for the Vermont DEC Water Supply Division. The Water Supply Division assists water systems with regards to their monitoring requirements by generating annual monitoring schedules in SDWIS which are sent to public water systems in December of each year for the up-coming year and following year (for financial planning purposes). All schedules for the up-coming year are posted on the division website. At various times during the year the division sends reminder notices for sampling.

a. The Water Supply Division directs water systems to conduct routine sampling according to their monitoring schedule
b. All public water systems conduct their own monitoring. The division may conduct monitoring in response to contamination issues or a potential public health risk.
c. When necessary, the division directs the water system to perform re-sampling, follow-up sampling, or increased monitoring as a result of a violation, or an exceedance of some trigger level or MCL, or in response to a potential public health risk.
d. All public water systems are responsible for reporting water quality test results to the division. Certified laboratories or the water system may report water quality data to the WSD.
e. The division uses SDWIS to record and analyze public water system water quality data including tracking of data and compliance determination.
f. Bacteriological data analyzed by the Vermont Department of Health is submitted electronically. All other data is reported to the division via mail or fax.

EPA-NE QAPP Worksheet #6
Identify project personnel associated with each organization, contractor, and subcontractor participating in responsible project functions. Include the name of the organization for whom they work, and their project responsibilities. Indicate project Case Team members with an "*". Attach resumes to this worksheet.

Personnel Responsibilities and Qualifications Table

Name	Organizational Affiliation	Responsibilities	Location of Personnel Resumes, if not included[1]	Education & Experience Qualifications[2] (also see job spec attached)
Smith, Darrell *Acting Chief*	DPH Drinking Water Section	Program Administration	DPH/Human Resources	
Lori Mathieu, Public Health Services Manager	DPH Drinking Water Section	Program Administration	DPH/Human Resources	
Downie, Sandra *Health Program Associate*	DPH Drinking Water Section	Quality Assurance Contact Education and Outreach	DPH/Human Resources	
Hage, Michael *Compliance Section Supervisor*	DPH Drinking Water Section	Compliance	DPH/Human Resources	
Messer, Steve *Supervising. Sanitary Engineer*	DPH Drinking Water Section	Implementation and Response/ Sanitary Surveys	DPH/Human Resources	
Johnson, Gary *Supervising Environmental Analyst*	DPH Drinking Water Section	Monitoring, Reporting and Enforcement	DPH/Human Resources	
Walden, Cameron *Supervising. Sanitary Engineer*	DPH Drinking Water Section	Capacity, Review and Standards/ Plan Reviews	DPH/Human Resources	
Reed, Thomas *Environmental Analyst 3*	DPH Drinking Water Section	Data Management/Verification	DPH/Human Resources	

[1]If a resume is on file elsewhere, document location in this column and summarize the individual's education and experience in the next column. If a resume does not exist for an individual, then indicate not available in this column and summarize the individual's education and experience in the next column.
[2]If a resume is attached to this worksheet, then write, "See attached" in this column.

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Personnel Responsibilities and Qualifications Table

Name	Organizational Affiliation	Responsibilities	Location of Personnel Resumes, if not included[1]	Education and Experience Qualifications[2]
Mass DEP Project Manager	MA DEP DWP	Project Managing	MA DEP Personnel Office	
Nicholas Anastas, Ph.D. Mass DEP Project QA Scientist	MA DEP DWP	QA/QC Project	MA DEP Personnel Office	
Mass DEP Project Engineer/Scientist	MA DEP DWP	Project's Technical Aspects	MA DEP Personnel Office	
Damon Guterman DEP Lab Contact	MA DEP DWP	Liaison between DEP Regional Offices and the Wall Experiment Station (WES)	MA DEP Personnel Office	
Oscar Pancorbo WES Director	MA DEP	Overseeing the maintenance of the facility, supervising and directing the personnel and the DEP analytical programs.	MA DEP Personnel Office	

[1]If a resume is on file elsewhere, document location in this column and summarize the individual's education and experience in the next column. If a resume does not exist for an individual, then indicate not available in this column and summarize the individual's education and experience in the next column.

[2]If a resume is attached to this worksheet, then write, "See attached" in this column.

Personnel Responsibilities and Qualifications Table

Name	Organizational Affiliation	Responsibilities	Location of Personnel Resumes	Education and Experience Qualifications
Roger Crouse, P.E.	MECDC DHE DWP	DWP Acting Director	ME DHHS Personnel Office	ME DHHS Personnel Office
Carlton Gardner	MECDC DHE DWP	Compliance Manager	ME DHHS Personnel Office	ME DHHS Personnel Office
Jack Krueger	HETL	State Lab Contact	ME DHHS Personnel Office	ME DHHS Personnel Office
Nate Saunders	MECDC DHE DWP	Field Staff Manager	ME DHHS Personnel Office	ME DHHS Personnel Office
Matthew Sica	MECDC DHE DWP	QAO	ME DHHS Personnel Office	ME DHHS Personnel Office
Robin Frost	MECDC DHE DWP	SDWIS Administrator	ME DHHS Personnel Office	ME DHHS Personnel Office
Amilyn Stillings	MECDC DHE DWP	Inventory Coordinator	ME DHHS Personnel Office	ME DHHS Personnel Office
Jennifer Grant	MECDC DHE DWP	Compliance Staff	ME DHHS Personnel Office	ME DHHS Personnel Office
Lindy Moceus	MECDC DHE DWP	Compliance Staff	ME DHHS Personnel Office	ME DHHS Personnel Office
Scott Whitney	MECDC DHE DWP	Compliance Staff	ME DHHS Personnel Office	ME DHHS Personnel Office
Dawn Carpenter	MECDC DHE DWP	Compliance Staff	ME DHHS Personnel Office	ME DHHS Personnel Office
Linda Robinson	MECDC DHE DWP	Compliance Staff	ME DHHS Personnel Office	ME DHHS Personnel Office

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EPA-NE QAPP Worksheet #6

Identify project personnel associated with each organization, contractor, and subcontractor participating in responsible project functions. Include the name of the organization for whom they work, and their project responsibilities. Indicate project Case Team members with an A * Attach resumes to this worksheet.

Name	. Organizational Affiliation	Responsibilities	Location of Personnel Resumes, if not included[1]	Education and ExperienceQualifications[2]
Sara Pillsbury	NHDES–DWGB	Administrator	NHDES Personnel Office	NHDES Personnel Office
Richard Thayer	NHDES-DWGB	Project Contact for 2007 QAPP	NHDES Personnel Office	NHDES Personnel Office
Robert Mann	NHDES–DWGB	Section Manager; Engineering Capacity Development, Plan Review, Sanitary Surveys, Youth Camps	NHDES Personnel Office	NHDES Personnel Office
Selina Makofsky	NHDES-DWGB	Section Manager: Enforcement/Monitoring	NHDES Personnel Office	NHDES Personnel Office
Paul Susca	NHDES-DWGB	Section Manager; Planning, Protection, Grants, Rules, Training	NHDES Personnel Office	NHDES Personnel Office
Pat Bickford	NHDES-Laboratory	Analytical Services	NHDES Personnel Office	NHDES Personnel Office
Laurie Cullerot	NHDES-DWGB	Section Manager; Data Management	NHDES Personnel Office	NHDES Personnel Office
Brandon Kernen	NHDES-DWGB	Section Manager; Hydrology, Conservation	NHDES Personnel Office	NHDES Personnel Office

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[2]If a resume is attached to this worksheet, then write, "See attached" in this column.

EPA-NE QAPP Worksheet #6
Identify project personnel associated with each organization, contractor, and subcontractor participating in responsible project functions. Include the name of the organization for which they work, and their project responsibilities. Indicate project Case Team members with an "*". Attach resumes to this worksheet.

Personnel Responsibilities and Qualifications Table

Name	Organizational Affiliation	Responsibilities	Location of Personnel Resumes, if not included[1]	Education and Experience Qualifications[2]
Walter Combs, Ph.D.	Executive Director, Environmental Health	Overall management and quality assurance of all activities of the Division of Environmental Health, which includes the Office of Drinking Water Quality	Rhode Island Department of Health, Office of Management Services	
June Swallow, P.E.	Chief, Office of Drinking Water Quality	Overall manager and project officer for the Office of Drinking Water Quality	Rhode Island Department of Health, Office of Management Services	
Doris Aschman, P.E.	Supervising Sanitary Engineer, Office of Drinking Water Quality	Supervision of engineering activities, some review of incoming data	Rhode Island Department of Health, Office of Management Services	
Susan Rabideau, P.E.	Office of Drinking Water Quality	Engineering services, review of incoming data	Rhode Island Department of Health, Office of Management Services	
Gary Chobanian, P.E	Office of Drinking Water Quality	Engineering Services, DWSRF administrator	Rhode Island Department of Health, Office of Management Services	
Frederick Kurdziel	Chief Sanitarian, Office of Drinking Water Quality	Supervision of all sampling activities, review of Incoming data, compliance	Rhode Island Department of Health, Office of Management	

EPA-NE QAPP Worksheet #6
Identify project personnel associated with each organization, contractor, and subcontractor participating in responsible project functions. Include the name of the organization for which they work, and their project responsibilities. Indicate project Case Team members with an "*". Attach resumes to this worksheet.

Personnel Responsibilities and Qualifications Table

Name	Organizational Affiliation	Responsibilities	Location of Personnel Resumes, if not included[1]	Education and Experience Qualifications[2]
		determinations	Services	
Justin Blair	Sr. Environmental Scientist Engineer, Office of Drinking Water Quality	Scheduling of sampling activities, review of incoming data, compliance determinations	Rhode Island Department of Health, Office of Management Services	
Alfred Kwolek	Environmental Scientist Engineer, Office of Drinking Water Quality	Compliance determinations, enforcement activities	Rhode Island Department of Health, Office of Management Services	
Ewa King, PhD	Associate Director, Division of Laboratories	Overall management of the Division of Laboratories	Rhode Island Department of Health, Office of Management Services	
Henry Leibovitz	Chief, Environmental Sciences, Certification Officer	Environmental Sciences, Division of Laboratories, Laboratory Certification Officer	Rhode Island Department of Health, Office of Management Services	

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[2]If a resume is attached to this worksheet, then write "See attached" in this column

EPA-NE QAPP Worksheet #6
Identify project personnel associated with each organization, contractor, and subcontractor participating in responsible project functions. Include the name of the organization for whom they work, and their project responsibilities. Indicate project Case Team members with an "*". Attach resumes to this worksheet.

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Personnel Responsibilities and Qualifications Table

Name	Organizational Affiliation	Responsibilities	Location of Personnel Resumes, if not included[1]	Education and Experience Qualifications[2]
Gary Schultz	Acting Director, Water Supply Division	Overall Manager of the Division	Waterbury, VT	
Jean Nicolai	Operations and Compliance Chief, Water Supply Division	Manages all operations and compliance and monitoring activities	Waterbury, VT	
Ellen Parr Doering	Compliance and Certification Section Manager, WSD	Manages compliance and monitoring and oversees review of incoming data	Waterbury, VT	
Matt Guerino	Environmental Analyst, Compliance and Certification	TCR - reviews incoming data, compliance determination, monitoring schedules. Operation Certification	Waterbury, VT	
Billy Kahn	Environmental Analyst, Compliance and Certification	Phase II/V, DBPs, Radionuclides, – reviews incoming data, compliance determination, monitoring schedules	Waterbury, VT	
Vacant	Environmental Analyst, Compliance and Certification	SWTR rules, Lead and Copper, CCR – reviews incoming data, compliance determination,	Waterbury, VT	
Elizabeth Hunt	Support and Planning Chief, Water Supply Division (WSD)	Manages Support Team, Planning efforts and SDWIS monitoring schedules	Waterbury, VT	
Tim Pricer	Support and Planning Section	SDWIS Program Administrator	Waterbury, VT	
Marion Okuszki and Helen Banevicius	Support and Planning Section	Data entry - TCR, Chemical, etc.	Waterbury, VT	
Mary Celotti	Vermont Department of Health Laboratory Director	Overall Management of the Department of Health Laboratory	Burlington, VT	
George Mills	Vermont Department of Health Laboratory	Program Chief and Certification of Laboratories for drinking water analyses	Burlington, VT	

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[2]If a resume is attached to this worksheet, then write "See attached"" in this column.

EPA-NE QAPP Worksheet #7
Provide the following information for those projects requiring specialized training. Attach training records and/or certificates to this worksheet.

Title: CT-DWS-QAPP
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Special Personnel Training Requirements Table

Project Function	Specialized Training Title of Course or Description	Training Provided By	Training Date	Personnel/ Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/ Certificates*
Sampling: organics, inorganics, microbiology, radiochemistry	Field Training	Senior DWS Engineer	As Needed	(See DWS Staff Organization Chart)	(See DWS Staff Organization Chart)	N/A
Water emergencies, assessment & response	Incident Command System	FEMA		DWS WEAR Team		Online

*If training records and/or certificates are on file elsewhere, then document their location in this column. If training records and/or certificates do not exist or are not available, then this should be noted.

EPA-NE QAPP Worksheet #7 Provide the following information for those projects requiring specialized training. Attach training records and/or certificates to this worksheet.	**Title**: MA QAPP **Revision Number**: B **Revision Date**: 7/12/08 **Page**: 1

Special Personnel Training Requirements Table

Project Function	Specialized Training Title of Course or Description	Training Provided By	Training Date	Personnel/ Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/Certificates*
The MassDEP Drinking Water Program staff is trained to sample for all the drinking water parameters (organics, inorganics, microbiology and radiochemistry). Training is provided either by DEP senior experienced staff or by training programs DEP co-sponsors and teaches in conjunction with NeRWA, MWWA and NEWWA. Please refer to the organizational chart for a list of MassDEP DWP staff. Attached is a sample of training available through NEWWA.						

*If training records and/or certificates are on file elsewhere, then document their location in this column. If training records and/or certificates do not exist or are not available, then this should be noted.

EPA-NE QAPP Worksheet #7
Provide the following information for those projects requiring specialized training. Attach training records and/or certificates to this worksheet.

Title: NE States' DW QAPP
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Special Personnel Training Requirements Table

Project Function	Specialized Training Title of Course or Description	Training Provided By	Training Date	Personnel/Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/ Certificates *
Water Sampling	Field Training for Sample Collection.	Member of Field Inspection Team	As Needed	Field Staff (Assistant Engineers/ Engineering Techs) Circuit Riders	ME DWP Maine Rural Water	N/A
Technical Assistance	Field Training for Sample Collection and Technical Assistance	Member of Field Inspection Team	As Needed	Field Staff (Assistant Engineers/ Engineering Techs.), Circuit Riders	MEDWP Maine Rural Water	N/A

* If training records and/or certificates are on file elsewhere, then document their location in this column. If training records and/or certificates do not exist or are not available, then this should be noted.

EPA-NE QAPP Worksheet #7
Provide the following information for those projects requiring specialized training. Attach training records and/or certificates to this worksheet.

Title: NH DES
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Special Personnel Training Requirements Table

Project Function	Specialized Training Title of Course or Description	Training Provided By	Training Date	Personnel/Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/Certificates*
Water Sampling	Sample Collection and Preservation	DES Laboratory, NEWWA, DES Sanitary Survey Engineers	As Needed	Sanitary Surveyors, Environmentalists, Engineers, Geologists	DES Engineers, Geologists, Environmentalists I-IV	DES Concord and other locations. Certifications are located at DES in Concord.
Technical Assistance	Technical Assistance, Computer Training, Communication Skills, Managerial	DWGB Chief Engineer, NH Bureau of Education, Web Cast Seminars	As Needed	Computer, Monitoring, Enforcement, Technical and Engineering Staff.	DES Engineers I-IV, Geologists, Environmentalists I-V, Administration and Support Staff.	DES, Concord

*If training records and/or certificates are on file elsewhere, then document their location in this column. If training records and/or certificates do not exist or are not available, then this should be noted.

EPA-NE QAPP Worksheet #7
Provide the following information for those projects requiring specialized training. Attach training records and/or certificates to this worksheet.

Title: RI DOH
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Special Personnel Training Requirements Table

Project Function	Specialized Training Title of Course or Description	Training Provided By	Training Date	Personnel/Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/Certificates*
	Organics Sampling	Chief Sanitarian or Laboratory Supervisor	OJT as needed	Bill Walaska, Justin Blair, James Scotland, Rich Amirault, Alfred Kwolek, Garry Smith, David Zanfagna, Bill Grant	Sanitarian, Sr. Env. Scientist, Eng. Tech IV (2), Env. Scientist (3), Sr. Sanitarian / DWQ HEALTH	Not applicable
	Inorganics Sampling	Chief Sanitarian or Laboratory Supervisor	OJT as needed	Bill Walaska, Justin Blair, James Scotland, Rich Amirault, Alfred Kwolek, Garry Smith, David Zanfagna, Bill Grant	Sanitarian, Sr. Env. Scientist, Eng. Tech IV (2), Env. Scientist (3), Sr. Sanitarian / DWQ HEALTH	Not applicable
	Microbiology Sampling	Chief Sanitarian or Laboratory Supervisor	OJT as needed	Bill Walaska, Justin Blair, James Scotland, Rich Amirault, Alfred Kwolek, Garry Smith, David Zanfagna, Bill Grant	Sanitarian, Sr. Env. Scientist, Eng. Tech IV (2), Env. Scientist (3), Sr. Sanitarian / DWQ HEALTH	Not applicable
	Radiochemistry Sampling	Chief Sanitarian or Laboratory	OJT as needed	Bill Walaska, Justin Blair, James Scotland, Rich Amirault,	Sanitarian, Sr. Env. Scientist, Eng. Tech IV	Not applicable

Special Personnel Training Requirements Table

Project Function	Specialized Training Title of Course or Description	Training Provided By	Training Date	Personnel/Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/Certificates*
		Supervisor		Alfred Kwolek, Garry Smith, David Zanfagna, Bill Grant	(2), Env. Scientist (3), Sr. Sanitarian / DWQ HEALTH	

*If training records and/or certificates are on file elsewhere, then document their location in this column. If training records and/or certificates do not exist or are not available, then this should be noted.

EPA-NE QAPP Worksheet #7

Provide the following information for those projects requiring specialized training. Attach training records and/or certificates to this worksheet.

Title: Vermont
Revision Number: B
Revision Date: 7/12/08
Page: 1 of 1

Special Personnel Training Requirements Table

Project Function	Specialized Training Title of Course or Description	Training Provided By	Training Date	Personnel/Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/ Certificates*
NA	NA	NA	NA	NA	NA	NA

*If training records and/or certificates are on file elsewhere, then document their location in this column. If training records and/or certificates do not exist or are not available, then this should be noted.

Worksheet #8a
Project Planning Attendance

Please see Worksheet #2, Question 5, for a list of planning sessions and the list of workgroup participants which immediately follows the title page.

Worksheets 8b & 9a
6-State DW QAPP
Project Definition, Background & Description

Outline:

This discussion covers the following topics:

A. Implementation of regulations.
B. Plan review procedures.
C. Data and information management.
D. Sanitary surveys.
E. Enforcement strategy.
F. Training, education and outreach.
G. Capacity
H. Drinking water state revolving fund (SRF)
I. Security and emergency response

A. Implementation of regulations.

1. *Introduction*: The responsibilities of state primacy agencies are based on U.S. EPA regulations as given in the requirements of the Safe Drinking Water Act (SDWA) and its amendments. The regulatory development, adoption process and implementation procedures are described in the following narrative.

   The procedures each state follows for review and modification of existing drinking water regulations under state jurisdiction and for the development of new regulations that may be required pursuant to the SDWA are given below. The plan is compatible with procedures in effect for regulatory development.

   Staff systematically reviews all existing regulations routinely enforced by each state primacy agency by tracking new regulatory requirements initiated by SDWA amendments. The following process

accomplishes coordination of activities from initial notification and review to final regulation development or modification.

2. *Regulatory implementation*: An essential component of regulatory implementation includes ongoing communication with public water systems. Systems are notified of upcoming regulatory mandates and provided technical assistance as necessary. Staff maintains oversight of public water systems by review of water quality monitoring and reporting requirements; completion of sanitary surveys; review, inspection and approval of all infrastructure and new sources; review and approval of treatment techniques and plans, financial and managerial systems; and initiation of enforcement actions. Training, informational materials, technical workshops and various assistance programs are also provided to system owners/operators to achieve and maintain system regulatory compliance.

3. *Regulatory adoption process for each state:*
   a. Connecticut regulatory revision: The staff coordinates modifications to all drinking water related regulations and tracks the required steps for finalization and adoption of regulatory changes as follows:
      (1) Subsequent to initial notification, proposed modifications are reviewed by staff and forwarded for processing which includes:
         • Consideration of issues related to proposed modification.
         • Drafting and reviewing language and proposed modifications.
         • Preparation of the "package" of proposed modifications.
      (2) After the package is prepared, it is circulated to appropriate staff for review, comment and final approval.
      (3) The concept paper and fiscal note for the final package are prepared.
      (4) The package is submitted to appropriate offices for final approvals/signatures.
      (5) The proposed regulations are submitted to the Governor's Office and the Office of Policy and Management for review and approval.
      (6) A notice of intent to promulgate and/or amend regulations is published in the *Law Journal.*
      (7) The Public Health Committee, the Regulations Review Committee, and any other related standing legislative committees are notified of intent to promulgate.
      (8) A public hearing can be requested by parties identified in the General Statutes. Written comments may be submitted prior to the hearing, written testimony may be submitted at

the hearing, and oral presentations may be made at the hearing. All written comments become part of the promulgation package for review by respective state agencies and legislative committees.

(9) The appropriate office provides a written response to comments.

(10) Regulation proposals are sent to the Attorney General's office for formal review. The AG has 30 days to approve. Note: the AG's office may return the regulations proposals to the Department, rejecting or approving said proposed regulations. The AG may direct the promulgating agency to change the language of the proposed regulations. After changes are made, the revised regulation proposals are resubmitted to the AG, who has an additional 30 days to review and approve them

(11) Proposed regulations are submitted to the Regulation Review Committee which may:

- Approve in whole.
- Reject without prejudice. Revisions will be made, and the regulations will be resubmitted to the AG for review (30 days) and then resubmitted to the Regulation Review Committee.
- Reject with prejudice (unusual).

(12) Following final approval, the approved regulations are submitted to the Secretary of State. They are considered effective on the day submitted. Such regulations are not enforceable until approved regulations are made available for public inspection and the *Law Journal* publishes the regulations.

(13) The staff tracks the progress of the package through adoption.

(14) Once a regulation is adopted, notice is provided to constituents through appropriate means, e.g., mass mailing, and technical assistance is provided as necessary in response to constituents' requirements.

(15) The staff carries out compliance monitoring and evaluates returns (reports, surveys, etc.) for compliance determination and for follow-up, technical assistance or enforcement action.

(16) Regulations are reviewed for modification as necessary.

b. Massachusetts regulatory revision. The staff coordinates modifications to all drinking water related regulations and tracks the required steps for finalization and adoption of regulatory changes.

(1) The staff reviews and incorporates EPA regulations into the state's proposed drinking water regulations revision package.
(2) The program staff reviews proposed revisions, and prepares a draft regulation package.
(3) The regulation package is submitted to staff and advisory groups for discussion and comments.
(4) The edited regulation package is submitted for review to the Department's Commissioner, upper level management and legal staff for signatures.
(5) The revised regulation package is sent to other state agencies that may have an interest in the proposed regulations.
(6) Final draft proposed regulations are sent to the Executive Office of Environmental Affairs (EOEA) and then to the Executive Office for Administration and Finance (A&F) for review and approval.
(7) Once approved by A&F, the proposed regulations are submitted to the Secretary of State.
(8) Public hearing notices are published 21 days prior to the public hearing. The public comment period begins and continues through the public hearings scheduled throughout the state.
(9) The program staff reviews all comments and prepares and routes final revisions to appropriate staff and the legal office for final review. The package includes a summary of responses and comments.
(10) The EOEA and the A&F review the final package.
(11) The A&F approves the regulations, and they are submitted to the Secretary of State for adoption.

c. Connecticut, & Massachusetts -- new regulations.

(1) Subsequent to initial notification, the staff tracks U.S. EPA regulatory development, utilizing the Association of State Drinking Water Administrators, the American Water Works Association, the *Federal Register*, workshops, conferences, etc.
(2) Appropriate staff reviews EPA proposed regulations.
(3) When EPA regulation is finalized, the staff develops proposed regulations.
(4) Go to A.3.a(1) [CT Regulatory Revision] for Connecticut and to A.3.b(1) [MA Regulatory Revision] for Massachusetts.

d. Maine rule-making procedure.

Internal agency process:

(1) The proposed rule changes are reviewed by DWP staff for comments, concerns, and accuracy. The Director of the Drinking Water Program must approve all proposed changes.

(2) Once the proposed rules have been finalized, the DWP Rulemaking Coordinator will begin the formal process for rulemaking consistent with the State of Maine Administrative Procedures Act.

Formal rulemaking process:

(3) Proposed rule changes with the underlines and strikeouts, should be sent to the Attorney General's office for initial review to examine form and legality. After initial review, the AG will return the proposed rules to the Rulemaking Coordinator with comments.

(4) The Director of the Division of Environmental Health and the Deputy Director of the Maine Center for Disease Control and Prevention must approve the proposed rule changes before forwarding them to the Department of Health and Human Services Commissioner's Office.

(5) The rules are then forwarded to the Commissioner's Office for executive approval. An executive approval cover sheet must be attached to the proposed rules.

(6) The Commissioner's Office, after reviewing and approving the proposed rules, will return the rulemaking packet to the DWP Rulemaking Coordinator.

(7) The Rulemaking Coordinator will set the time and date for the public hearing. Once the public hearing time and date have been set, public notice of the proposed rule needs to be set according to the timetables in paragraph (9) below.

(8) Once the proposed rules have been signed and dated by the Commissioner, the formal rulemaking process may continue, pursuant to 5 MRSA § 8001 et seq.

(9) The Rulemaking Coordinator must file:

(a) One copy of the proposal rule package with the Secretary of State's Office on the Tuesday of the week prior to newspaper publication date. The package must include the Notice of Rulemaking Proposal Form (MAPA-3), the Rulemaking Fact Sheet, and the text of the proposed language.

(b) Twenty copies of the Rulemaking Fact Sheet with the Executive Director of Legislative Council within a day or two after filing with Secretary of State.

(10) Time-line for notice of proposed rule:

(a). The Notice of Rulemaking Proposal (MAPA-3) must be published 17-24 days prior to the hearing, if one is scheduled (5 MRSA sec. 8053 sub-sec. 5). If no hearing is scheduled, the public may submit commits for at least 30 days from the publication date.

(b) The MAPA-3 Notice of proposed rulemaking form must be given to the following people at least 20 days before the hearing or before the deadline for comments, if no hearing is scheduled (see 5 MRSA sec. 8053):

(i) Any person specified in the statute authorizing the rule-making;

(ii) Any person who has filed within the past year a written requests with the agency for notice of rule making. Notice must be by mail to the last address provided to the agency by the person and should include copies of the proposal, if requested. The agency may charge a fee reasonably related to the cost of this service; and

(iii) Any trade, industry, professional interest group or regional publication that the agency deems effective in reaching affected persons.

(c) Copies of the proposed rule itself must be available for public distribution at least 20 days prior to the hearing or 20 days prior to the comment deadline, if no hearing is held.

(11) Public Hearing:

(a) A hearing can only be conducted by someone who is in a "major policy-influencing position" as listed in 5 MRSA c.71 (mainly commissioners, deputies, and bureau chiefs), or a designee who has responsibility over the subject matter to be discussed at the hearing (the designee provision, part of Public Law 1993, c.362, took effect October 13, 1993).

(b) When a public hearing is held, the Maine Administrative Procedures Act requires the agency to accept comments for at least 10 days thereafter. Following the opportunity for hearing, an agency must consider available relevant information, including public comments, before adoption.

(c) Before agency adoption of the proposed final rules, a copy of the proposed rules must be sent to the Attorney General's office for final review.

(12) Adoption:

(a) The Maine Administrative Procedures Act requires an agency, at the time of adoption, to file a written statement explaining the factual and policy basis for the rule with the Secretary of State's Office. When adopting a rule, the agency shall also address all comments received and state its rationale for adoption or reason for not adopting suggested changes (5 MRSA sec. 8052 sub-sec. 5). The agency may consolidate similar comments instead of addressing each one individually, but a recent provision of law (Public Law 1993, c.446, affecting 5 MRSA sec. 8052 sub-sec. 5) requires the listing of the names of persons whose comments were received and the organizations they represent, along with summaries of their comments. A record of the vote of agency members in rule-making decisions must be maintained by each agency and available for public inspection (5 MRSA sec. 8056 sub-sec. 5).

(b) Adoption, if that is the decision, must be by official action of the agency and must take place within 120 days from the comment deadline (see 5 MRSA sec. 8052 sub-sec. 7.) The physical definition of adoption is the dated signature of the agency representative at the certification statement in the Maine Administrative Procedures Act -1.

(13) Filing the Adopted Rule:

(a) A copy of the proposed rules for adoption must be submitted to the Attorney General's Office for approval as to form and legality. Such approval takes the form of a dated signature by an assistant attorney general (who is different than the AAG performing the initial review).

(b) The Rulemaking Coordinator must file a certified copy with the Secretary of State's Office in a prescribed form (5 MRSA sec. 8056 sub-sec. 1), which includes Maine Administrative Procedures Act -4, Maine Administrative Procedures Act -1, a hard copy and electronic copy of the marked rules, as well as a clean copy, Basis Statement, Comments and Responses, Rulemaking Fact Sheet, Rulemaking Checklist, and the electronic filing provisions found in the APA.

e. New Hampshire.

See the flow chart included as Appendix 2 (at the end of this QAPP).

f. Rhode Island.

(1) Draft changes.

(2) Optional community review.

(3) Public notice of public hearing and comment period.

(4) Public hearing.

(5) Review and response to comments.

(6) Regulations adopted or revised.

(7) If revisions are needed, go back to step one.

g. Vermont – regulatory adoption process.

The Secretary of State's office administers the regulatory adoption process in Vermont http://vermont-archives.org/aparules/. Vermont Statute, 3 VSA Chapter 25 governs the process of the adoption of administrative rules, which includes the Vermont Water Supply Rule. Additionally, the Office of the Secretary of State is charged with specific duties under this statute including: creating forms for rule filings, receiving rule filings, designating the *Newspapers of Record*, publishing formal notices of rulemaking in the newspapers of record, arranging publication of a bulletin of rules (aka *Code of Vermont Rules*), and providing a repository for rule filings. The Office of the Secretary of State has adopted the *Rule on Rulemaking* for the effective administration of Title 3 V.S.A. Chapter 25. This rule encompasses both the procedures and forms for filing rules and the forms have the force and effect of law.

B. **Plan review procedures**

1. *Purpose.* Under the Safe Drinking Water Act, the federal government and states with primary enforcement authority regulate public water systems (PWS) to insure the provision of safe drinking water. Plans for the construction of a new PWS, or the modification of existing systems that may affect the quality or quantity of water produced, must be submitted for Drinking Water Program (DWP) approval prior to the construction of the project.

   Before a new public water supply well is drilled, the DWP must review and approve the location where the well will be drilled. Site plans must include the wellhead protection area for the well and a list of potential contamination sources that may affect the well. A financial commitment may also be required, showing a good faith effort.

   Before a new public surface water source is developed, the DWP must review and approve the proposed source and the location of the proposed intake. Site plans must include the delineation of the contributing tributaries and the surface water supply protection areas. Land uses in the watershed must also be identified. A financial and managerial commitment may also be required, showing a good faith effort.

2. *Exempt Projects.* Some maintenance projects and the replacement or installation of water mains may be exempt from the plan and specification submission and facility approval process. Projects funded by the Drinking Water State Revolving Fund (DWSRF) are not exempt from the plan and specification submission requirements (See note CT-B1 below).

3. *Submission Requirements.* Plans and specifications for a new PWS, or significant modifications of an existing system, if requested by the DWP due to the project's complexity, must be prepared by a qualified professional and stamped and signed by a registered Professional Engineer (See note CT-B2 below).

4. *Process – New PWS and Significant Modifications to Existing PWS.* Project plans and specifications must be submitted for DWP review and approval prior to construction (See notes CT-B3, CT-B4, MA-B1, ME-B1, RI-B1 and VT-B1 below).

5. *Process – New Public Water Supply Wells.* The DWP determines the required elements necessary in new source approval. Examples of a State's determined new well approval are based on these standards, which may include any of the following:

Before a new well source is drilled, an applicant must complete an application that includes a mailing address, details about the proposed facility, and dates of operation. The applicant must receive preliminary approval of the location where the well will be drilled. In general, an approvable site will be greater than the required minimal distance specified by law or rule from any potential source of contamination (See notes CT-B5, MA-B2 and VT-B2 below).

If this is not possible or practical at the proposed site, the DWP can grant a waiver to this setback requirement. In order to receive preliminary approval, the applicant must submit an application form, a location map, and a site plan. The applicant must identify potential contamination sources near the well.

A well driller licensed in that state must drill the well.

After the well is drilled, it must be tested to ensure that the water meets drinking water standards. The tests must be taken at the conclusion of a pump test. A 48- or 72-hour pump test is required. (See note CT-B6 below.)

The applicant must receive a letter of final approval from the DWP prior to putting the well on line. Final approval requires the submission of a completed application (describing the characteristics of the well, the date the well was drilled, who drilled it, etc.). All of the results of the required water quality tests must be attached to the application. If the water meets drinking water standards, the applicant will receive a letter of final approval and an online notice. This notice must be completed and returned when the well is put on line. It will enable the DWP to notify the applicant of required tests and help to keep the PWS in compliance with the Safe Drinking Water Act. (See note CT-B7 below.)

Notes for Section B:

CT-B1 Projects receiving federal or state funding and those reviewed under the "Certificate of Public Convenience and Necessity" (CPCN) Statute and Regulations are not exempt from plan and specification submission requirements.

CT-B2 A "General Application for Approval or Permit" form is required for all projects and permits submitted for review and approval. Application forms for specific project components are in development. CPCN projects require the Professional Engineer (PE) to be registered in the State of CT.

CT-B3 The CTDPH must be notified before entering into a financial commitment for a new public water system or increasing the capacity of an existing public water system, and the approval of the CTDPH must be obtained before any construction is begun. This includes construction of supply and treatment works, transmission lines, storage tanks, pumping stations and other works of sanitary significance. It does not include the routine extension of laterals or tapping of new service connections, unless the project is federal or state funded, or CPCN (see note CT-1 above).

CT-B4 New water facilities must comply with state construction standards and regulations prior to operation. The following construction standards may not be all-inclusive: AWWA C-651 disinfection of water mains; AWWA C-652 disinfection of water storage facilities; AWWA C-653 disinfection of water treatment plants; AWWA C-654 disinfection of wells; and AWWA C-600 pressure testing of water mains. State rules may contain specific water facility design standards or make reference to applicable industry standards including best engineering principals and practices, codified standards as referenced in CT Guidelines for the Design and Operation of Public Water System Treatment, Works, and Sources, AWWA standards, Recommended Standards for Water Works (better known as Ten States Standards), and National Sanitation Foundation listings. Guidelines for specific water system components and processes are continuously updated. The recently developed "Design and Construction Technical Guidelines for Non-Community Public Water Systems" is also in place.

CT-B5 See the CT Guidelines for the Design and Operation of Public Water System Treatment, Works, and Sources regarding separating distances. In order to receive preliminary approval, the applicant must submit an application form, a location map, and a site plan. The applicant must identify potential contamination sources near the well.

CT-B6 CT requirements for minimum duration of pump test vary based on proposed well output as follows: <10 gallons per minute (gpm) requires 18-hour test; 10-50 gpm requires 36-hour test; >50 gpm requires 72-hour test, with one exception. For CPCN community water system wells a minimum 72-hour test is required regardless of proposed gpm and all wells must be tested simultaneously.

CT-B7 Upon issuance of a Well Use Approval, the well is considered active and in use, unless otherwise notified by the PWS.

MA-B1 Modifications of drinking water facilities are conducted in accordance with Legislative Authority as stated in MGL, Chapter 111, Section 160H and MA Regulatory Authority as given in 310 CMR 22.04 of the Drinking Water Regulations. Upon filing the permit, BRP WS 25, followed by a possible MEPA review (301 CMR 11.00), an initial engineering study documented in an engineer's report is submitted prior to submittal of piloting and design documents. After approval of the engineer's report, a pilot study or in-plant demonstration study is conducted. The study is conducted in accordance with DWS Policy 90-04. Before preparing design plans and specifications, a final report, including the engineer's design recommendations, is submitted to DEP for review and written approval.

MA-B2 Refer to *MA DEP Guidelines and Policies for Public Water Systems, Volumes 1 and 2*, as amended in 2007.

ME-B1 The New System Approval process is used to evaluate all new water sources and systems for Public Water Systems. Specific procedures and policies are used for the New System Approval process, which for ground water sources include a contamination source setback waiver policy and a monitoring policy for systems with inadequate setbacks

between the well and contamination sources. The New System Approval process is completed as a joint effort between the PWS, the Field Inspector, and the Compliance Officer for that PWS.

ME-B2 Plans and specifications submitted for review are date stamped and routed to the Drinking Water Program (DWP) project manager. The project manager reviews plans and specifications using standard checklists for different types of projects. If after the project manager completes the initial review of plans and specifications, deficiencies or non-compliances are found, the project manager sends a letter to the water facility owner and, if appropriate, the consulting engineer describing the deficiencies. The project manager may request additional information or may require the plans and specifications to be altered and resubmitted, setting a time for the submission of changes. After a PWS corrects and documents that it has corrected the deficiencies, the project manager issues a letter of approval, authorizing construction.

For DWSRF projects, the DWP project manager conducts all inspections of the project construction and post-construction startup. Inspections occur at regularly scheduled (monthly) pay requisition meetings involving the owner, contractor, DWP project manager, and other interested parties.

Projects that do not receive DWSRF financial assistance receive plan review and approval by the DWP project manager. System changes involving treatment, pumping, and storage are inspected by the project manager before being brought online.

The Field Inspection Team (FIT) Manager provides all oversight of the project review process, including the development of all policies, procedures, and rules. The FIT manager also provides training to all project managers and oversight of all project review correspondence.

NH-B1 By Rule New Hampshire divides plan reviews into three general categories. A) Large Public Water Systems which are defined as systems that serve over 1,000 people and those that provide fire protection by means of street fire hydrants (Env-Ws 374 – Ws

377). B) Small Community Water Systems which are defined as community water systems that serve 25 or more but less than 1,000 persons without fire protection provided by street hydrants (Env-Ws372). C) Non-Community Water Systems which consist of non-transient non-community and transient non-community water systems (Env-Ws 373).

NH-B2 A professional licensed engineer is required to design small community water systems having more than 50 units or design flows greater than 20,000 gpd and non-community water systems having a design flow greater than 20,000 gpd.

NH-B3 In general each plan review for a new water system requires the following items to be submitted:

(1) A completed application form.
(2) A copy of the concept approval.
(3) A copy of the preliminary well siting report
(4) A preliminary business plan.
(5) A copy of plans and specifications for the pump house and water distribution system.
(6) A copy of a final well siting report.
(7) A copy of a revised business plan.
(8) A copy of an operations and maintenance manual.
(9) Identification of the certified operator for the system.
(10) A verification of distribution pipe installation in accordance with Env-Ws 372-377.
(11) A copy of a final business plan.
(12) A copy of an emergency plan.

RI-B1 In Rhode Island, projects that do not receive DWSRF financial assistance usually receive one inspection upon project completion, and may be inspected during construction as time allows. DWSRF-funded projects receive initial and monthly or more frequent inspections. The plan review manager provides oversight of the project review process, including the development of related policies, procedures, and rules. The manager also

provides training to project review staff, oversight of all project review correspondence and participates in all project review teams.

VT-B1 Construction plans are submitted to the Water Supply Division, date stamped, checked for completeness, routed to appropriate Environmental Engineer, and reviewed to ensure the proposed construction meets the standards in the Vermont Water Supply Rule. Plans must be stamped and signed by a professional engineer licensed in the State of Vermont. The Environmental Engineer provides comments and may request changes, clarification or additional information. The Environmental Engineer approves the project and issues a permit to construct with specific conditions.

For new public water systems, a managerial, financial and capacity review is performed in addition to the technical review. The division must be satisfied that the system will have the technical, financial and managerial capacity to operate the new water system prior to issuance of a permit to construct.

VT-B2 In Vermont, before a new source is developed, an applicant must submit an application specifying the details of the proposed project. The source application must identify the location, source site, and potential sources of contamination. The Water Resources Section Hydrogeologist reviews the preliminary information and conducts a field visit to inspect the site. Once the site is approved, the applicant submits an application and plans for source construction and a 72-hour pump test, which specifies the steps that will be taken. The applicant must also give public notice by notifying adjacent landowners about the project. The Water Supply Division approves the proposal to conduct the pump test. After conducting the pump test, the applicant submits a pump test report, water quality data, delineated source protection area, and source protection plan. A second public notice is given for the source protection area delineation. Once the project receives a Source Permit, the applicant submits construction plans to connect the source to the water system and, the Environmental Engineer issues a permit to construct the source. The project is determined complete once the Environmental Engineer receives record drawings.

C. **Data and information management.**

1. *Purpose.* A major goal of the state primacy agencies is to provide accurate, complete, and timely information to the regulated community, state and federal agencies, and to the public. The ultimate goal is to use these data for making decisions that are intended to protect the public health and the environment. The state primacy agency uses a number of tools to collect, generate, and report data efficiently including surveys, databases, and personal communication. Computerized database systems include:
   - Geographic information systems (GIS) that handles the spatial data.
   - Federally-supported databases (*e.g.* SDWIS).
   - State-specific databases.

2. *Data constituents.* Complete documentation can be found at the State Agencies' offices. Some of the major data elements that their databases track are:
   - inventory information.
   - monitoring schedules.
   - treatment practices.
   - water quality testing data.
   - violations, enforcement and compliance.
   - inspections and sanitary surveys.

3. *Analytical data review.* All data from the public water systems (PWSs) are received and reviewed by assigned staff persons. Information is checked for accuracy and entered into the database by the staff. If data are questionable, they are verified either in person during on-site inspections or by notification by letter, phone call, photocopy transmittal or electronic mail.

   Assigned staff persons compare the monitoring results submitted by, or on behalf of, a PWS, with established standards (*e.g.*, MCLs), historical data, the use of a laboratory certified for the targeted analyte and other relevant information. Professional experience is an integral component of data analysis and evaluation. Samples must be analyzed within the holding times specified by the approved methods and quality control must meet established criteria.

If monitoring results show anomalies, staff must determine the causes for such results (*e.g.*, lab contamination, inconsistency with historical results, quality control values outside of appropriate limits, etc.) by reviewing laboratory QA practices and sampling procedures. If minor errors have occurred, for example, transcription errors or incomplete information on reports, staff asks the PWS to correct the clerical or transcription errors and resubmit the results. If a more serious situation has occurred, e.g., an uncertified or decertified laboratory was used, staff may reject the data and demand re-sampling, reanalysis or both. Sampling and analysis must be done for all required contaminants unless an analyte-specific waiver has been granted by the state. (See Maine, New Hampshire and Vermont state-specific material in notes ME-C1, NH-C1, NH-C2 and VT-C1at the end of Sec. C.)

4. *Filing system.* Maintaining and documenting information for public water supplies is an indispensable part of a quality system designed to monitor drinking water. Once information is received, date stamped and reviewed according to the specific program, paper copies are filed in the public water system file maintained for each individual city or town. This information includes monitoring reports, correspondence, test results, and source protection information.

   These records are maintained according to 40 CFR 142.14. Prior to destruction of paper copies, electronic or microfilm copies are made. One copy is kept on-site the other, off-site. (See notes NH-E1 and NH-E2 at the end of this section.)

5. *Data use:* Sound environmental decisions rely on the generation of relevant and accurate analytical data. Among the decisions that require the application of data of known and documented quality are:
   - determining current system compliance and return to compliance.
   - establishing reporting requirements.
   - identifying triggers for follow-up assistance.
   - establishing monitoring and inspection schedules.
   - performing risk assessment and risk management activities.
   - deciding if enforcement action is needed.
   - prioritizing DWSRF allocation.
   - identifying the appropriate audience for and urgency of public notification.

6. *Electronic data interchange (EDI):* EDI has become a very efficient option for the delivery of environmental data for public drinking water supplies. In order to insure a successful EDI program the following must be considered:
    - Software selection: Should the marketplace drive the development of software used by the submitting party to create their EDI submissions or should the primacy agency provide a standardized software package.
    - Format: The EDI files submitted must be in a standard structure that the database (i.e., SDWIS) can accept or they cannot be processed.
    - Response time: The submitter must be responded to in a very timely manner with the status of their submission ("received", "processed", "error report attached").
    - Data quality: Database queries must be developed for quality checks, however, they shouldn't be used to take the place of the water systems' responsibility to submit quality data.
    - Reports: Monthly reports should be made available so that the submitter can cross check with what they submitted to insure compliance. Updated sampling schedules with compliance information can be posted on the primacy agency's web page for all to use. Errors can be corrected prior to violations being issued.

    Additional applications are presently developed by staff.

Notes for Section C.

ME-C1 All data received for water systems through the electronic data transfer from the state primacy lab are reviewed by assigned staff. Each transfer of information is checked for accuracy (i.e., PWS ID number, name, method, holding times, and results) by accessing the lab's database directly and comparing to the Drinking Water Program's database at a minimum of 10%. The reports are printed and stored by the assigned staff for validation.

NH-C1 Each contaminant that is sampled must be analyzed by a laboratory that has certification for that specific contaminant. An exception to this is analysis required by the DBP rule. Most chlorine residual samples are taken, measured and reported to the Bureau by the water system operator not a certified laboratory. In addition water quality parameters required by the Lead and Copper rule for pH, alkalinity and temperature can be taken, measured and reported directly by the water operator.

NH-C2 Review, reporting and communication of environmental data are constantly reviewed and updated by the Bureau through its Quality Assurance System Program.

VT-C1 SDWIS/STATE and internally developed Access reports and tools are used to assist in data analysis and evaluation. Databases include operation certification tracking and permit tracking.

D. **Sanitary surveys**

1. *Goal.* The objective of a Sanitary Survey is to inspect and evaluate water systems for sanitary risks and compliance with state regulations and the Safe Drinking Water Act and its amendments.

2. *Frequency.* Currently, all sanitary surveys are performed on a routine 3- to 5-year cycle. More frequent sanitary surveys may be triggered by consumer complaints or regulatory violations.

3. *Preparation for a sanitary survey.* In compliance with the sanitary survey selection process, water suppliers are notified by inspection staff, either in writing or verbally, to schedule a survey and assure water supplier staff availability and cooperation. Once a survey is scheduled, the sanitary survey staff thoroughly reviews all available local/state records, including applicable operation and maintenance manuals, water supply management plans, source water protection plans, etc. Pertinent inventory data are also obtained from state computer networks which enable an update of respective water supply information during the survey inspection process. Any violations on record within a state's data system of Safe Drinking Water Act regulations are reviewed. (See CT- and NH-specific information in notes CT-D1 and NH-D1 below.)

4. *Content of a sanitary survey.* Standard forms or electronic sanitary survey tools are used to assure uniformity and completeness of sanitary surveys. The sanitary survey inspection must cover at a minimum the following 8 elements:

    a. Source and source protection
    b. Treatment
    c. Distribution system
    d. Finished water storage
    e. Pumps, pump facilities, and controls
    f. Monitoring, reporting and data verification
    g. System management and operation
    h. Operator compliance with state requirements

    Other items which the sanitary survey inspection may include:

a. Technical, financial and managerial capacity assessment.
b. Record keeping and reporting.
c. Availability of supply
d. Auxiliary or standby power capability
e. Monitoring plans
f. Drinking water quality requirements
g. Distribution system management and flushing plans
h. CADD schematic drawings of source water zones of protection (where applicable)
i. CADD flow schematics (where applicable)
j. Cross connection controls
k. Security
l. Public notification
m. Technical sustainability assessment of the water system to meet standards
n. Special priority programmatic issues, which may come up from time to time.

Should a critical deficiency (imminent health threat) be observed, written notification may be left with the owner/purveyor at the time of the survey, mandating that the imminent health threat be corrected within the required period of time.

5. *Response tracking.* (The practices of the Massachusetts and Vermont programs differ. See the Massachusetts- and Vermont-specific information in notes MA-D1 and VT-D1, respectively, below.)

Once all of the above are reviewed, a sanitary survey report is written, reviewed by supervisory staff as appropriate and mailed to the owner of the water supplier. Inspection dates of each sanitary survey are tracked by computer. The expected response date may also be tracked by computer. A satisfactory response to an inspection report includes (1) corrective actions for all noted deficiencies, (2) a schedule for the corrective actions to take place or (3) an explanation, satisfactory to the water regulatory program, explaining why the deficiency should not be corrected. If a satisfactory response is received, then a follow-up inspection may be scheduled to verify that the necessary corrective actions have been completed.

If a timely response is not received, a supervisory report is generated and a reminder letter is sent to the water system, which grants an additional amount of time for a response. If a response from the water system is still not forthcoming, the water supplier is asked to participate in a teleconference or meeting with inspection and supervisory staff to discuss their intentions, or is sent a reminder letter requiring its response to the survey report in a timely manner. If the water system's response is still unsatisfactory at this point, then formal enforcement procedures are initiated. (See the following section.)

Notes for Section D.

CT-D1 A comprehensive file review/compliance history of the PWS that is to be surveyed is to be performed, including reviews of: SDWIS/State data, files, water quality, M&R violations, MCL violations, operator certification compliance, sampling site plan, customer complaints, previous sanitary survey reports and sanitary survey responses. The violations and/or deficiencies identified during the compliance review are to be discussed with the PWS Administrative Contact and/or Owner and/or Certified Operator (when applicable) at the time of the sanitary survey. Provide necessary technical assistance to assist the PWS with correcting deficiencies and/or correcting violations.

Print out copies of the PWS Inventory Form, the Contact Update Form, the Operator Verification Form (not applicable to TNC PWSs) and the PWS Information Form. Any applicable changes must be captured on these forms, completed by the PWS, signed, and submitted to the appropriate unit within DWS.

A copy of the current water quality testing schedule is to be reviewed as part of the sanitary survey to get a current SDWIS record of the PWS Inventory and contacts. Based on infrastructure/inventory data collected and verified during the sanitary survey, evaluate necessary changes to SDWIS/STATE and input any additional data collected during the sanitary survey.

Cameras are to be brought to all surveys. Pictures are to be taken of all significant parts of the PWS, including sources, storage facilities, treatment, and all violations and deficiencies.

GPS units are to be brought to each survey. The following must have recorded GPS locations: CPWS-wells, reservoir intakes, treatment plants, storage tanks, and pump stations; NCPWS-wells, treatment plants.

MA-D1 After a survey is conducted in Massachusetts, the inspector writes a sanitary survey report that must be approved by his/her supervisor. The report is then sent to the water system. If a violation of a regulation, an imminent health threat is observed or a capacity deficiency that could result in a significant risk to public health is observed, the report includes an enforcement letter or notifies the water system that a separate enforcement document will be sent to specify the necessary corrective actions and schedule for completion. Data from the survey are entered into the computerized database and all compliance milestones are listed and tracked. All enforcement procedures are pursued to full compliance.

NH-D1 New Hampshire requires that the certified water operator be present during the survey. When a sanitary survey is completed the surveyor explains the results of the survey immediately to the water system's operator. In addition an extensive check off copy of the survey's findings is given to the operator. Within a few days a formal letter is written by the surveyor and sent to the water operator and owner of the water system. The letter explains the findings of the survey and what, if any, actions are required by the water system to be in compliance with New Hampshire's rules. Dates for reaching compliance are given and tracked. Follow up letters and enforcement actions are used until all deficiencies have been corrected.

Sanitary surveys also provide a mechanism for updating water system files, make available direct technical assistance and in some cases enroll systems into the capacity program.

VT-D1 Within 30 days following the sanitary survey, the surveyor writes a complete survey report summarizing the survey findings (addressing EPA's eight (8) survey elements), significant and minor system deficiencies, and any requested actions,(considering all of the 8 elements for an EPA Class I survey) as appropriate. The surveyor sends a sanitary survey report to the surveyee(s) and the owner or administrative contact, (and the system operator if not the surveyee), and the WSID file. Following the sanitary survey letter,

typically a water system permit to operate or Temporary Permit to Operate (containing a system improvement schedule) is issued. The surveyor submits completed survey forms to the Support Team for entry into SDWIS and for filing of the original copy in the WSID file.

E. Enforcement strategy

1. *Purpose and goals.*

   a. Purpose. The federal Safe Drinking Water Act is designed to ensure that public water systems meet minimum water quality standards and produce safe and palatable drinking water. All New England States have primary responsibility (primacy) for the administration and enforcement of the Act. The requirements of the Act and its regulations (National Drinking Water Regulations, 40 C.F.R. §§ 141-143) have been incorporated into the states' regulations. It is the purpose of this enforcement policy to set forth the steps that the states may follow in order to accomplish the goal of effective, timely and consistent enforcement of the requirements of the SDWA and the states' regulations. A state will initiate formal enforcement actions against public water systems violating the Safe Drinking Water Act and the state's regulations based on an established enforcement program. (See CT state-specific information in note CT-E1 at the end of Section E.)

   b. Goals. The primary goals of each State's enforcement program are:

      (1) to protect the public health and promote the public welfare by regulating the quality and quantity of water delivered by public water systems.

      (2) to retain primacy under the federal Safe Drinking Water Act.

      (3) to provide effective guidance and compliance assistance, encourage a consistent approach, foster expedient action, and identify program priorities for enforcement initiatives.

      (4) to apply reasonable yet stringent enforcement that promotes violation deterrence through respect for and compliance with the law.

2. *Priorities for enforcement actions.* Prioritization of enforcement actions is ongoing and routinely discussed.

   a. Enforcement actions for emergency situations involving a public health hazard or health risk. Each state initiates actions against those systems that involve an imminent public health hazard or public health risk. Risk involves the immediacy of the adverse health effect caused by the violation and the nature of that effect. For example, the consumption of drinking water containing disease-causing microorganisms or high nitrates can cause an immediate, or acute, adverse health effect. In contrast, the consumption of drinking water containing chemicals exceeding other MCL standards normally causes adverse health effects on a chronic or lifetime exposure basis.

Decisions regarding the timing and nature of enforcement actions, therefore, must include consideration of the nature and degree of risk from, and not merely the existence of, violations of state regulations.

The population at risk is also considered in the prioritization of enforcement action. Consideration of a population at risk will allow a state to maximize public health protection by placing higher priority for enforcement actions on larger public and risk-sensitive small populations, (e.g., nursing homes, day care centers, and schools). In addition, priority may be given to smaller, less risk-sensitive systems on a case-by-case basis, depending on the nature and extent of the violations.

The criteria (not ranked) that may be used in determining whether there is an imminent public health hazard or public health risk are identified below. The application and weighting of the criteria are at the discretion of each state.

(1) Boil water or Do Not Drink notice.
(2) Disease outbreak - epidemiological study.
(3) Consumer complaints regarding situations of compromised public health or public safety.
(4) Low/no water pressure in distribution system, water outages and shortage.
(5) Exceeding state designated Health Action Levels.
(6) Untreated, non-compliant surface water or GWUDI (ground water under direct influence) systems.
(7) Other violations of State design and construction standards
(8) Operator error.
(9) System contamination.
(10) MCL violations.
(11) Using an unpermitted source of water.
(12) Significant water system deficiency.
(13) Lack of disinfection capability.
(14) Septic system within two-year time of travel from water source or strong evidence of hydraulic connection.
(15) Unprotected high-hazard cross-contamination equipment.

(16) A system that lacks capacity.

b. Targeted enforcement approach. The state may take an approach to conduct enforcement on targeted or focused areas. The focus areas below, not necessarily ranked, may be handled as ongoing enforcement actions concurrent with other targeted areas.

(1) Resistant or frequent exceedance of the total coliform MCL.
(2) Lack of a certified operator.
(3) Unpermitted or unapproved source.
(4) Lack of a ground water under the direct influence determination.
(5) Inadequate/no water treatment facilities (corrosion control, standby disinfection).
(6) Inadequate distribution/storage (source construction, cross connections, pressure).
(7) Lack of a source protection plan or bacteriological sampling plan.
(8) Lack of system capacity.
(9) Well driller violations.
(10) EPA significant non-compliers (SNCs)
(11) Failure to issue a consumer confidence report
(12) Lack of a permit to operate or violation of a permit.
(13) Violations concerning a specific regulation such as the D/DBP rule.
(14) Failure to monitor, issue public notices, send monthly reports, perform other reporting requirements, and perform work without a construction permit.

c. EPA priorities for enforcement. Each state meets routinely with EPA to discuss the current significant non-compliant systems identified in EPA's computer inventory and other priorities for enforcement. A state, as appropriate, may modify the program priorities to incorporate EPA's priorities.

3. *Identifying violations.* In addition to systems identified on the quarterly EPA SNC list, violations are discovered through other avenues including the States' computer compliance tracking systems and technical staff findings. For example, violations may be discovered by:

(a) internal review and tracking of public water system monitoring, reporting, public notification, and MCL violations.
(b) sanitary surveys and other on-site inspections.
(c) citizen complaints and follow-up investigations.
(d) epidemiological studies disclosing sickness or disease originating from a public water system.
(e) internal tracking of schedules of compliance.
(f) internal tracking of certified operator status.
(g) review of water system reports.
(h) other site visits.

After discovery of a violation, a state will determine whether an enforcement action will be initiated. (See also Note ME-E1 at the end of this section.)

4. *Initiating enforcement actions.* The first step in the enforcement process may be an informal or formal notice of the violation. The next action may be to issue a bilateral agreement which may assume the authority of a court order. A penalty for the economic benefit plus a penalty for the actual violations may be included in the agreement.

   If a state determines that a water system is unlikely to uphold an agreement, the designated enforcement action may be issuance of an administrative order (AO). If a state determines that defending an AO will require greater resources than are available, it may refer the case to its Attorney General's office and/or EPA for further action.

5. *Compliance and enforcement tracking*. Each state tracks compliance with the regulations. All violations and enforcement actions are reported to the EPA.

See the notes below for state-specific information for Connecticut, Maine and New Hampshire.

Notes for Section E.

CT-E1 See CT's "Standard Operating Procedure for the Requesting, Preparing, Issuing and Tracking Formal Enforcement Actions against Violations of CT Drinking Water Regulations"; Standard Operating Procedures ID #: DWS003; dated May 2006. Please call the Drinking Water Section at 860.509.7333 for a copy or more information.

ME-E1 First is the informal notice of violation. Next a formal notice of noncompliance is issued which may incorporate two or more Notices Of Violation (NOV), the next action is a bilateral consent agreement.

NH-E1 The types of NH enforcement documents include:

(a) Notice of Violation (NOV) – Cites violation and indicates what action(s) are requested of the system.

(b) Notice of Past Violation (NPV) – Cites violation, but states all required information/actions have been received/accomplished.

(c) Letter of Deficiency (LOD) – Cites violation(s) and requests certain actions to be completed by certain dates.

(d) Administrative Order (AO) – Highly structured, legal, enforceable document. Cites history of violations and the Drinking Water & Groundwater Bureau's attempts to gain compliance. Orders certain actions to be completed by certain dates.

(e) Administrative Fine (AF) – Highly structured, legal, enforceable document that cites history of violations and the DWGB's attempts to gain compliance. Proposes certain fine(s) based on rule.

(f) Referral to the Attorney General's Office (RFE). – Referral is by memo signed by the Commissioner of the Department of Environmental Services giving the background, identifying danger to the environment/health, and indicating the degree of willfulness of the offender. Settlements usually provide for civil penalty ($) and some action by the legal system.

NH-E2 The type of enforcement document requested is based on a 20-point check of a system's compliance history with regards to all other Drinking Water & Groundwater Bureau programs.

F. **Training, education and outreach.**

1. *Operator training.* Community and nontransient, noncommunity, water systems are required to have a certified operator to operate the water system. (Some states require transient noncommunity water systems to also have a certified operator.) Each water system is required to have a specific type and grade of operator(s), dependent upon the water system's size, treatment methods used and general complexity. (See footnotes MA-F1, NH-F1 and VT-F1 at the end of this section.)
2. Educational outreach. State outreach programs are designed to assist owners and operators of water systems and also provide information about drinking water to each state's citizens. Listed below are some of the outreach activities.

Operator training is designed to assist new persons to obtain knowledge in order to operate a water system and meet the minimum operator certification qualifications such as passing a certification exam for the level of certification required to operate a certain grade of water system. Additionally, operator training is designed for existing certified operators that need continuing education hours to maintain their certification. However, ultimately the goal of all education is to provide water operators and owners with the knowledge needed to better operate their systems managerially, financially and technically. This is especially true now because of increased regulatory requirements, and the need to understand the growing complex technical nature of the drinking water industry.

Up-to-date educational programs are provided to owners and operators by the states and their contractors. Courses, seminars and workshops are held all year at locations throughout the states. Owners and operators are notified of these training opportunities by direct mail, e-mail, newsletter entries and web site postings. In addition, states approve training made available through organizations such as American Water Works Association, New England Water Works Association, rural water associations and others. Further educational options such as college courses, self study programs, seminars and workshops must be relevant to water system operation, design, maintenance and management. They must be submitted to the states for approval.

- Supply fact sheets and brochures about drinking water subjects.
- Post drinking water information on program web sites.

- Publish program newsletters reporting about drinking water topics.
- Present seminars and workshops on drinking water issues to a variety of groups.
- Make available staff for talks to school children, trade groups and other organizations.
- Organize educational events for elementary schools during Drinking Water Week.
- Provide funds to water systems from the Drinking Water State Revolving Loan Fund.
- Exhibit drinking water themes at trade shows, fairs and other annual events.
- Recognize water systems that make a special effort to promote drinking water issues.
- Provide assistance to water systems in producing their Consumer Confidence Reports.
- Send reminder and pre-violation letters to water system owners and operators.
- Conduct sanitary surveys of all public water systems.
- Continue to provide technical assistance to water systems.
- Facilitate mentoring and joint assistance groups among water operators.
- Provide technical, managerial and financial assistance directories to water systems.
- Answer questions from citizens with regard to drinking water concerns.
- Network with public and private groups about drinking water issues.

(See note MA-F2 at the end of this section.)

3. *Emergency response planning training.* Training is available for water systems with regard to the incident command system and emergency planning. Additionally, tabletop exercises are frequently run for experience in implementing incident management plans.

4. *Training for local health officers.* The states provide training about drinking water concerns to local health officers. Such training can be accomplished by the use of seminars, workshops and one-on-one communication. The subjects discussed can cover such issues as:

    - Types of contamination.
    - Sources of contamination.
    - Short-term vs. long-term health effects.
    - Types of water systems.
    - Available methods of treatment.
    - The SDWA.

- Source water protection.
- Requirements for public notification.
- Where to go for assistance.

While training may vary slightly from state to state, the ultimate goal is to inform and update health officers about the processes required to provide safe drinking water.

5. *Training for state drinking water staff.* State drinking water staff can take advantage of a variety of educational opportunities to expand and update their knowledge about issues related to their specific job and the states' drinking water programs in general. Engineers, geologists, environmentalists, sanitary surveyors and other technical personnel have technical training made available to them via courses, seminars, conferences and workshops. Administrative staff can also take advantage of a number educational opportunities designed to improve their administrative and technical skills. Both technical and administrative staff can receive training from their own state training programs, other governmental agencies and private organizations.

Notes for Section F.

MA-F1 Massachusetts requires TNC water systems to have certified operators.

MA-F2. Drinking water awards: During National Drinking Water Week, the MassDEP, in conjunction with the Massachusetts Drinking Water Education Partnership (MADWEP) (which includes the New England Water Works Association and Massachusetts Water Works Association), recognizes public water systems that go beyond compliance with the state drinking water regulations in promoting quality drinking water. Source protection awards are also distributed during drinking water week.

NH-F1 New Hampshire is presently investigating the possibility of TNC water systems having registered operators.

VT-F1 Vermont requires TNC water systems to have certified operators.

G. **Capacity.**

From a regulatory standpoint, well-run water systems are considered to have adequate "capacity". The term "capacity" can be thought of as a process through which a water system voluntarily plans for and implements activities to ensure that a water system meets both its immediate and long term obligations to provide safe and reliable drinking water to its customers. Capacity activities have been categorized into three general groups:

1. *Technical capacity* refers to the physical infrastructure of the water system, including but not limited to the source, treatment, storage and distribution components of the system. This requires that water system personnel provide proper operational management with regards to the physical components of the system.

2. *Managerial capacity* refers to the management structure of the water system, including but not limited to the ownership accountability, staffing, general organization, regulatory requirements, and effective linkages to customers.

3. *Financial capacity* refers to the financial resources of the water system, including, but not limited to revenue sufficiency, credit worthiness and fiscal controls.

A capacity development program strives to help both proposed and existing water systems ensure that their finances, management, infrastructure and operation are sufficient to provide safe drinking water consistently, reliably and cost-effectively. (See footnotes CT-G1, NH-G1 and VT-G1 below.)

Notes for Section G.

CT-G1 See CT's "Capacity Development Strategy", as approved by the EPA, for CT's state-specific activities and information. Please call the Drinking Water Section at 860.509.7333 for more information.

NH-G1 During the plan review process NH reviews all proposed community water systems and nontransient noncommunity water systems for acceptable capacity standards. Before construction approval is given the capacity plans must also be approved. In addition a preoperational survey is conducted by sanitary survey staff. As part of that survey the water system must have an approved capacity plan before the Drinking Water & Groundwater Bureau will issue a system identification number for that system. The monitoring portion of the plan review process is also used for tracking the progress of capacity assistance provided to existing water systems.

VT-G1 Vermont adopted a strategy on July 28, 2000, for providing capacity development assistance to existing public water systems. In addition to programs that existed prior to 2000, Vermont established a wide array of new initiatives aimed at helping water systems improve in all three areas of capacity. Since July 2000 Vermont has been implementing its strategy, with results published in annual reports submitted to EPA. In addition to the assistance provided to existing PWSs, Vermont conducts capacity reviews for proposed new public community and nontransient noncommunity water systems. Vermont will not allow construction or operation of a new community water system or nontransient noncommunity water system without first making a determination that a proposed system will have adequate capacity.

H. **Drinking Water State Revolving Fund program**.

The federal Safe Drinking Water Act (SDWA) amendments of 1996 allowed states to establish a Drinking Water State Revolving Fund (DWSRF) program to assist public water systems (PWSs) with financing infrastructure upgrades needed to achieve and maintain compliance with the SDWA requirements and to protect public health. The SDWA provides for an annual Congressional authorization to be allocated among the states. The DWSRF provides low interest loans to PWSs. Loans can be repaid within 20 years. The program also emphasizes the prevention of drinking water contamination by allowing states to reserve a portion of their grants to fund activities that encourage enhanced water system management and source water protection.

Each year each state submits a capitalization grant application to the U.S. Environmental Protection Agency (EPA) to capture its DWSRF allocation. Applications for funding from EPA include funds for set-aside activities as well as project funds. Set-asides are funds allocated for a range of specific activities such as encouraging source water protection and supporting other state drinking water program activities, which include DWSRF program administration, drinking water program management, technical assistance for small water systems and the purchase of land for additional source protection. Each state's "Intended Use Plan" describes activities planned for set-aside and project funds.

Each year each state develops a list of projects that will receive funding in the year after the grant award and maintains a comprehensive priority list of eligible projects for funding in future years. Priority for the use of funds is designated to those projects that address one or more of the following categories: quality, quantity, acquisition/transfer, proactive infrastructure upgrades, source/distribution system protection, and affordability.

The highest points are assigned to projects that are designed to bring systems into compliance with quality and quantity regulations. This reflects a philosophy of encouraging public health protection through the distribution of safe and adequate drinking water. In each fiscal year each state makes project loans to recipients in the order of a priority list of eligible projects to the extent of monies available. Each recipient may apply for and receive a project loan in the amount equal to 100% of the eligible project cost. The state institutes a tiered schedule of interest rates for DWSRF loans derived

from the market costs of debt financing for the DWSRF program. The tier applicable to a specific project is based on the financial and legal status of the recipient as well as the type of project. See state-specific information for CT, ME, NH and VT in the notes below.

Notes for Section H.

CT-H1 CT-specific programmatic responsibilities and processes are outlined within the "Drinking Water State Revolving Fund Standard Operating Procedures" ID #: DWS004; dated July 2006. Please call the Drinking Water Section at 860.509.7333 for more information.

ME-H1 In addition to low interest loans, Maine provides zero interest loans and principal forgiveness to qualified water systems. Qualifications are based upon median household income (MHI) and user rates. Specific programmatic responsibilities can be found in the DWSRF Project Management Guidance Manual.

NH-H1 NH can allow a portion of the principal to be forgiven if the median household income of the population served and the projected cost increase falls within certain guidelines.

Specific rates and procedures are explained in the fact sheets WD-DWGB-17-2 "State Revolving Loan Fund for Drinking Water Projects" and WD-DWGB-17-3 "State Revolving Loan Program for Drinking Water Systems." They can be obtained at http://www.des.state.nh.us/dwg.htm
Additional assistance can be provided through New Hampshire's Local Water Protection Grants and the Water Supply Land Grant Program. Also, Federal Funds may be obtained via the Community Development Block Grant Program and the US Department of Agriculture's Rural Development Program.

VT-H1 The DWSRF loan program provides low interest loans to municipally- and certain privately-owned public water systems for water system improvements necessary to either bring systems into compliance or help them to maintain compliance with requirements of the federal Safe Drinking Water Act. The loan program receives between $8M - $9M annually from federal

and state appropriations, which enables funding for between 12-25 projects per year, ranging in size from $10K (typically, school improvements) to several million dollars.

In addition to use of the DWSRF for construction loans, Vermont uses part of its Local Assistance Set-Aside for a planning loan program, which is used to finance preliminary engineering and final design for municipal and non-profit privately-owned public community system improvement projects. The planning loan fund is capitalized with $250K to $500K annually, enough for roughly a dozen planning projects per year. This planning loan fund serves as a bridge to the construction loan program.

I. **Security and emergency response.**

1. Public water systems are at the forefront for ensuring that our nation's water system infrastructure is protected against terrorist threats. The Bioterrorism Act requires every community water system serving more than 3,300 persons to conduct and certify a vulnerability assessment and to prepare or revise and certify an emergency response plan based on the results of the vulnerability assessment.

   A vulnerability assessment is an assessment to determine the vulnerability of a water system to a terrorist attack or other intentional acts intended to substantially disrupt the ability of the system to provide a safe and reliable supply of drinking water or otherwise present public health concerns. The assessment should include such elements of a system as pipes and constructed conveyances; physical barriers; water collection; pretreatment, treatment, storage and distribution facilities; electronic, computerized or other automated systems utilized by the water system; the use, storage, or handling of various chemicals; and the operation and maintenance of such systems.

   The points considered for a vulnerability assessment include the characterization of the water system; the identification and prioritization of adverse consequences to be avoided, the critical aspects of the system open to a threat; the assessment of likelihood of a malicious act; the evaluation of existing countermeasures; and the analysis of the current risk and the development of a prioritized plan for risk reduction.

2. An emergency response plan (ERP) is a documented plan that describes the actions that a water system would take in response to various major events. "Major event" refers to credible threats, indications of terrorism, or acts of terrorism; major disasters or emergencies, such as hurricanes, tornadoes, storms, earthquakes, fires, flood, or explosion regardless of cause; and catastrophic incidents that leave extraordinary levels of mass casualties, damage, and disruption severely affecting the population, infrastructure, environment, economy, and governmental functions.

   The core ERP elements are: system specific information; community water system roles and responsibilities; communication procedures (who, what, and when); personnel safety; identification of alternate water sources; replacement equipment and chemical supplies; property protection; and water sampling and monitoring.

3. The states' drinking water program efforts are to assist and educate public water systems. These resources provide basic security procedures and protocols in order to strengthen and protect New England's public drinking water infrastructure. They include the following: providing tools and guidance to drinking water systems; providing training and technical assistance; building and maintaining reliable communication processes; building and maintaining reliable information systems; improving knowledge of potential threats, methods to detect attacks, and effectiveness of security enhancements in the water sector; improving networking among groups involved in security-related matters – water, emergency response, laboratory, environmental, intelligence and law enforcement communities.

   The states' drinking water programs are responsible for regulating public water systems. Because of the hierarchal structure, any response plan by a state drinking water program must coordinate and integrate with the emergency response structure of the state. The hierarchy of the command structure is from the local level to the drinking water program and the state and up to the Nation Incident Management System (NIMS) structure outlined in the National Response Plan.

   The states' drinking water programs are responsible for responding to emergencies involving public water systems. Most drinking water emergencies involve main breaks, loss of electricity, pump failure or contamination, which is largely handled by the drinking water system. However, the drinking water program plays a greater role in response to drinking water emergencies as the events increase in size to exceed the capabilities of the drinking water systems. This is especially true in today's world of ever-changing hazards including widespread natural disasters and terrorism.

   In order for the drinking water programs to consistently and effectively assist drinking water systems during an emergency, it is important to have procedures and protocols in place.

See the notes below for state-specific information for Connecticut, Maine, New Hampshire and Vermont.

Notes for Section I.

CT-I1 Contact the CT Department of Public Health, Drinking Water Section regarding the Department's "Emergency Contingency Plan" and the Drinking Water Section's "Water Emergencies, Assessment and Response Team Standard Operating Procedures" documents. Please call the Drinking Water Section at 860.509.7333 for more information.

ME-I1 The Maine DWP has developed an Emergency Response Plan created September 29, 2006 that guides the DWP in emergency decisions.

NH-I1 The NH Drinking Water Groundwater Bureau (DWGB) (per Env-Ws 360.15) requires all community water systems to have and maintain an emergency plan (plan) and submit it to the DWGB at least every six years. It further requires the plan be reviewed annually by the system and updated as needed. Additionally, the plan is a checklist item during each sanitary survey and lack of one is considered a survey deficiency. To aid systems in preparing an effective plan, the DWGB has developed Emergency Planning Guides that are intended to help people understand and meet the basic standards for an emergency plan. Community and noncommunity, nontransient systems are also required to notify the DWGB within 24 hours or sooner of an emergency per Env-Ws 360.01. The DWGB website http://des.nh.gov/dwgb has documents and tools for water systems regarding emergency planning, security and vulnerability assessments. The DWGB also has its own Emergency Plan Response.

VT-I1 The Vermont Water Supply Division (VT-WSD) completed the initial phase of the Very Small System Security Recognition Pilot Program. Vermont and Texas were the only states to participate in this program initiated by the Association of State Drinking Water Administrators (ASDWA). The primary program goals were to: (1) assist and encourage systems to consider security improvements; (2) energize systems to do a vulnerability assessment and/or emergency response plan; and (3) recognize systems that have been proactive with enhancing their system security. The second phase of the pilot program will include outreach assistance for the completion of vulnerability assessments and emergency response plans.

Worksheet #9b

Contaminants of Concern

This "worksheet" includes the following spreadsheet, which lists the contaminants of concern for the New England States. It contains all the microbes and chemical compounds ("contaminants"), which are of concern to EPA and/or the New England states.

Regulated parameters are those contaminants for which EPA requires monitoring and has established maximum contaminant levels (MCLs) or maximum residual disinfectant levels (MRDLs). The MCLs and MRDLs are prescribed in 40 CFR 141.

The States may also monitor for contaminants at their own discretion, which are not regulated by EPA.

Contaminants of Concern

Codes:
R: Regulated
NR/M: Not Regulated, but monitored
NR/NM: Not Regulated, not monitored
I: Initial Testing Only

Contaminant Type	Contaminant Name	CT	NH	MA	ME	RI	VT
TCR	Coliform	R	R	R	R	R	R
SWTR	Turbidity	R	R	R	R	R	R
DBP	Bromate	R	R	R	R	R	R
	Carbon, Total-Organic	NR/M	R	R	R	R	R
	Chloramines	R	R	R	R	R	R
	Chlorine	R	R	R	R	R	R
	Chlorine dioxide	R	R	R	R	R	R
	Chlorite	R	R	R	R	R	R
	Total Haloacetic Acids (HAA5)	R	R	R	R	R	R
TTHM	Bromodichloromethane	NR/M	R	R	R	R	R
	Bromoform	NR/M	R	R	R	R	R
	Chloroform	NR/M	R	R	R	R	R
	Dibromochloromethane	NR/M	R	R	R	R	R
	Total Trihalomethanes	R	R	R	R	R	R
VOC	1,1,1-Trichloroethane	R	R	R	R	R	R
	1,1,2-Trichloroethane	R	R	R	R	R	R
	1,1-Dichloroethylene	R	R	R	R	NR/M	R
	1,2-Dichloroethane	NR/M	R	R	R	R	R
	1,2-Dichloropropane	R	R	R	R	R	R
	Benzene	R	R	R	R	R	R
	Carbon tetrachloride	R	R	R	R	R	R
	cis-1,2-Dichloroethylene	R	R	R	R	R	R
	Dichloromethane; methylene chloride	R	R	R	R	R	R
	Ethylbenzene	R	R	R	R	R	R

Contaminant Type	Contaminant Name	CT	NH	MA	ME	RI	VT
	Styrene	R	R	R	R	R	R
	Tetrachloroethylene	R	R	R	R	R	R
	Toluene	R	R	R	R	R	R
	Trichloroethylene	R	R	R	R	R	R
	Monochlorobenzene	R	R	R	R	R	R
	o-Dichlorobenzene	R	R	R	R	R	R
	trans-1,2-Dichloroethylene	R	R	R	R	R	R
	1,2,4-Trichlorobenzene	R	R	R	R	R	R
	Vinyl chloride	R	R	R	R	R	R
	1,4-Dichlorobenzene	NR/NM	R	R	R	R	R
	1,1,1,2-Tetrachloroethane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	1,1,2,2-Tetrachloroethane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	1,1-Dichloroethane	NR/M	NR/M	NR/M	R	R	NR/M
	1,1-Dichloropropene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	1,2 Dibromoethane	NR/NM	NR/M	NR/NM	R	NR/M	NR/M
	1,2,3-Trichlorobenzene	NR/NM	NR/M	NR/M	NR/M	NR/M	NR/M
	1,2,3-Trichloropropane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	1,2,4-Trichlorobenzene[Repeat]	R	NR/R	R	R	R	NR/M
	1,2,4-Trimethylbenzene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	1,3,5-Trimethylbenzene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	1,3-Dichloropropane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	1,3-Dichloropropene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	2,2-Dichloropropane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Bromobenzene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Bromochloromethane	NR/NM	NR/M	NR/M	NR/M	NR/M	NR/M
	Bromomethane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Chlorodibromomethane	NR/M	R	NR/M	NR/M	NR/M	NR/M
	Chloroethane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
VOC	Chloromethane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Dibromochloropropane	R	R	NR/NM	R	NR/M	R
	Dibromomethane	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Dichlorodifluoromethane	NR/NM	NR/M	NR/M	NR/NM	NR/M	NR/M
	Hexachlorobutadiene	NR/NM	NR/M	NR/M	NR/M	NR/M	NR/M
	Isopropylbenzene	NR/NM	NR/M	NR/M	NR/M	NR/M	NR/M
	M-Dichlorobenzene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Methyl Tert-Butyl Ether (Mtbe)	NR/M	R	NR/M	R	NR/M	NR/M
	Monochlorobenzene [Repeat]	R	R	R	R	R	NR/M
	Naphthalene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	N-Butylbenzene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	N-Hexane	NR/NM	NR/NM	NR/NM	NR/NM	NR/M	NR/NM
	N-Propylbenzene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	O-Chlorotoluene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	O-Dichlorobenzene [Repeat]	R	R	R	R	R	NR/M
	P-Chlorotoluene	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	P-Dichlorobenzene	R	R	NR/NM	R	NR/M	R
	P-Isopropyltoluene	NR/NM	NR/M	NR/M	NR/M	NR/M	NR/M
	Sec-Butylbenzene	NR/NM	NR/M	NR/M	NR/M	NR/M	NR/M
	Tert-Butylbenzene	NR/NM	NR/M	NR/M	NR/NM	NR/M	NR/M
	Trichlorofluoromethane	NR/NM	NR/M	NR/M	NR/M	NR/M	NR/M
	Total Xylenes	R	R	R	R	R	R
SOC	1,2-Dibromo-3-chloropropane; DBCP	R	R	R	R	R	R
	2,3,7,8-TCDD (Dioxin)	R	R	R	R	R	R

Contaminant Type	Contaminant Name	CT	NH	MA	ME	RI	VT
	Alachlor	R	R	R	R	R	R
	Atrazine	R	R	R	R	R	R
	Benzo(a)pyrene	R	R	R	R	R	R
	Bis(2-ethylhexyl) phthalate[Repeat]	NR/NM	R	R	NR/M	NR/NM	NR/NM
	Di(2-ethylhexyl) phthalate	R	R	R	R	R	R
	Dinoseb	R	R	R	R	R	R
	Ethylene dibromide (EDB)	R	R	R	R	R	R
	gamma-BHC; Lindane	R	R	R	R	R	R
	Heptachlor epoxide	R	R	R	R	R	R
	Hexachlorobenzene; HCB	R	R	R	R	R	R
	Pentachlorophenol	R	R	R	R	R	R
	Total Polychlorinated Biphenyls (PCB)	R	R	R	R	R	R
	Toxaphene	R	R	R	R	R	R
	Aldicarb	NR/M	R	NR/M	NR/M	R	NR/M
	Aldicarb sulfoxide	NR/M	R	NR/M	NR/M	R	NR/M
	Carbofuran	R	R	R	R	R	R
	Chlordane	R	R	R	R	R	R
	Dalapon	R	R	R	R	R	R
	Diquat	R	R	R	R	R	R
	Endothall	R	R	R	R	R	R
	Endrin	R	R	R	NR/M	R	R
	Glyphosate	R	R	R	R	R	R
	Heptachlor	R	R	R	NR/M	R	R
	Hexachlorocyclopentadiene	R	R	R	NR/M	R	R
	Methoxychlor	R	R	R	NR/M	R	R
	Oxamyl (Vydate)	R	R	R	R	R	R
	Picloram	R	R	R	R	R	R
	Simazine	R	R	R	NR/M	R	R
	2,4,5 TP (Silvex)	R	R	R	NR/M	R	R
	2,4 D	R	R	R	NR/M	R	R
	Aldrin	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Aroclor 1016 (PCB)	NR/NM	NR/NM	NR/M	NR/M	R	R
	Aroclor 1221 (PCB)	NR/NM	NR/NM	NR/M	NR/M	R	R
	Aroclor 1232 (PCB)	NR/NM	NR/NM	NR/M	NR/M	R	R
	Aroclor 1242 (PCB)	NR/NM	NR/NM	NR/M	NR/M	R	R
	Aroclor 1248 (PCB)	NR/NM	NR/NM	NR/M	NR/M	R	R
	Aroclor 1254 (PCB)	NR/NM	NR/NM	NR/M	NR/M	R	R
	Aroclor 1260 (PCB)	NR/NM	NR/NM	NR/M	NR/M	R	R
	Aldicarb sulfone	NR/M	R	NR/M	NR/M	R	NR/M
	Butachlor (Machete)	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Carbaryl	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Di(2-Ethylhexyl) – Adipate	R	NR/M	R	R	R	R
	Dicamba	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Dieldrin	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	3-Hydroxycarbofuran	R	R	R	R	R	R
	Methomyl	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Metolachlor	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Metribuzin (Sencor)	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
	Propachlor	NR/M	NR/M	NR/M	NR/M	NR/M	NR/M
Nitrates	Nitrate	R	R	R	R	R	R
	Nitrate-Nitrite	R	R	R	R	NR/NM	R
Nitrites	Nitrite	R	R	R	R	R	R
Arsenic	Arsenic	R	R	R	R	R	R
Other_IOC	Antimony, Total	R	R	R	R	R	R
	Asbestos	R	R	R	R	R	R

Contaminant Type	Contaminant Name	CT	NH	MA	ME	RI	VT
	Barium	R	R	R	R	R	R
	Beryllium, Total	R	R	R	R	R	R
	Cadmium	R	R	R	R	R	R
	Chromium	R	R	R	R	R	R
	Cyanide, Free	R	R	R	R	R	R
	Fluoride	R	R	R	R	R	R
	Mercury	R	R	R	R	R	R
	Selenium	R	R	R	R	R	R
	Thallium, Total	R	R	R	R	R	R
Rads	Combined Radium (-226 & -228)	R	R	R	R	R	R
	Combined Uranium	R	R	R	R	R	R
	Gross Alpha, Excl. Radon & U	R	R	R	R	R	R
	Gross Beta Particle Activity	R	R	R	R	R	R
Other_Contaminants	Chloride	R	NR/M	NR/NM	R	NR/NM	R
	Copper	R	R	NR/M	R	R	R
	Corrosivity	NR/NM	NR/M	NR/NM	NR/NM	NR/NM	R
	Fluoride	R	R	R	R	NR/NM	R
	Foaming Agents	R	NR/M	NR/NM	NR/NM	I	R
	Iron	NR/NM	NR/M	NR/NM	NR/M	R	R
	Manganese	NR/NM	NR/M	NR/NM	NR/M	I	R
	Odor	R	NR/M	NR/NM	NR/M	I	R
	PH	R	R	NR/NM	R	I	R
	Sulfate	R	R	NR/NM	R	NR/NM	R
	Sulfide	NR/NM	NR/M	NR/NM	R	I	NR/NM
	Zinc	NR/NM	NR/M	NR/NM	NR/M	R	R
	Radon	NR/NM	NR/M	NR/NM	I	NR/NM	I
	Acrylamide	NR/NM	R	NR/NM	NR/NM	R	R
	Epichlorohydrin	NR/NM	R	NR/NM	NR/NM	R	R
	Aluminum	NR/NM	NR/M	NR/NM	NR/NM	NR/NM	R
	Bromide	NR/M	NR/M	NR/NM	R	NR/NM	NR/NM
	Color	R	NR/M	NR/NM	NR/M	I	R
	Conductivity @ 25 C U-MHO	NR/M	NR/M	NR/NM	NR/NM	NR/M	NR/NM
	Fecal Coliform	R	R	R	R	R	R
	Giardia lamblia	NR/NM	R	NR/NM	R	R	R
	Gross Alpha, Incl. Radon & U	R	R	NR/M	NR/NM	I	R
	Hardness, Carbonate	NR/NM	NR/M	NR/NM	NR/M	R	NR/M
	Lead	R	R	NR/M	NR/M	R	R
	Methyl-tert-Butyl-Ether (MTBE)	NR/M	R	NR/M	R	NR/M	NR/M
	Nickel	R	NR/NM	NR/M	NR/NM	R	R
	Phenol	NR/NM	NR/NM	NR/NM	NR/NM	NR/NM	NR/NM
	Radium-226	NR/M	R	NR/M	R	R	R
	Radium-228	NR/M	R	NR/M	R	R	R
	Silver	R	NR/M	NR/NM	R	I	R
	Sodium	R	NR/M	NR/M	R	R	R
	Total Dissolved Solids (TDS)	NR/NM	NR/M	NR/NM	NR/NM	I	R
	2,4-dinitrotoluene	NR/NM	NR/NM	NR/NM	NR/NM	NR/M	NR/NM
	2,6-dinitrotoluene	NR/NM	NR/NM	NR/NM	NR/NM	NR/M	NR/NM
	Acetochlor	NR/NM	NR/NM	NR/NM	NR/NM	NR/NM	NR/NM
	Diazinon	NR/NM	NR/NM	NR/NM	NR/M	NR/NM	NR/NM
	Perchlorate	NR/NM	NR/NM	R	NR/NM	NR/NM	NR/NM
	Arsenic III	NR/NM	NR/NM	NR/NM	I	NR/NM	NR/NM
	Orthophosphate	NR/M	NR/M	NR/M	NR/M	R	NR/M

Contaminant Type	Contaminant Name	CT	NH	MA	ME	RI	VT
	Silica	NR/M	NR/NM	NR/NM	NR/M	NR/NM	NR/NM
	Valpar	NR/NM	NR/NM	NR/NM	R	NR/NM	NR/NM

Worksheet 9c

Field and Quality Control Sample Summary

Drinking Water

Samplers should collect field duplicates at a frequency of 5%, or one per sampling event, whichever is more frequent.

Worksheet #9d

Analytical Services

Drinking water samples for compliance monitoring must be analyzed by laboratories certified by the laboratory certification (accreditation) program of the state in which the sampled water utility is located or by laboratories directly certified by the U.S. EPA. State principal laboratories analyzing such samples are certified by EPA New England. EPA-approved methods must be used. Laboratories may use only those methods for which they have been certified. All approved drinking water methods are listed in the *Code of Federal Regulations 40 CFR 141.*

Information about certified labs may be found by contacting the state laboratory certification (accreditation) programs provided on the next page or by contacting the EPA New England Quality Assurance Unit contact listed below. If the program has a web site, it is listed.

EPA New England Quality Assurance Unit contact for lab certification (accreditation) information:

Arthur E. Clark
EPA New England
11 Technology Drive
North Chelmsford, MA 01863
Telephone: 617-918-8374
Fax: 617-918-8274
Email: clark.arthur@epa.gov

Certification Officers within New England
(Including Certification Program Web Sites)

August 2007

CT

Mr. Jeffrey Curran
Dept. of Public Health
Certification Officer
410 Capitol Ave. MS#51LAB
P.O. Box 340308
Hartford, CT 06134-0308
Phone: 860-509-7369
Fax: 860-509-7378

Web site: http://www.ct.gov/dph

MA

Ms. Ann Marie Allen
Dept. of Environmental Protection
Acting Deputy Director, Wall Experiment Station
Director, Laboratory Certification Office
37 Shattuck St.
Lawrence, MA 01843
Phone: 978-682-5237 ext. 333
Fax: 978-688-0352

Web site: http://public.dep.state.ma.us/labcert/labcert.aspx

ME

Matthew Sica, Certification Officer
Department of Health & Human Services
MECDC, Division of Environmental Health, Bureau of Health
11 State House Station
Augusta, ME 04333
Phone: 207-(207) 287-1929
Fax: 207-(207) 287-4172
Street address: 286 Water St., 3rd Floor Key Plaza

Web site:
http://www.maine.gov/dhhs/eng/water/Templates/LabCertification/LabCertification.htm

NH

Mr. Bill Hall, Manager
Department of Environmental Services
Environmental Laboratory Accreditation Program
P. O. Box 95
Concord, NH 03302-0095
Phone: 603-271-2998
Fax: 603-271-2997

Web site: http://www.des.state.nh.us/nhelap

RI

Henry Leibovitz, Ph.D
Dept. of Health Laboratory
Chief, Environmental Sciences & Certification Officer
50 Orms St.
Providence, RI 02904-2283
Phone: 401-222-5578
Fax: 401-222-6985

Web site: http://www.health.ri.gov/labs/instate.php

VT

Mr. George Mills
Department of Health
Certification Officer & Program Chief
195 Colchester Ave.
Burlington, VT 05401
Phone: 802-863-7335
Fax: 802-863-7632

Web sites: General information: http://www.anr.state.vt.us/dec/watersup/wsysops.htm
List of labs: http://healthvermont.gov/enviro/ph_lab/certlab.pdf

Worksheet #10
Project Schedule

Routine monitoring is conducted on an on-going basis according to schedules established by each state program in accordance with EPA drinking water regulations. Inventory (including treatment processes), violations, Lead and Copper Rule milestones, Lead and Copper Rule 90th Percentile Sample Data, inspections and enforcement actions are reported to the EPA drinking water program.

Worksheet #11
Performance Criteria

At the present time EPA has not set nationwide measurement performance criteria for drinking water analyses.

The project quality objective is to ensure to the extent possible that all drinking water compliance data will be of sufficient quality to evaluate compliance of public water supplies with federal and/or state regulations.

The states' drinking water programs require the use of approved methods of analysis. In turn, the EPA and state certification programs regularly audit their certified laboratories to make certain that they meet the performance criteria in the methods.

Worksheet #12a
Sampling Design and Rationale

Sampling locations and frequencies of sampling are set by EPA and/or state regulation. The table of sampling locations below includes appropriate references.

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
Coliform	141.21(a)(1)	Public water systems must collect total coliform samples at sites which are representative of water throughout the distribution system according to a written sample siting plan.
Coliform Repeat Monitoring	141.21(b)(2)	The system must collect at least one repeat sample from the sampling tap where the original total coliform-positive sample was taken, and at least one repeat sample at a tap within five service connections upstream and five service connections downstream of the original sampling site.
IOCs: The following is to determine compliance with 141.62.		
Inorganics	141.23(a)(1)	Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (hereafter called a sampling point) beginning in the initial compliance period. The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.
Inorganics	141.23(a)(2)	Surface water systems shall take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment (hereafter called a sampling point). Note: For purposes of this paragraph, surface water systems include systems with a combination of surface and ground sources.
Inorganics	141.23(a)(3)	If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).
Asbestos	141.23(b)(5)	A system vulnerable to asbestos contamination due solely to

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
		corrosion of asbestos-cement pipe shall take one sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.
Asbestos	141.23(b)(6)	A system vulnerable to asbestos contamination due solely to source water shall monitor in accordance with the provision of paragraph (a) of this section. (See Inorganics)
Asbestos	141.23(b)(7)	A system vulnerable to asbestos contamination due both to its source water supply and corrosion of asbestos-cement pipe shall take one sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.
VOCs: The following to determine compliance with 141.61(a) 1-21		
VOCs	141.24(f)(1)	Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (hereafter called a sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source, treatment plant, or within the distribution system.
VOCs	141.24(f)(2)	Surface water systems (or combined surface/ground) shall take a minimum of one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment (hereafter called a sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source, treatment plant, or within the distribution system.
VOCs	141.24(f)(3)	If the system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water representative of all sources is being used).
Vinyl Chloride	141.24 (f)(11)(v)	A vinyl chloride sample shall be taken at each sampling point at which one or more of the two-carbon organic compounds were detected. This applies to groundwater systems.

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
SOCs: The following to determine compliance with 141.61(c).		
SOCs	141.24(h)(1)	Groundwater systems shall take a minimum of one sample at every entry point to the distribution system, which is representative of each well after treatment (hereafter called a sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.
SOCs	141.24(h)(2)	Surface water systems shall take a minimum of one sample at every entry point in the distribution system that are representative of each source or at each entry point to the distribution system after treatment (hereafter called a sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant. Note: For purposes of this paragraph, surface water systems include systems with a combination of surface and ground sources.
SOCs	141.24(h)(3)	If the system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water representative of all sources is being used).
Gross Alpha Particle Activity, Radium-226, Radium-228 and Uranium	141.26(a)	All community water systems (groundwater or surface water) must sample at every entry point to the distribution system that is representative of all sources being used.
Beta Particle and Photon Emitters	141.26(b)	State determines if a system must monitor for Beta particle and photon emitters. Monitoring is at the entry point to the distribution system.
Disinfectants and Disinfection Byproducts		
Stage 1 D/DBPR TTHM HAA5	141.132(b)(1)(i)	Water systems shall collect at least 25% of all quarterly samples at locations representing maximum residence time. Remaining samples taken at locations representative of at least average residence time in the distribution system and representing the entire distribution system.

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
Stage 1 D/DBPR TOC	141.132(b)(1)(iii)	In order to qualify or be eligible for reduced monitoring for TTHM and HAA5, water systems shall collect monthly samples from the water source (prior to any treatment)
Stage 1 D/DBPR Chlorite	141.132(b)(2)(i)	Water systems that use chlorine dioxide for disinfection or oxidation shall measure daily chlorite samples at the entry point to the distribution system.
Stage 1 D/DBPR Bromate	141.132(b)(3)(i)	Water systems shall collect one monthly sample per treatment plant at the entry point to the distribution system if ozone is used for disinfection or oxidation and the ozonation system is operating under normal condition.
TOC Alkalinity	141.132(d)(1)	Subpart H systems that use conventional filtration shall collect paired samples per month per plant at a time representative of normal operating conditions and influent water quality. The term "paired samples" is defined as one sample from the entry point to the distribution system (after treatment) and at the same time, collect one sample from the source water (prior to any treatment).
Stage 2 D/DBPR TTHM HAA5	141.601(b)(1)-(3)	Water systems must collect dual sample sets at each monitoring location identified in the standard monitoring plan. One sample in the dual sample set must be analyzed for TTHM. The other sample in the dual sample set must be analyzed for HAA5. The system must conduct one monitoring period during the peak historical month for TTHM or HAA5 levels or the month of warmest water temperature.
Stage 2 D/DBPR TTHM HAA5	141.622 141.621(a)(1) 141.620(e) 141.604 141.603 141.132(f)	Any water system that submitted an IDSE report, the system must begin monitoring at the locations and months recommended in its IDSE report, unless the State requires other locations or additional locations after its review. Any small NTNC that is eligible for a small system waiver, and submitted a 40/30 certification, the system must monitor at the locations(s) and dates identified in it monitoring plan
Unregulated contaminant Monitoring Regulation (UCMR)-141.40		
List 1,2&3 Analytes	141.40(a)(4) (i)(C) and 141.40(a)(4) (ii)(B)	UCMR is being implemented through three monitoring phases: Assessment (List 1), Screening Survey (List 2) and Pre-screening Testing (List 3). For water systems that are subject to the monitoring requirements, must collect at least one sample at each entry point to the distribution system (EPTDS) after treatment. The water system must collect the

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
		samples in one continuous 12-month period for List 1 analytes and if applicable, for List 2 analytes during the time frame set-forth in UCMR and designated by the State. For nitrosamines in List 2, water systems must collect samples at EPTDS and distribution system maximum residence time (DSMRT).
Special Monitoring for Sodium-141.41		
Sodium	141.41(a)	Community public water systems shall collect and analyze one sample per plant at EPTD.
Source Water Monitoring for Surface Water and Ground Water Under the Direct Influence of Surface Water (GWUDI)—141.70, 141.500 and 141.700		
Sampling Point	141.71(a)(1)	For Subpart H systems, fecal coliform concentration must be equal to or less than 20/100ml, or the total coliform concentration must be equal to or less than 100/100ml in representative grab samples immediately prior to the first or only point of disinfectant application.
Sampling Point	141.703(a)	For Subpart H systems and their consecutive systems which are required to conduct source water monitoring must collect samples for each plant that treats a surface water or GWUDI source. Where multiple plants draw water from the same influent, such as the same pipe or intake, the State may approve one set of monitoring results.
Sampling Point	141.703(b)(1)	Subpart H and their consecutive systems must collect source water samples prior to chemical treatment, such as coagulants, oxidants and disinfectants, unless the systems meet the condition of 141.73 (b)(2).
Sampling Point	141.703(c)	Water systems that recycle filter backwash water must collect source water sample prior to the point of filter backwash water addition
Monitoring for Systems Without Filtration 141.74(b)		
Fecal or Total Coliform	141.74(b)(1)	Fecal coliform or total coliform density measurements must be performed on representative source water samples immediately prior to the first or only point of disinfectant application.

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
Turbidity	141.74(b)(2)	Turbidity measurements as required by 141.71(a)(2) must be performed on representative grab samples of source water immediately prior to the first or only point of disinfectant application every four hours or more frequently. A water system may substitute continuous turbidity monitoring for grab sample monitoring if it validates the continuous measurement for accuracy on a regular basis using a protocol approved by the State.
Cryptosporidium	141.701(a)(2)	Unfiltered water systems serving at least 10,000 people must sample their source water for Cryptosporidium at least monthly for 24 months.
CT Calculations		
Temperature	141.74(b)(3)(i)	The temperature of the disinfected water must be measured at least once per day at each residual disinfectant concentration sampling point.
pH	141.74(b)(3)(ii)	If the system uses chlorine, the pH of the disinfected water must be measured at least once per day at each chlorine residual disinfectant concentration sampling point.
Residual Disinfectants	141.74(b)(3)(iv)	The residual disinfectant concentration(s) ("C") of the water before or at the first customer must be measured each day during peak hourly flow.
Residual Disinfectants	141.74(b)(5)	The residual disinfectant concentration of the water entering the distribution system must be monitored continuously, and the lowest value must be recorded each day, except that if there is a failure in the continuous monitoring equipment, grab sampling every 4 hours may be conducted in lieu of continuous monitoring, but for no more than 5 days following the failure of the equipment.
Residual Disinfectants	141.74(b)(6)(i)	The residual disinfectant concentration must be measured at least at the same points in the distribution system and at the same time as total coliforms are sampled, unless the State designates a different point to take residual disinfectant samples.
Filtered Systems 141.74(c):		
Turbidity	141.74(c)(1)	Turbidity measurements must be performed on representative samples of the system's filtered water every

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
		four hours or more frequently. A water system may substitute continuous turbidity monitoring for grab sample monitoring if it validates the continuous measurement.
Residual Disinfectants	141.74(c)(2)	The residual disinfectant concentration of the water entering the distribution system must be monitored continuously and the lowest value must be recorded each day, except that if there is a failure in the continuous monitoring equipment, grab sampling every 4 hours may be conducted in lieu of continuous monitoring.
Residual Disinfectants	141.74(c)(3)(i)	The residual disinfectant concentration must be measured at least at the same points in the distribution system and at the same time as total coliforms are sampled, unless the State designates a different sampling point. Heterotrophic plate count (HPC) may be measured in lieu of residual disinfectant.
Turbidity	141.560 141.174	Any Subpart H water system that utilizes conventional filtration or direct filtration must conduct continuous monitoring of turbidity for each individual filter. Turbidity results must be recorded at least every 15 minutes. If there is a failure in the continuous turbidity monitoring equipment, the system must conduct grab sampling every four hours in lieu of continuous monitoring, but for no more than five working days following the failure of the equipment.
Cryptosporidium, E. coli, and Turbidity	141.701(a)(1)	Filtered water systems serving at least 10,000 people must sample their source water for *Cryptosporidium, E. Coli*, and turbidity at least monthly for 24 months.
E. coli	141.701(a)(3)(i)	Filtered water systems serving fewer than 10,000 people must sample their source water for *E. Coli* at least once every two weeks for 12 months, or at least monthly for 24 months, depending on types of source water and the amount of *E. coli* detected.
Lead and Copper Rule—141.80		
Lead and Copper in	141.86(a)(3) to 141.86(a)(5)	The sampling sites selected for the community water system's sampling pool ("tier 1 sampling sites") shall consist of single family structures that:

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
Tap Water	141.86(a)(8)	(i) Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or (ii) Are served by a lead service line. When multiple-family residences comprise at least 20 percent of the structures served by a water system, the system may include these types of structures in its sampling pool. (4) Any community water system with insufficient tier 1 sampling sites shall complete its sampling pool with "tier 2 sampling sites", consisting of buildings, including multiple-family residences that: (i) Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or (ii) Are served by a lead service line. (5) Any community water system with insufficient tier 1 and tier 2 sampling sites shall complete its sampling pool with "tier 3 sampling sites", consisting of single family structures that contain copper pipes with lead solder installed before 1983. A community water system with insufficient tier 1, tier 2, and tier 3 sampling sites shall complete its sampling pool with representative sites throughout the distribution system. Any water system that contains lead service lines, shall draw 50% of the samples from sites that contain lead service line, and/or draw 50% of the samples that contain copper pipes with lead solder.
Lead and Copper in Tap Water	141.86(a)(6) 141.86(a)(7)	The sampling sites selected for a non-transient non-community water system shall consist of buildings that: (i) Contain copper pipes with lead solder installed after 1982 or contain lead pipes: and /or (ii) Are served by a lead service line.
Lead and Copper in Tap Water	141.86(b)(2) 141.86(b)(3)	Each first-draw tap sample and each service line sample shall be one liter in volume and have stood motionless in the lead service line and/or in plumbing for at least six hours. Lead service line samples shall be collected in one of the following three ways: (i) At the tap after flushing the volume of water between the tap and the lead service line; (ii) Tapping directly into the lead service line; or (iii) If the sampling site is a building as a single family residence, allow the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.

SDWA SAMPLING LOCATIONS* July 2008		
Parameter	Reg. Citation	Location
Lead and Copper in Source Water	141.88(a)	A water system that fails to meet the lead or copper action level shall collect a minimum of one sample at the entry point to the distribution system for lead and copper level.
Temperature pH Alkalinity Calcium Conductivity Orthophosphate or Silica if applicable in Tap Water and Source Water	141.87(a)(1)	Tap samples shall be representative of water quality throughout the distribution system taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. (Note: Systems may find it convenient to conduct tap sampling at sites used for coliform sampling Samples collected at the entry point(s) to the distribution system shall be from locations representative of each source after treatment.

* Courtesy of Mark Sceery *et al*, EPA New England.

Worksheet #12b
Sampling Location, Sampling Method and Analytical Method

&

Worksheet #13
Sampling SOPs

With the exception of New Hampshire and Rhode Island, all New England state drinking water programs use the sampling guidance found in *New England States' Sample Collection & Preservation Guidance Manual for Drinking Water,* Rev. 4.1, June 24, 2008.

New Hampshire uses the following guidance: *Sampling Manual for New Hampshire*.*

Rhode Island uses individual "Sample Collection/Preservation Protocols" prepared by the RI DOH Division of Laboratories and Office of Drinking Water Quality. They are reformatted versions of the sampling protocols in the *New England States' Sample Collection & Preservation Manual for Drinking Water.**

* These documents were reviewed by the EPA New England Quality Assurance Unit and found to be satisfactory.

Worksheet # 14
Field Sampling Equipment Calibration

&

Worksheet # 15
Field Equipment Maintenance, Testing & Inspection

No field sampling equipment is used except as noted below. Samples are collected as grab samples directly from faucets into sample containers.

MA has recently authorized the use of field sampling equipment for Stage 1 DBPR residual monitoring under 310 CMR 22.07E(6)(d)2. Also, some WQP monitoring under the LCR, especially pH, may be performed using field equipment. The same is true for on-line meters including, for example, the measurement of turbidity under the SWTR.

Worksheet # 16
Sample Handling Flow Diagram

General sampling handling practices are included in the sampling manuals referenced above (for Worksheet 12b). State-specific practices for obtaining containers, scheduling analyses and delivering samples to the state principal labs are given in Chapter 4 of the *New England States' Sample Collection & Preservation Guidance Manual for Drinking Water,* Rev. 4.1, June 24, 2008.

Worksheet # 17

Field Analytical Method/SOP Reference
&
Worksheet # 18
Field Analytical Instrument Calibration
&
Worksheet # 19
Field Analytical Instrument/Equipment Maintenance, Testing and Inspection

In general, no field analyses are performed. Therefore, these Worksheets have not been completed. When the Massachusetts drinking water program completes its state-specific worksheets for the monitoring discussed in Worksheets 14 and 15, they will be added to a separate Updates and Errata document which will supplement this QAPP.

Worksheet # 20
Fixed Laboratory Analytical Method/SOP Reference

Drinking water samples for compliance monitoring must be analyzed by laboratories certified by the lab certification (accreditation) program of the state in which the sampled water utility is located or directly by EPA. State principal laboratories analyzing such samples are certified by EPA New England. EPA-approved methods must be used. Laboratories may use only those methods for which they have been certified. All approved drinking water methods are listed in the *Code of Federal Regulations 40 CFR 141*.

Information about certified labs may be found by contacting the state laboratory certification (accreditation) programs. See Worksheet # 9d and its attachment for further information.

Worksheet # 21
Fixed Laboratory Instrument Maintenance and Calibration

The state principal laboratories calibrate and maintain their instruments as required by instructions given in the various EPA-approved analytical methods. EPA New England verifies during its periodic on-site evaluations of these laboratories that all method requirements are appropriately performed and documented.

Worksheet # 22a
Field Sampling QC

&

Worksheet # 22b
Field Sampling SOP Precision and Accuracy

Routine sampling for compliance purposes is generally conducted by the department staff only in Rhode Island.

Sampling for enforcement actions and resampling (which is performed in response to a violation or an exceedance) is generally conducted by department staffs in all states but Vermont.

Sampling is performed according to the sampling manuals discussed in Worksheet 12b/13.

EPA New England has recommended to all labs that field duplicates be taken at a frequency of 5 to 10% or one per batch, whichever is more frequent.

Worksheet # 23a
Field Analytical QC Samples

&

Worksheet # 23b
Field Analytical Method/SOP Precision and Accuracy

Any field analyses that are performed must have supporting documentation for precision and accuracy in the form of field manuals, standard operating procedures and or other types of guidance manuals.

Worksheet # 24a
Fixed Laboratory Analytical QC Samples

&

Worksheet # 24b
Fixed Laboratory Method/SOP Precision and Accuracy

EPA-approved methods include mandatory quality control measures. EPA New England reviews and retains the state laboratories' acceptance limits for precision and accuracy (which are documented in its copies of their laboratory quality assurance plans and analytical standard operating procedures).

These procedures apply to commercial and municipal labs performing sampling and analysis in support of the SDWA.

Worksheet # 25
Non-Direct Measurements Criteria and Limitations

Non-direct measurements are not utilized by the New England states' drinking water programs.

Worksheet # 26
Project Documents and Records

See Sections C3 (Analytical Data Review) and C4 (Filing System) in the combined Worksheets 8b and 9a for a discussion of the review of analytical data reports and record receipt and retention.

The state programs retain sample collection sheets, custody forms and all laboratory tracking, worksheet and other raw data. For a complete list of the records state programs must receive and retain, see the current version of 40 CFR 142.14.

Massachusetts has privatized the monitoring and analysis process and relies on commercial or municipal labs to perform this work. The state typically only receives the result forms. Private laboratories are required to retain copies of all of the applicable QA/QC documentation that is required and discussed throughout this document including:

- Initial demonstration of capability,
- Appropriate initial and continuing calibration data,
- Appropriate results for blank samples.
- Surrogate recovery data,
- Instrument calibration data.

Review of QAPP:
Modifications to the content of this document will be assembled in an Updates & Errata list which will be published periodically (as a separate document).

Worksheet # 27 (Modified)

Assessments

Laboratory Assessments
The Safe Drinking Water Act requires that each state principal laboratory (SPL) be certified by EPA every three years. The criteria for these evaluations and the determinations of certification status are given in the current version of the EPA's *Manual for the Certification of Laboratories Analyzing Drinking Water*. (The currently effective version is the fifth edition, EPA 815-R-05-004, January 2005.) The EPA's Office of Water accepts accreditation of laboratories under the National Environmental Laboratory Accreditation Program (NELAP) as an equivalent alternative to laboratory certification as described in the Manual. NELAP-accredited laboratories are evaluated every two years according to the standards of the National Environmental Laboratory Accreditation Conference (NELAC). (The current version is the 2003 NELAC Standard.). In EPA New England, the SPLs in Connecticut, Massachusetts and Rhode Island are evaluated under the EPA's laboratory certification program; the SPLs in Maine, New Hampshire and Vermont are NELAP accredited. They receive accreditation from the New Hampshire Environmental Laboratory Accreditation Program.

Private (commercial) and municipal laboratories are assessed by their respective state certification or accreditation programs in Connecticut, Maine, Massachusetts, New Hampshire and Rhode Island. Vermont's laboratories are assessed by recognized NELAP accrediting bodies from other states since Vermont requires NELAP accreditation for its laboratories. Each state has its own regulations governing the laboratory certification or accreditation program which include rules for the on-site assessment of laboratories. State programs for laboratory certification and accreditation are discussed in the section on Analytical Services (Worksheet 9d, pages 94 - 97).

Data Assessments
Data from public water systems are assessed for quality and usability according to the processes described in Project Definition, Background & Description, Section C. Data and information management, part 3. *Analytical data review* (Worksheets 8b & 9a, pages 64 – 65). Responsibilities for data review are included in the Personnel Responsibilities and Qualifications Table (Worksheet 6, pages 33 – 39).

Program Assessments
State programs routinely participate in each of the four types of program assessments described in the QA Management Report section (Worksheet 28, page 119).

On-site reviews of the state programs for laboratory certification in Connecticut, Massachusetts, Maine, Rhode Island and Vermont are conducted at least once every three years by the EPA New England Certification Officer. Procedures for review of laboratory certification programs are described in EPA New England's *SOP for Evaluating State Principal Laboratories Analyzing Drinking Water*. New Hampshire's Environmental Laboratory Accreditation Program is evaluated every three years by NELAP in accordance with the NELAC Standard and The NELAC Institute's *NELAP SOP for the Evaluation of Accreditation Bodies,* Rev. 8.6, Feb. 15, 2008.

Worksheet # 28
QA Management Reports

1. As required by law, each state must prepare and publish an Annual Compliance Report for the previous calendar year. Each state must report a subset of violations relating to MCL, MRDL, TT, significant M/R, variances and exemptions, record keeping, significant PN, and significant consumer notification violations. In addition to the required elements, many states include enforcement activities, inspections of water suppliers, funding, capacity development, status of source water assessment, status of regulation implementation and other state projects.

2. Every three months, each state program transmits to the Safe Drinking Water Information System – Federal database (SDWIS Fed) a list of violations and their types, enforcement activities and any changes to any of its water suppliers' inventories as well as inspections, treatment technique milestones and monitoring data. Each state transmits data sets to its desk top QC check point. Any errors detected would be corrected and the revised data sets would be submitted to EPA's data warehouse.

3. The EPA regional office conducts program implementation evaluation on an annual basis if deemed necessary. In addition, it performs program enforcement evaluation as needed (usually annually or triennially).

4. Once every few years, depending on the availability of funds, the EPA headquarters office of Ground Water and Drinking Water authorizes a contractor to conduct "data verification" for selected regulations. These reviews are different from the data validation with which analysts and quality assurance personnel are familiar. They examine water suppliers' files kept by the state programs. They focus primarily on:
   - Compliance determination. (For example, did the state program make the right decision in accordance with EPA regulations?)
   - Procedures used to process suppliers' data.
   - Tracking systems. (How well does a program track its water systems, sampling locations, emergency plans, etc.?)
   - Reporting procedures. (Were all violations reported to EPA?)

Worksheet # 29a
Data Evaluation Process (Narrative)

&

Worksheet # 29b
Data Evaluation Summary (Table)

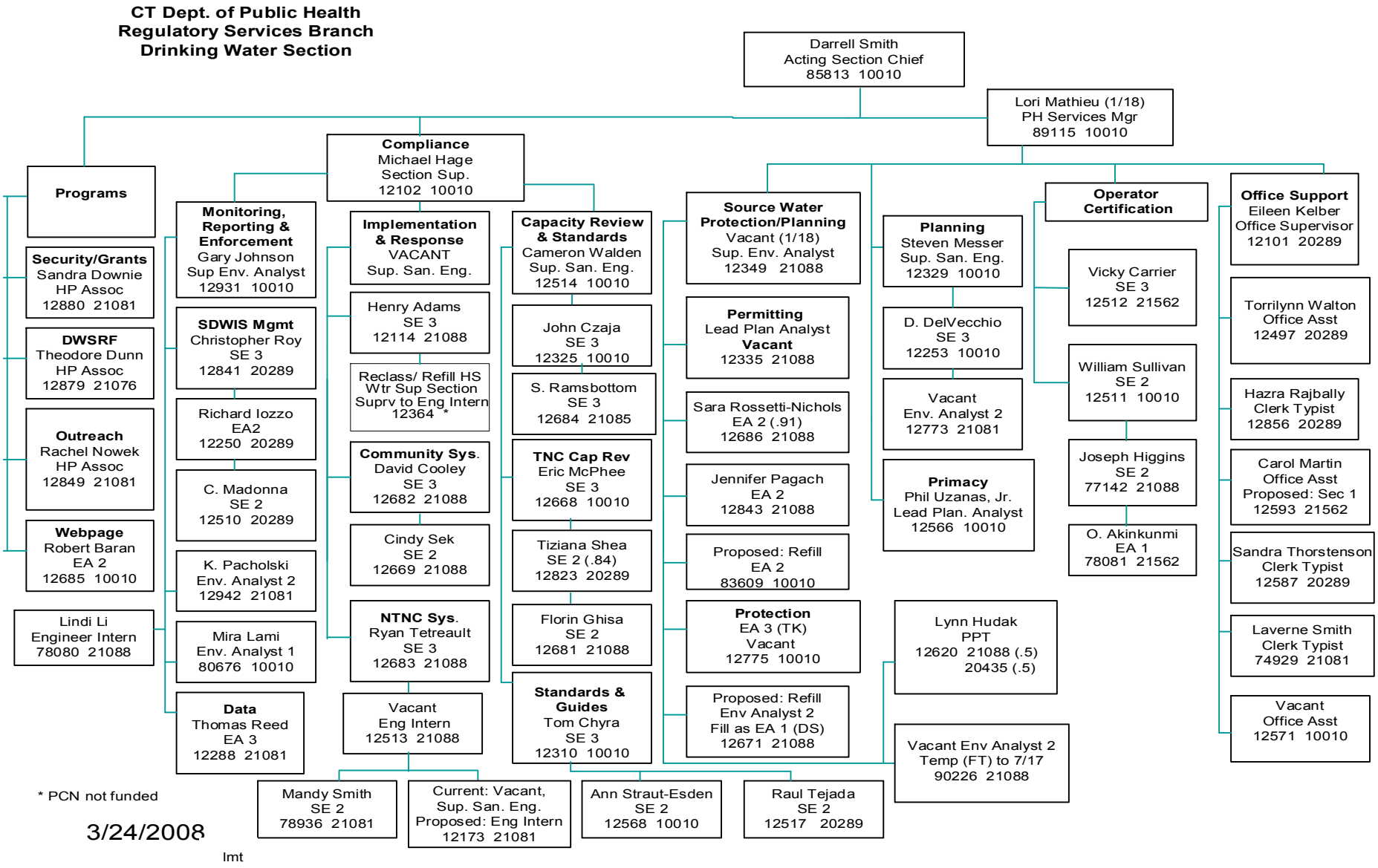
Data evaluation processes are described in Sec. 3.C of the narrative for combined Worksheets # 8b and # 9a.

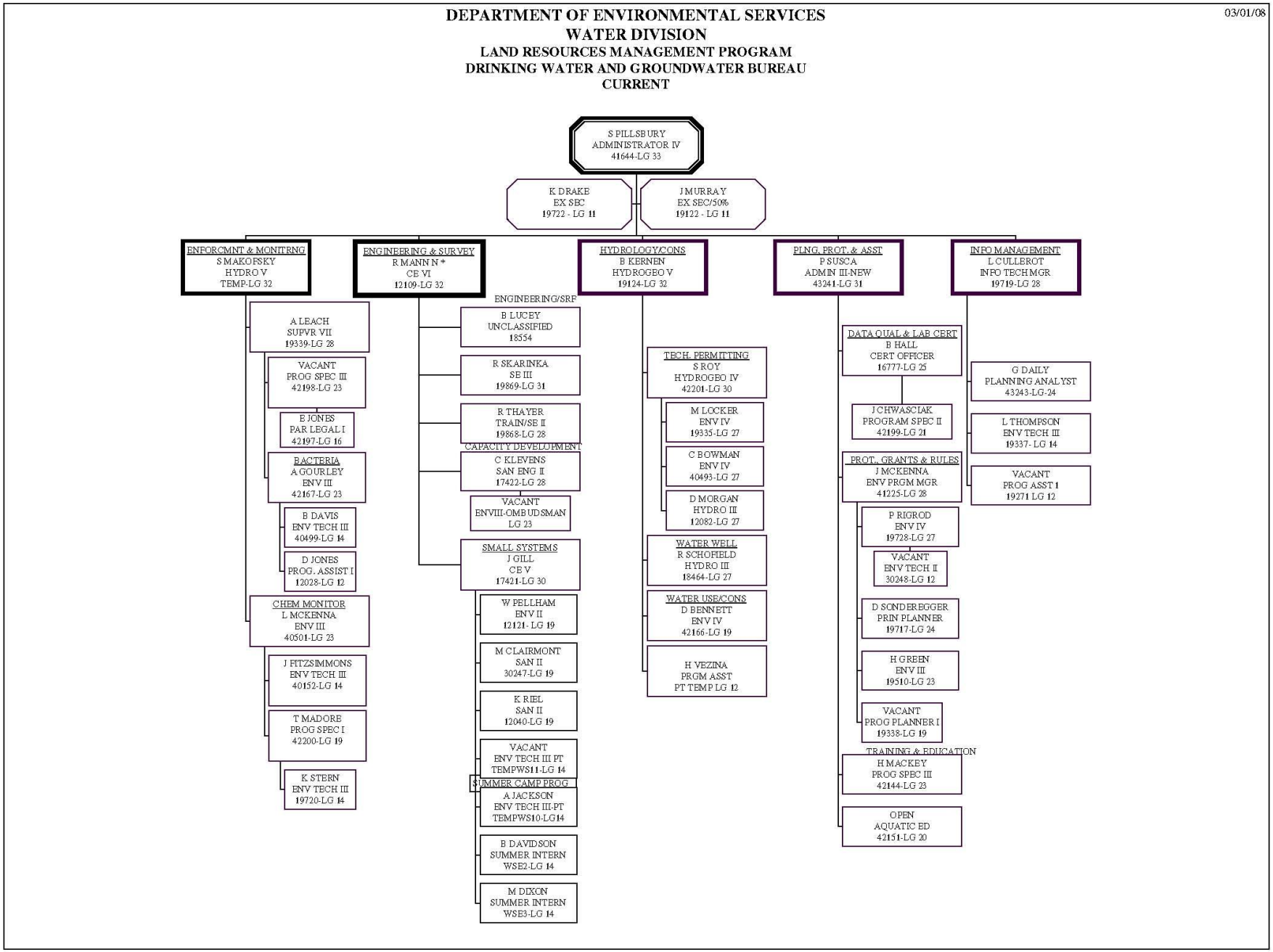
Worksheet # 30
Data Usability Assessment

Data usability processes are described in Sec. C.3 of the narrative for combined Worksheets 8b and 9a.

Appendix 1

Continuation of Worksheet 5A - Organizational Charts


CT Dept. of Public Health
Regulatory Services Branch
Drinking Water Section
Darrell Smith
Acting Section Chief
85813 10010
Lori Mathieu (1/18)
PH Services Mgr
89115 10010
Programs
Security/Grants
Sandra Downie
HP Assoc
12880 21081
DWSRF
Theodore Dunn
HP Assoc
12879 21076
Outreach
Rachel Nowek
HP Assoc
12849 21081
Webpage
Robert Baran
EA 2
12685 10010
Lindi Li
Engineer Intern
78080 21088
Compliance
Michael Hage
Section Sup.
12102 10010
Monitoring, Reporting & Enforcement
Gary Johnson
Sup Env. Analyst
12931 10010
SDWIS Mgmt
Christopher Roy
SE 3
12841 20289
Richard Iozzo
EA2
12250 20289
C. Madonna
SE 2
12510 20289
K. Pacholski
Env. Analyst 2
12942 21081
Mira Lami
Env. Analyst 1
80676 10010
Data
Thomas Reed
EA 3
12288 21081
Implementation & Response
VACANT
Sup. San. Eng.
Henry Adams
SE 3
12114 21088
Reclass/ Refill HS Wtr Sup Section Suprv to Eng Intern
12364 *
Community Sys.
David Cooley
SE 3
12682 21088
Cindy Sek
SE 2
12669 21088
NTNC Sys.
Ryan Tetreault
SE 3
12683 21088
Vacant
Eng Intern
12513 21088
Capacity Review & Standards
Cameron Walden
Sup. San. Eng.
12514 10010
John Czaja
SE 3
12325 10010
S. Ramsbottom
SE 3
12684 21085
TNC Cap Rev
Eric McPhee
SE 3
12668 10010
Tiziana Shea
SE 2 (.84)
12823 20289
Florin Ghisa
SE 2
12681 21088
Standards & Guides
Tom Chyra
SE 3
12310 10010
Source Water Protection/Planning
Vacant (1/18)
Sup. Env. Analyst
12349 21088
Permitting
Lead Plan Analyst
Vacant
12335 21088
Sara Rossetti-Nichols
EA 2 (.91)
12686 21088
Jennifer Pagach
EA 2
12843 21088
Proposed: Refill
EA 2
83609 10010
Protection
EA 3 (TK)
Vacant
12775 10010
Proposed: Refill
Env Analyst 2
Fill as EA 1 (DS)
12671 21088
Planning
Steven Messer
Sup. San. Eng.
12329 10010
D. DelVecchio
SE 3
12253 10010
Vacant
Env. Analyst 2
12773 21081
Primacy
Phil Uzanas, Jr.
Lead Plan. Analyst
12566 10010
Lynn Hudak
PPT
12620 21088 (.5)
20435 (.5)
Vacant Env Analyst 2
Temp (FT) to 7/17
90226 21088
Operator Certification
Vicky Carrier
SE 3
12512 21562
William Sullivan
SE 2
12511 10010
Joseph Higgins
SE 2
77142 21088
O. Akinkunmi
EA 1
78081 21562
Office Support
Eileen Kelber
Office Supervisor
12101 20289
Torrilynn Walton
Office Asst
12497 20289
Hazra Rajbally
Clerk Typist
12856 20289
Carol Martin
Office Asst
Proposed: Sec 1
12593 21562
Sandra Thorstenson
Clerk Typist
12587 20289
Laverne Smith
Clerk Typist
74929 21081
Vacant
Office Asst
12571 10010
Mandy Smith
SE 2
78936 21081
Current: Vacant,
Sup. San. Eng.
Proposed: Eng Intern
12173 21081
Ann Straut-Esden
SE 2
12568 10010
Raul Tejada
SE 2
12517 20289
* PCN not funded
3/24/2008
lmt


DEPARTMENT OF ENVIRONMENTAL SERVICES
WATER DIVISION
LAND RESOURCES MANAGEMENT PROGRAM
DRINKING WATER AND GROUNDWATER BUREAU
CURRENT
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ADMINISTRATOR IV
41644-LG 33
K DRAKE
EX SEC
19722 - LG 11
J MURRAY
EX SEC/50%
19122 - LG 11
ENFORCMNT & MONITRNG
S MAKOFSKY
HYDRO V
TEMP-LG 32
ENGINEERING & SURVEY
R MANN N *
CE VI
12109-LG 32
HYDROLOGY/CONS
B KERNEN
HYDROGEO V
19124-LG 32
PLNG, PROT. & ASST
P SUSCA
ADMIN III-NEW
43241-LG 31
INFO MANAGEMENT
L CULLEROT
INFO TECH MGR
19719-LG 28
A LEACH
SUPVR VII
19339-LG 28
VACANT
PROG SPEC III
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E JONES
PAR LEGAL I
42197-LG 16
BACTERIA
A GOURLEY
ENV III
42167-LG 23
B DAVIS
ENV TECH III
40499-LG 14
D JONES
PROG. ASSIST I
12028-LG 12
CHEM MONITOR
L MCKENNA
ENV III
40501-LG 23
J FITZSIMMONS
ENV TECH III
40152-LG 14
T MADORE
PROG SPEC I
42200-LG 19
K STERN
ENV TECH III
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ENGINEERING/SRF
B LUCEY
UNCLASSIFIED
18554
R SKARINKA
SE III
19869-LG 31
R THAYER
TRAIN/SE II
19868-LG 28
CAPACITY DEVELOPMENT
C KLEVENS
SAN ENG II
17422-LG 28
VACANT
ENVIII-OMBUDSMAN
LG 23
SMALL SYSTEMS
J GILL
CE V
17421-LG 30
W PELLHAM
ENV II
12121- LG 19
M CLAIRMONT
SAN II
30247-LG 19
K RIEL
SAN II
12040-LG 19
VACANT
ENV TECH III PT
TEMPWS11-LG 14
SUMMER CAMP PROG
A JACKSON
ENV TECH III-PT
TEMPWS10-LG14
B DAVIDSON
SUMMER INTERN
WSE2-LG 14
M DIXON
SUMMER INTERN
WSE3-LG 14
TECH. PERMITTING
S ROY
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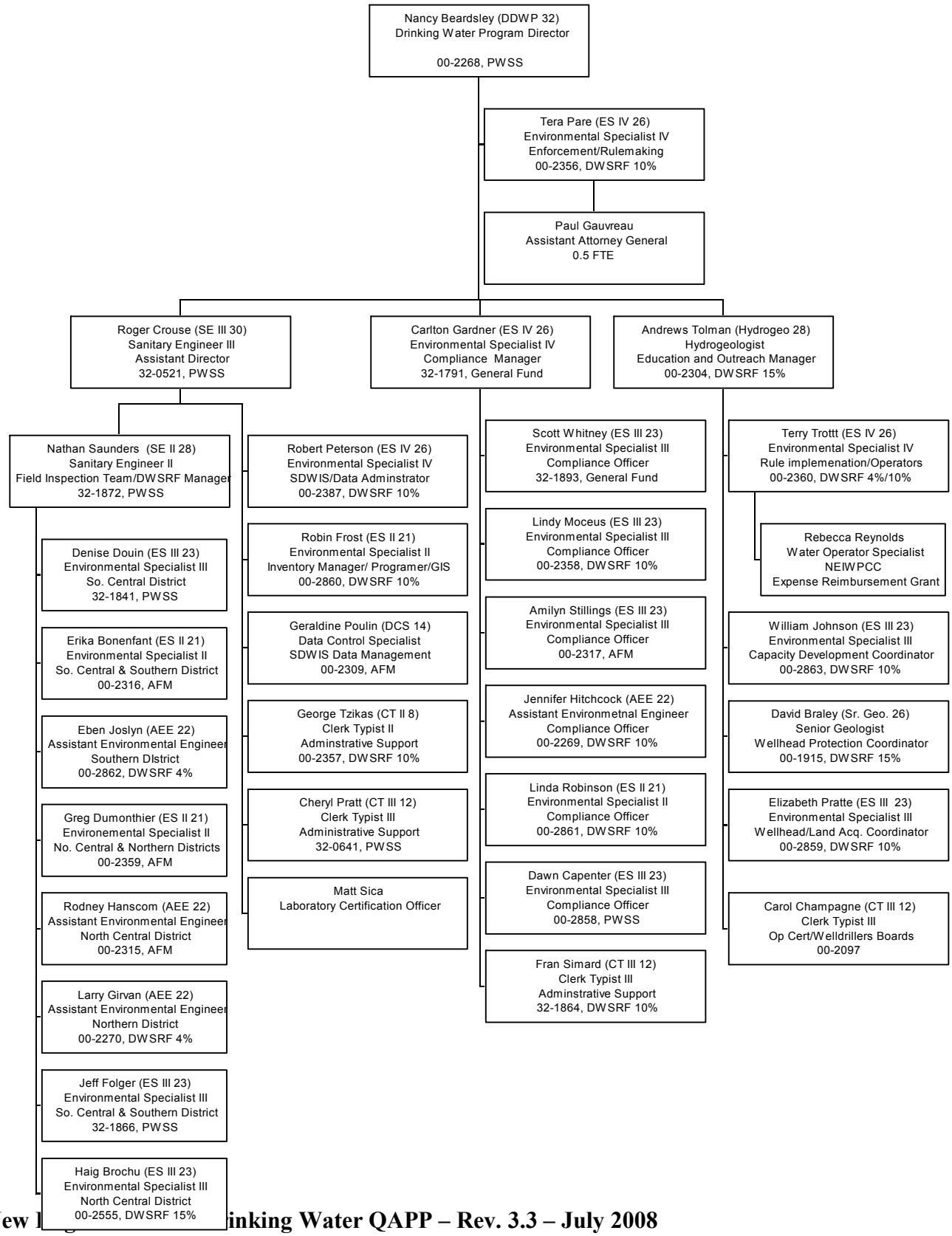
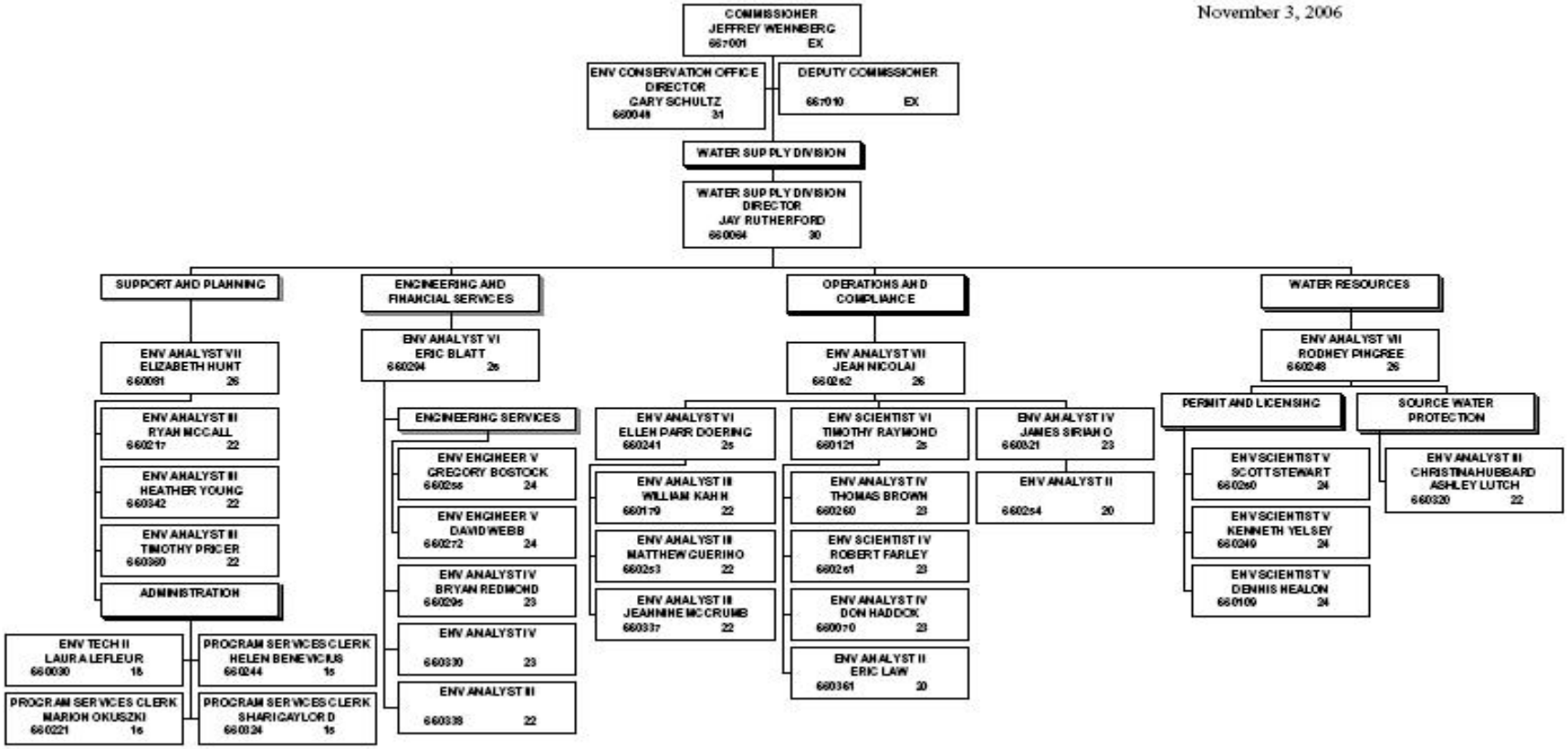
M LOCKER
ENV IV
19335-LG 27
C BOWMAN
ENV IV
40493-LG 27
D MORGAN
HYDRO III
12082-LG 27
WATER WELL
R SCHOFIELD
HYDRO III
18464-LG 27
WATER USE/CONS
D BENNETT
ENV IV
42166-LG 19
H VEZINA
PRGM ASST
PT TEMP LG 12
DATA QUAL & LAB CERT
B HALL
CERT OFFICER
16777-LG 25
J CHWASCIAK
PROGRAM SPEC II
42199-LG 21
PROT., GRANTS & RULES
J MCKENNA
ENV PRGM MGR
41225-LG 28
P RIGROD
ENV IV
19728-LG 27
VACANT
ENV TECH II
30248-LG 12
D SONDEREGGER
PRIN PLANNER
19717-LG 24
H GREEN
ENV III
19510-LG 23
VACANT
PROG PLANNER I
19338-LG 19
TRAINING & EDUCATION
H MACKEY
PROG SPEC III
42144-LG 23
OPEN
AQUATIC ED
42151-LG 20
G DAILY
PLANNING ANALYST
43243-LG-24
L THOMPSON
ENV TECH III
19337- LG 14
VACANT
PROG ASST I
19271 LG 12

DRINKING WATER PROGRAM, DIVISION OF ENVIRONMENTAL HEALTH, MAINE CDC
ORGANIZATIONAL CHART
March 2, 2006



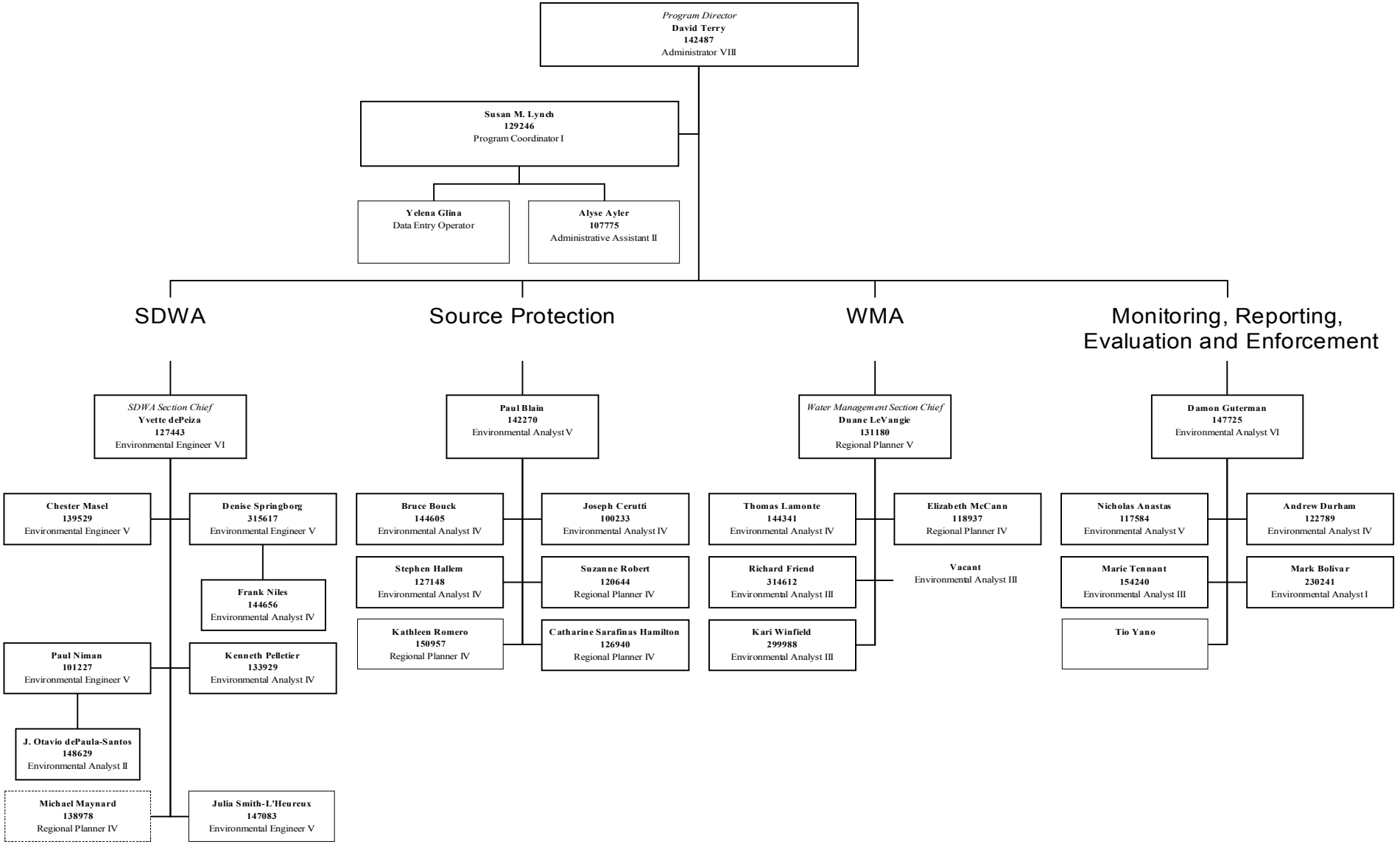
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATER SUPPLY DIVISION

November 3, 2006

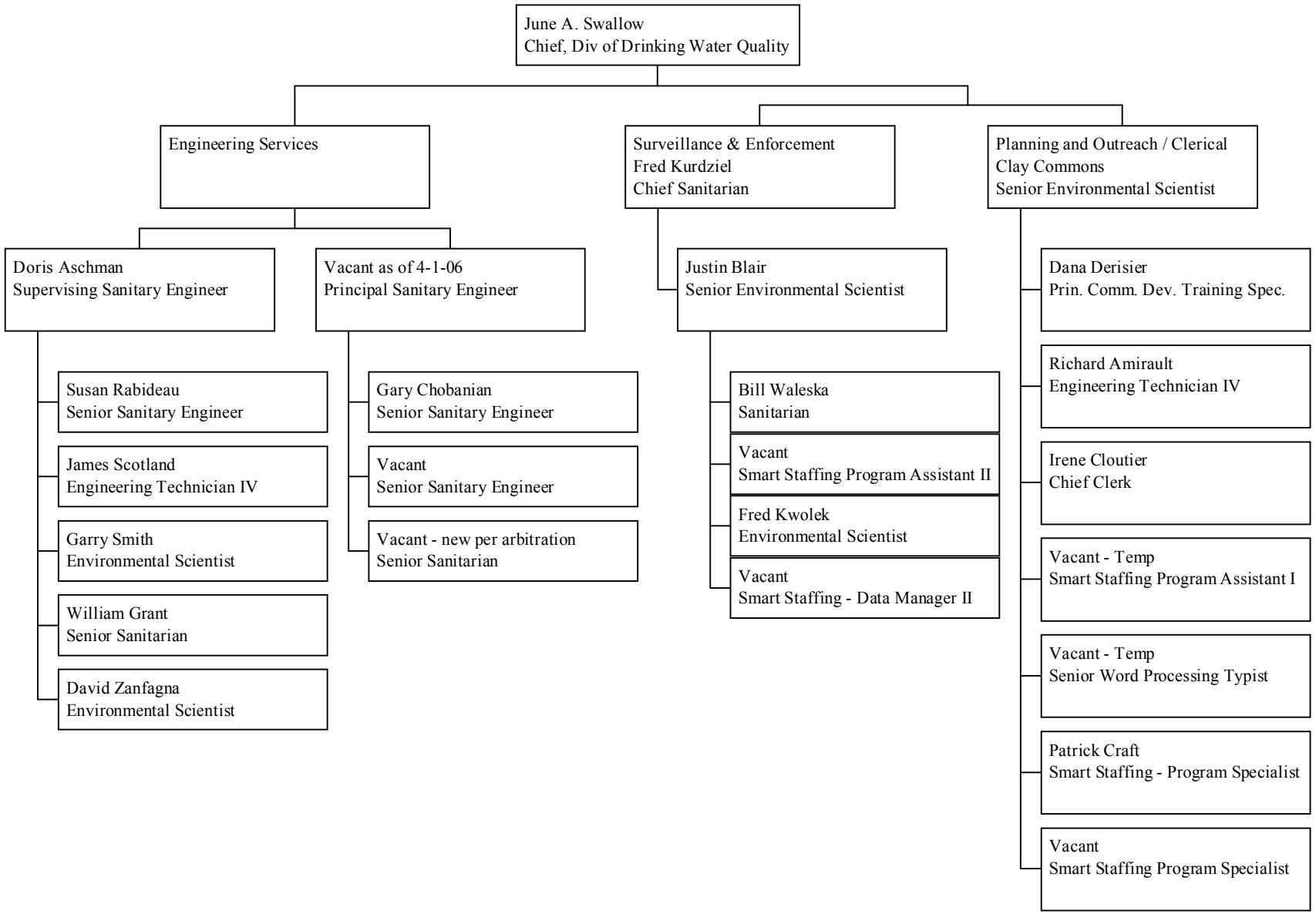


WATER SUPPLY
DEC 7

Program Unit 5012: BRP DWM Drinking Water



Rhode Island Dept. of Health



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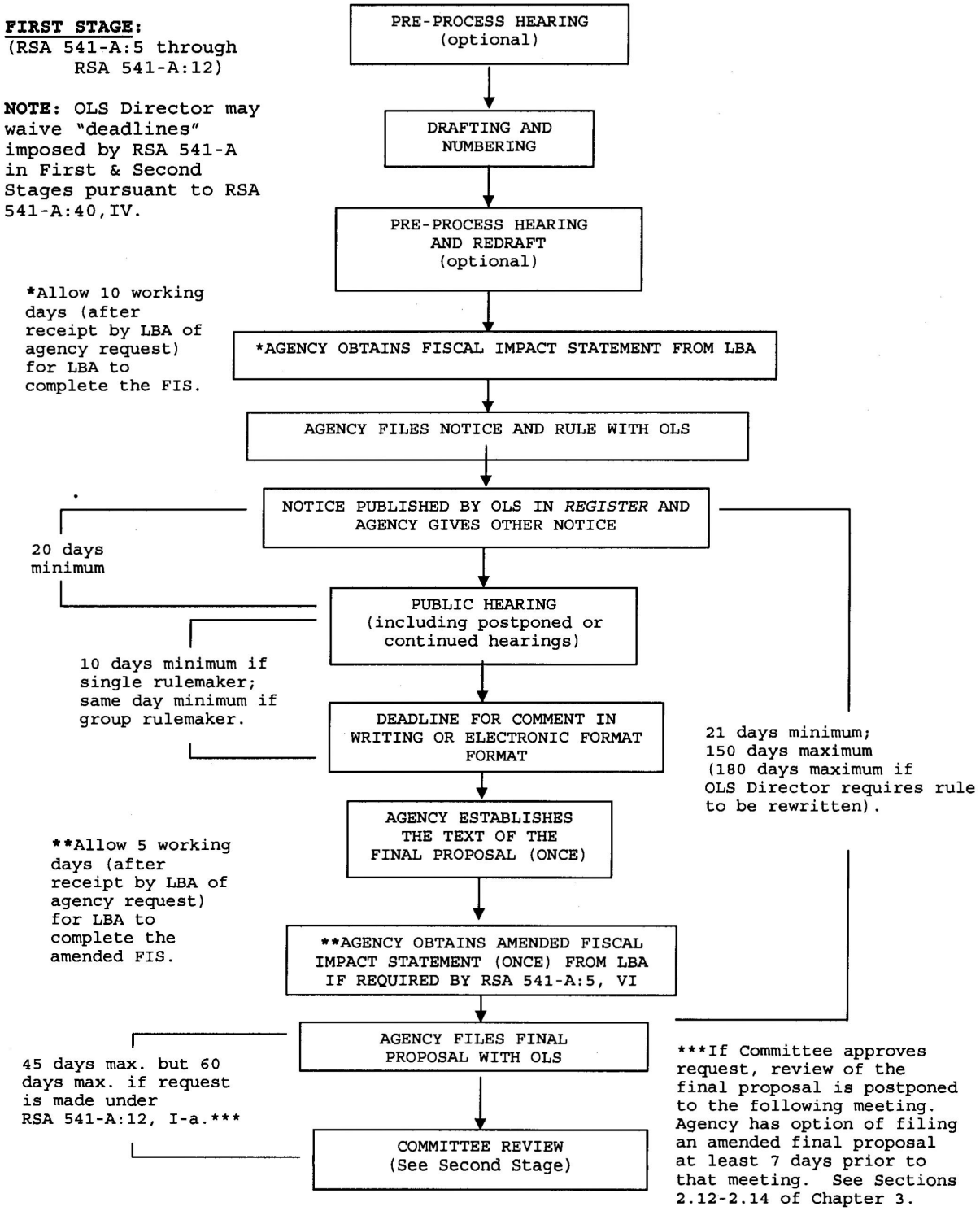
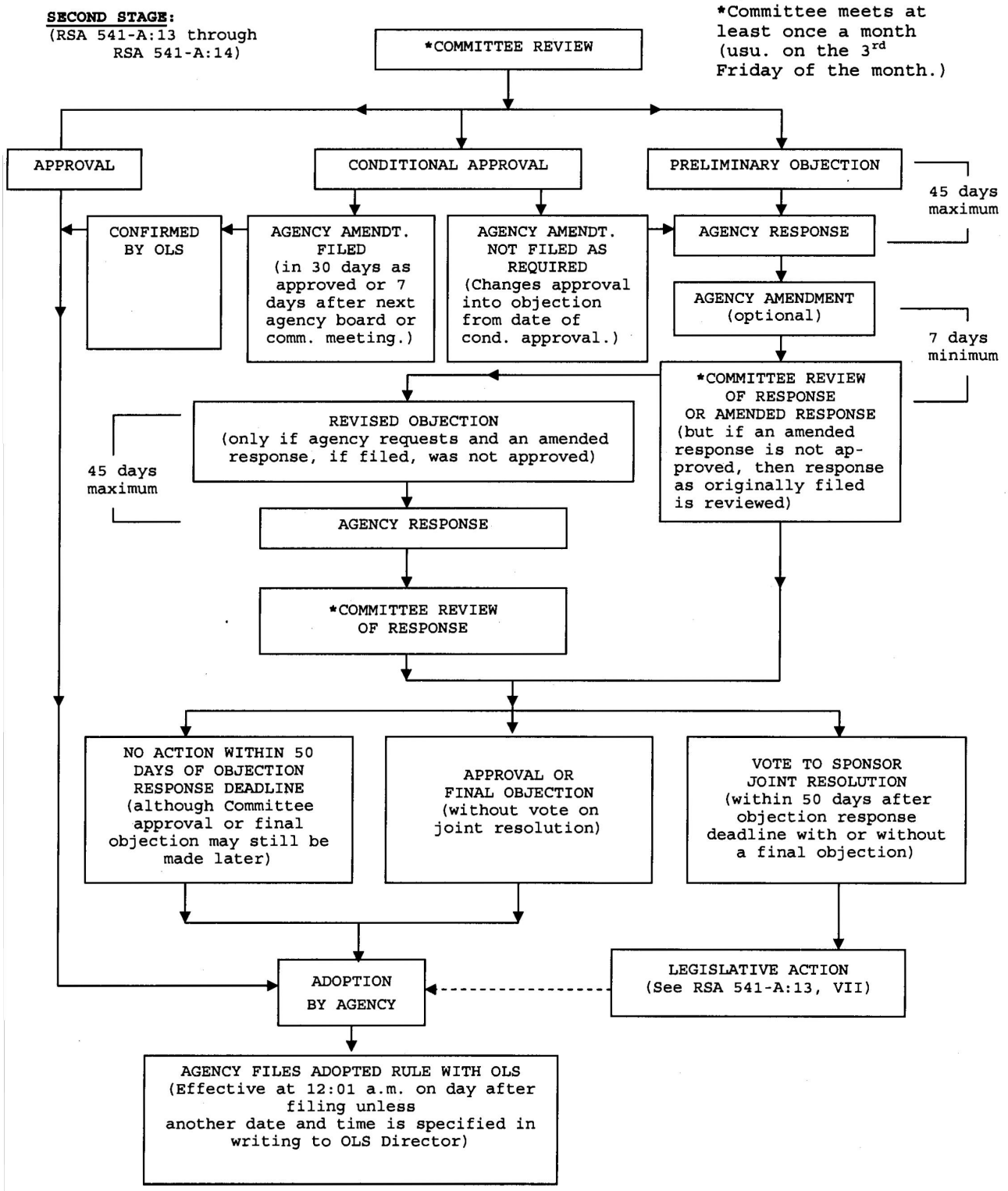
Appendix 2

NH DES Drinking Water Flow Chart

SUMMARY OF PROCEDURE FOR ADOPTION OF REGULAR RULES
(See RSA 541-A:5 through RSA 541-A:14)




SECOND STAGE:
(RSA 541-A:13 through RSA 541-A:14)
*COMMITTEE REVIEW
*Committee meets at least once a month (usu. on the 3rd Friday of the month.)
APPROVAL
CONDITIONAL APPROVAL
PRELIMINARY OBJECTION
45 days maximum
CONFIRMED BY OLS
AGENCY AMENDT. FILED (in 30 days as approved or 7 days after next agency board or comm. meeting.)
AGENCY AMENDT. NOT FILED AS REQUIRED (Changes approval into objection from date of cond. approval.)
AGENCY RESPONSE
AGENCY AMENDMENT (optional)
7 days minimum
*COMMITTEE REVIEW OF RESPONSE OR AMENDED RESPONSE (but if an amended response is not approved, then response as originally filed is reviewed)
REVISED OBJECTION (only if agency requests and an amended response, if filed, was not approved)
45 days maximum
AGENCY RESPONSE
*COMMITTEE REVIEW OF RESPONSE
NO ACTION WITHIN 50 DAYS OF OBJECTION RESPONSE DEADLINE (although Committee approval or final objection may still be made later)
APPROVAL OR FINAL OBJECTION (without vote on joint resolution)
VOTE TO SPONSOR JOINT RESOLUTION (within 50 days after objection response deadline with or without a final objection)
ADOPTION BY AGENCY
LEGISLATIVE ACTION (See RSA 541-A:13, VII)
AGENCY FILES ADOPTED RULE WITH OLS (Effective at 12:01 a.m. on day after filing unless another date and time is specified in writing to OLS Director)

Revised 1/05