



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

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JAN 31 2012

RECEIVED  
FEB 03 2012  
Drinking Water

Ref: 8P-W-DW

Amanda Smith, Executive Director  
Utah Department of Environmental Quality  
PO Box 144830  
Salt Lake City, Utah 84114-4830

Re: 2010/2011 Primacy Review for the  
State of Utah

Dear Ms. Smith:

Enclosed please find the *United States Environmental Protection Agency, Region 8, Public Water System Supervision Program, 2010/2011 Primacy Review for the State of Utah*. The findings contained in this report are based primarily upon interviews with managers and staff conducted during the week of August 16, 2010, and during a follow-up evaluation the week of April 4, 2011.

We appreciate the excellent communication and information sharing provided by the Division of Drinking Water during these Primacy Review meetings. Within ninety (90) days from receipt of this report, the EPA requests that the Utah DDW submit a response to the findings discussed in the report. The response should outline any actions that have been or will be taken to address deficiencies identified within Utah DDW's program, and areas in which the EPA could provide additional support or training to Utah DDW.

The EPA looks forward to working with the Utah Department of Environmental Quality in building upon a very good EPA/state partnership. If you have any questions regarding this report, please contact Lisa Kahn, of my staff, at (303) 312-6896.

Sincerely,

A handwritten signature in black ink, appearing to read "Callie A. Videtich".

Callie A. Videtich  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

Enclosure

cc: Kenneth H. Bousfield, P.E., DDW

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Drinking Water

**Review**  
**of the**  
**Utah Division of Drinking Water**  
**Public Water Supply Supervision**  
**Program**

**Final Report – 2010/2011**

**EPA Region 8**

## Glossary of Terms used in this Document

Acronym	Definition of the Acronym
ARRA	American Recovery and Reinvestment Act
ASDWA	Association of State Drinking Water Administrators
CCR	Consumer Confidence Report
CD	Capacity Development
CO	Carry Over
CUPSS	Check Up Program for Small Systems
DBP	Disinfection By-Products
DDW	Division of Drinking Water
DWSRF	Drinking Water State Revolving Fund
E-Doc's	Electronic Document Management System
ESS	Electronic Sanitary Survey
FI+	Fecal Indicator Positive
FBRR	Filter Backwash Recycling Rule
FTE	Full Time Equivalent employee
GIS	Geographic Information System
GWR	Groundwater Rule
GWUDI	Groundwater Under the Direct Influence of Surface Water
HAA5	Haloacetic Acid 5
IESWTR	Interim Enhanced Surface Water Treatment Rule
IOC	Inorganic Contaminants
IPS	Improvement Priority System
LCR	Lead and Copper Rule
LT1	Long Term 1 Enhanced Surface Water Treatment Rule
LT2	Long Term 2 Enhanced Surface Water Treatment Rule
MCL	Maximum Contaminant Limit
MRDL	Maximum Residual Disinfection Limits
NPDWR	National Primary Drinking Water Regulations
OECA	Office of Enforcement and Compliance Assurance
PE	Professional Engineer
PN	Public Notice
PPG	Performance Partnership Grant
PWS	Public Water System
PWSS	Public Water System Supervision
QA/QC	Quality Assurance/Quality Control
SARA	SDWIS Auxiliaries and Reports Application
SDWA	Safe Drinking Water Act
SDWIS	State Drinking Water Information System
SOC	Synthetic Organic Contaminants
SRF	State Revolving Fund
TCR	Total Coliform Rule
TOC	Total Organic Carbon
TTHM's	Total Trihalomethanes
UDEQ	Utah Department of Environmental Quality
VOC	Volatile Organic Contaminants

## Executive Summary

This report is the outgrowth of the EPA Region 8 Review Teams Primacy Review of Utah's Drinking Water Program. The report focuses on the implementation of the National Primary Drinking Water Regulations (NPDWRs), commonly referred to as the Drinking Water Rules, by the Utah Public Water System Supervision (PWSS) Program. The Utah PWSS Program is formally named the Utah Division of Drinking Water (DDW) and the two terms are used interchangeably in this report. This report evaluates the roles of Utah DDW Rule Managers because these staff members supervise the implementation by water systems of the NPDWRs. It also looks at other elements of the Utah DDW program such as plan reviews, financial resources, and technical assistance. Without these functions, the NPDWRs could not be effectively implemented either by the Utah DDW or the Public Water Systems (PWS) themselves. The decreases in the past several years to state funding sources have resulted in significant cuts to the state financial resources available to Utah DDW. Utah DDW management and staff are often forced to make difficult choices among high priority tasks. However, the EPA Review Teams were impressed with the capabilities and cohesiveness of Utah DDW management and staff, particularly in how well the individuals in the Utah DDW work together to maximize the use of available resources.

As of August 2010, Utah had 1,020 Public Water Systems regulated by the Utah DDW in the Utah Department of Environmental Quality (UDEQ). 221 of these systems serve a population exceeding 1,000 with the bulk of the remainder serving a population of less than 500. Utah DDW places a strong emphasis on providing technical assistance to the systems that it regulates to enable systems to meet regulatory requirements. Utah DDW has a unique Improvement Priority System (IPS) which measures a system's performance and goes beyond the Environmental Protection Agency's (EPA) focus on regulatory compliance. The IPS system also assesses the quality of facilities, which helps prevent public health issues from becoming a problem. Over time, the IPS point scores have declined demonstrating that Utah's investment in its PWSS program has produced significant positive results in protecting Utah's drinking water.

Our review found that there are areas for improvement. This report, based upon site visits in August 2010 and April 2011, concludes that Utah's PWSS program:

- is encountering problems in some key areas, such as enforcement, source water protection, engineering/plan review and administrative/data entry;
- is minimally funded to implement and enforce the current SDWA regulations;
- is dependent upon a few highly experienced staff; succession planning and cross training are needed;
- is experiencing the growing pains associated with the implementation of the new and complex Groundwater Rule (GWR).

The broad goal of implementing the SDWA regulations and protecting public health is generally being met. In 2007, EPA, through its contractor Cadmus, conducted a Data Verification Audit. The EPA Review Teams found that Utah DDW has corrected many of the deficiencies outlined in that report, particularly with the surface water rules and implementation of the standard monitoring framework. Annual reviews conducted by the EPA Region 8 Enforcement staff have also noted a significant improvement in data quality. There have been a number of other accomplishments over the past several years, as noted in this report. However, as the resource discussion explains, particularly due to the maximization of federal funding leverage by UDEQ, further cuts from state appropriations could have significant negative impacts on the ability of Utah DDW to minimally meet its public health responsibilities. Specifically, any dollar cut from Utah DDW general funds will result in the loss of three dollars of federal funding. In addition, EPA Region 8 encourages staff investments by Utah DDW in the areas of enforcement, engineering/plan review and data entry/administration.

## **Utah Response Requested**

Within ninety (90) days from receipt of this report, EPA Region 8 requests that Utah DDW submit a response to the findings outlined in this report and summarized in the Conclusions and Recommendations. The response should outline any actions that have been or will be taken to address deficiencies identified in this report, and areas in which EPA could provide additional support or training to Utah DDW.

## **U.S. EPA Region 8 Review of the Utah PWSS Program**

### **OVERVIEW**

The Drinking Water Program is unique among all other environmental programs. It is the only environmental program that oversees the facilities that produce and distribute an essential nutrient for the body – drinking water. Any failure in these facilities can lead to reproductive and developmental effects and chronic and acute illness, which can lead to fatalities. With potential consequences of this caliber, it is vitally important that the Utah DDW have sufficient resources to enable the Program to proactively prevent water system failures.

In August 2010, the EPA Region 8 Drinking Water Program conducted an on-site review of activities within the Utah PWSS Program. Per requirements under the authority of the Federal Safe Drinking Water Act (SDWA), this review was conducted to assess the State's performance of duties as delegated by EPA to the UDEQ under national primacy regulations codified at 40 CFR 142. The review consisted primarily of interviews of Utah DDW staff and managers by EPA Region 8 PWSS staff.

A second follow-up trip occurred in April 2011. This later review focused on providing additional investigation and technical assistance related to implementation of the SDWA in specific areas, many of which were identified by the August 2010 visit. This review was conducted by an EPA Region 8 team made up of a Drinking Water Unit Chief, a PWSS staffer, a SDWIS data base administrator, and several Rule Managers. It is worth noting that while technical assistance was extended by EPA Region 8 to Utah DDW, the Utah DDW provided insights to EPA Region 8 personnel that may assist EPA Region 8 in its direct implementation responsibilities in Wyoming and on Tribal lands.

This report summarizes both of these visits. It assesses the status of activities at the time of the August 2010 site visit with additional information from the April 2011 trip, where applicable. This report does not address the two current variances that the Utah DDW has issued to Park City for antimony and Green Hills Water and Sewer District for gross alpha. These variances will be addressed in subsequent correspondence.

The reviews focused on Drinking Water Rule implementation by Utah Rule Managers and how those activities are supported. The Plan Review function received major discussion because some issues relevant to new rules cannot be resolved without a strong plan review function. Other program activities within a PWSS Program's normal functions, such as Data Management, Source Protection, Operator Certification, and Capacity Development, were also included. The Drinking Water State Revolving Fund (DWSRF) was reviewed only from the aspect of how it was being used to support the PWSS function. Enforcement and compliance determinations were not reviewed specifically, but in discussions with Utah Rule Managers on their duties, it became apparent that follow up to enforcement orders was an area that needs improvement. Laboratory Certification was not reviewed as that function is performed elsewhere in the Utah State Government.

The Utah DDW is responsible for evaluating Public Water System (PWS) compliance with the Drinking Water Rules. Utah DDW does this by employing Rule Managers. The Rule Managers track and record performance, determine compliance, and serve as the State's technical experts on a given rule. A fully effective Rule Manager is proactive in assisting problem systems with addressing issues before a PWS is out of compliance. This requires expertise on the legal requirements of the rule and the science behind it as well as a significant knowledge of the individual systems. Rule Managers must manage the implementation of the rule, and have the ability to direct or provide training and technical assistance. In Utah, the Rule Managers are also expected to carry out enforcement functions. This includes drafting enforcement documents, including Administrative Orders for the Attorney General's review, and following up to ensure water systems comply with the orders.

## **ACCOMPLISHMENTS**

EPA Region 8 commends the Utah DDW for a number of accomplishments achieved despite having limited resources. The accomplishments speak highly of the professionalism of Rule Managers, other staff and managers, and their dedication to protecting the quality of drinking water in the State of Utah. These accomplishments include:

1. Utah DDW places a strong emphasis on providing technical assistance to the systems that it regulates. Utah DDW has used their unique IPS system to help prevent potential public health issues from becoming actual problems. Over time, the IPS point scores have declined, indicating that the use of the IPS system has produced significant positive results in protecting Utah's drinking water.
2. Over the years, Utah DDW has placed a major emphasis on using electronic systems to maximize the efforts of its limited staff. Although ongoing investment is needed to maintain and improve these systems, the benefits were clearly evident during interviews with management and staff.
3. Utah DDW has made significant progress in repairing gaps in its program, particularly with the implementation of the newer surface water rules. Technical staff have been hired to fill the previous vacancies in the Surface Water and Disinfectant/Disinfection Byproducts Rules.
4. The Lead and Copper Rule manager indicated that progress has been made placing all systems on correct monitoring schedules, rectifying a problem noted in previous EPA Region 8 Enforcement Reports.
5. All systems are now using the standard monitoring framework for the Chemical Rules, which has eased tracking problems and should significantly reduce future violations.
6. The Radionuclide Rule manager has corrected a serious deficiency in the program related to sample result recording.
7. Utah DDW has a strong cross-connection control program.

**RESOURCES (As of August 2010)**

**Funding**

Utah has three principle funding sources, which it uses to support its PWSS operations, i.e., State Appropriations, Sales Tax receipts and Fees, and Federal Grant Funds. The Federal Grant Funds come from both the DWSRF and the PWSS Grant. Uses of the Federal Grant funds are conditioned upon the State providing State Matching funds. For State Fiscal Year 2011, the funding situation was:

Legislative Appropriation	\$1,028,400
DWSRF Grant	\$10,558,400
PWSS Grant	\$922,000

The DWSRF Grant requires a 20% State Match for the overall Grant which must be deposited into the Loan Fund itself. The Matching funds are provided through moneys generated by a dedicated 1/16<sup>th</sup> of 1% Sales Tax and have been sufficient, to date, to provide the required 20% State Match. In addition, various percentages of each DWSRF Grant may be set aside for supporting certain elements of the PWSS Program. Within those specific categories, those within what is known as the 10% Set Aside (which directly enhance the PWSS function) require further 1:1 match with State funds. Utah has also reserved carry over funds (CO) from previous DWSRF Grants to use for this purpose, which also require a 1:1 State Match. Certain credits are allowed (for example, the over match expenditure during the 1993 program year can be used as match over and over again in subsequent years) which can be applied dollar for dollar against the 1:1 match requirement. Utah has up to \$855,668 available each year for this purpose. The PWSS Grant itself requires a State Match so that the Federal: State share ratio is 75%:25% of the total dollars.

The State match requirement is calculated by multiplying the Federal Grant by 33%. Utah DDW also funds its technical assistance efforts from the 2% Small Systems DWSRF Set Aside. This funding does not require an additional State Match.

The State of Utah receives its PWSS Grant through a Performance Partnership Grant (PPG), which provides the state some flexibility for State Match requirements. However, because the State funding for the PWSS Program is at its match limit, *any dollar cut* from the State Appropriations for the PWSS Program will be matched *with an additional three dollar cut* in federal funding, for a *combined cut of four dollars*.

**The Match Requirements to Implement the PWSS Program**

	<u>Federal grant amount</u>	<u>Required State match</u> (Federal Grant x 33%)	<u>Legislative Appropriation</u>
PWSS Grant	\$ 922,000	\$ 307,333	
10% SRF Set aside, including carry over from previous years – required 1:1 match	\$1,399,800	\$ 699,900 (\$1,399,800 less 1993 match credit of \$699,900)	
<b>Totals:</b>		\$ 1,007,233	\$1,028,400
Match excess			\$ 21,167

## Personnel

Utah DDW employs 40 people carrying out the PWSS Program staffed in five sections: Administrative Services, Construction Assistance, Engineering, Field Services, and Rules. Thirty-seven of these are State employees, with one being hired on a temporary contract. In addition, there are three (3) contract Utah Rural Water Association employees. Of the 40 people, four (4) work less than full time giving a total of 38.85 Full Time Equivalent (FTE) employees.

The Association of State Drinking Water Administrators (ASDWA) has produced a resource model as a guide to Drinking Water Administrators in staffing a State program. The model was constructed anticipating all the current rules before they were in final form. The model classifies States as Very Small (6 States), Small (11 States), Medium (23 States), Large (10 States) and Very Large (2 States). This model is a helpful tool in reviewing the staffing levels of State programs because it is the only standardized model specific to drinking water regulations. EPA Region 8 uses this model to assist with its evaluation of State programs but also evaluates each program's effectiveness based upon its own merits.

Under the ASDWA model, Utah is classified as Small. The model identifies a range of staffing by function given specific assumptions allowing for differences in the system numbers, classifications, and the geographic size of States. The Utah size model recommends a staff of 60.5 FTE and is compared with Utah's FTE personnel usage as set forth in the table on the next page.

Since 2000, EPA has promulgated eighteen new Drinking Water Rules while staffing levels at Utah DDW have remained essentially constant. In 2004, Utah DDW was able to add three (3) additional staff, but two (2) positions were subsequently lost with State budget cutbacks. As a result, Utah DDW is currently operating a marginally staffed program, which requires constant tradeoffs to meet program objectives. The Utah DDW is functioning as well as it is partially due to length of service of its personnel, especially in areas where experience and expertise are critical. The deficiencies noted in the following evaluation of NPDWR implementation can be attributed largely to marginal staffing levels.

**UTAH DDW RESOURCES COMPARED TO THE ASDWA MODEL – 2010**

<b>Function</b>	<b>Sub-function</b>	<b>ASDWA <u>FTE</u></b>	<b>Utah <u>FTE</u></b>
<b>Program Management</b>			
	Data System Update/Development	2.0	1.3
	Administration/Supervision	3.5	4.0
	Clerical	4.0	3.6
	Scientific Studies/Research/ Emergency Response	0.1	0.6
Plan Review		3.0	6.55
Sanitary Survey		7.0	3.33
Drinking Water State Revolving Fund		6.0	3.6
Enforcement		0.5	1.17
Source Water Protection		5.0	1.8
Operator Certification		1.5	1.15
Capacity Development		3.5	0.35
<b>Rule Management</b>			
	Surface Water Treatment Rules (SWTR)	5.6	0.6
	Disinfection Byproducts Rule (DBP)	1.5	0.6
	Total Coliform Rule (TCR)	5.0	1.15
	Groundwater Rule (GWR)	8.0	1.05
	Chemical Rules	1.3	0.75
	Lead & Copper Rule (LCR)	1.0	0.3
	Radionuclides Rule	1.0	0.1
	Public Notice Rule (PN) Included w/specific Rule Manager Duties		
	Consumer Confidence Rule (CCR)	1.0	0.15
<b>Utah Specific Requirements</b>			
	Technical Assistance	0.0	4.4
	Cross-Connection Control	0.0	1.25
	State DWSRF	0.0	0.55
	State and Tribal Assistance Grant Program (STAG)	0.0	0.3
	IPS Reporting	<u>0.0</u>	<u>0.2</u>
<b>Total FTE</b>		<u>60.5</u>	<u>38.85</u>

**EVALUATION OF ESSENTIAL PROGRAM AREAS**

**DATA SYSTEM UPDATE AND DEVELOPMENT**

Utah uses three (3) major Data Systems/ Programs to manage its PWSS Program. Utah DDW has placed a major emphasis on using electronic systems to maximize the efforts of its limited staff. These systems are the Safe Drinking Water Information System (SDWIS), SDWIS Auxiliaries and Reports Application (SARA) (a system enabling the effective use of data in SDWIS), and the Electronic Sanitary Survey System (ESS). Additionally, Utah DDW has implemented an Electronic Records System called "E-Doc's" which entails all paper files being scanned so that water system files and records are electronically available at each staff person's desk. There is also an automated email system (CASPER) that informs staff about important changes or additions to SDWIS, SARA and other programs/applications.

The State has centralized all Data Processing support, including SARA and SDWIS, which are unique to the Drinking Water Program. The new structure at the State level is functioning with committees and reports to set work priorities, but it is not yet operating smoothly. As such, Utah DDW is devoting 1.3 FTE with some expertise in SARA and SDWIS in order to address the State's Information Technology (IT) Department shortcomings.

SDWIS version 2.3 is the main data base system in use. A change to SDWIS 3.0 or later version is contemplated to occur in the near future (or has now occurred) but was not yet in place during the visits. Changes made in the SDWIS database from earlier version to version 2.3 challenged the compatibility with the ESS database. The ESS has significantly reduced the preparation and reporting time spent by surveyors, enabling better use of their on-site efforts. However, the latest edition is not fully compatible with SDWIS in terms of data field size. The limited inventory field sizes in SDWIS are particularly problematic because many Utah facilities have extensive descriptive names which have to be manually shortened, creating a time consuming data entry/correction problem. SDWIS 2.3 also has limited space for listing Significant Deficiencies as well as providing no ability to track corrective actions under the GWR. This increases necessary manpower to enter the data and manually track deficiencies and corrective actions. Additionally, the mapping links have been broken. This impedes downloading of updated information into SDWIS and requires significant manual adjustments to be made.

Utah is hoping that the next version of SDWIS, version 3.0, will resolve these issues. The incompatibility issue has been raised by EPA Region 8 with Headquarters. No decision to address this issue has yet been finalized but updates to ESS to ensure capability with SDWIS 3.0 have been proposed and supported by EPA and several other states besides Utah. At the time of the site visits, Utah DDW indicated their intent to hire a contractor to develop a "work around" to provide ESS capability with SDWIS 3.0.

SARA, developed in house and currently maintained by Utah's IT staff, appears to be of great assistance to the Rule Managers as they make compliance determinations. However, as with ESS, every change in the SDWIS database format and structure has resulting domino effects with new challenges to this database as well.

Utah DDW is trying to encourage electronic reporting of laboratory analytical data to reduce human error that may occur with data entry and reduce Utah DDW staff time associated with manual data entry. Unfortunately, laboratories that have the capability to report data electronically are not yet capable of reporting data directly in a format compatible with SDWIS. Also SDWIS tools to assist laboratories are not available due to "firewall constraints" of the Utah DEQ. Therefore, data management staff spend considerable time "translating" the electronic data files received into a format that can be fed into SDWIS. As noted by some Utah Rule Managers, even reaching this point has lessened their data entry requirements significantly and enabled them to focus more on other critical aspects of rule implementation.

The manpower used by Utah DDW in this effort is less than the ASDWA Model requirements. Theoretically, this manpower is located in the Utah centralized data processing facility. However, given the difficulties encountered with the current systems and the critical nature of this effort, any reduction in DDW resources in this area would have an immediate negative effect on the entire Utah PWSS Program. In fact, Utah DDW lost its main database staff member in March 2011. During the April 2011 visit, EPA Region 8's SDWIS database administrator worked with the staff members identified by Utah DDW who would be assuming responsibility for these functions. A primary focus was ensuring that Utah DDW would be able to upload its state data into SDWIS Fed, the required federal reporting database.

Other recommendations that were made based upon the oversight reviews included having the entire Utah DDW receive training in the version of SDWIS that they will be using, and that the

new database administrator(s) attend specific training for data base administrators. Additionally, it was recommended that Utah DDW consider changing the way it runs SDWIS and SARA. As of April 2011, Utah DDW used a replication server that required a day (24 hours) for data to become available to SDWIS and SARA users. A change to operating SDWIS State and SARA in a live version would allow Utah DDW staff real time interaction.

**SCIENTIFIC STUDIES, RESEARCH AND EMERGENCY RESPONSE**

The model assumes a minimal requirement of 0.1 FTE in this function for Small States. However, the model was constructed prior to the events of September 11, 2001, and subsequent emergency response requirements that have been imposed. Utah’s devotion of 0.6 FTE in this area appears to satisfy minimum requirements under the new circumstances.

**PLAN REVIEWS**

The Federal Regulations require Utah as, a condition of operating a PWSS Program, to review and approve plans for new systems and improvements to existing systems to ensure new facilities will enable a PWS to meet regulatory requirements. Because engineers carrying out this function must review the work of Professional Engineers (PEs), Utah DDW requires that their engineers be PEs as well. PEs have a high marketability that has caused “turnover” problems for the program in the past. This is at least partly due to the disparity in the salary PEs qualify for within Utah’s payscale compared to what they can earn in the private sector. This has been a major issue in the past and may reoccur with improved economic conditions.

Interviews with Utah DDW engineering section management indicate that over 1000 plan reviews are conducted annually. The implementation of the new and more complex Surface Water rules and GWR may be a factor in the increasing number of plan reviews noted in the following table.

	FY 2008	FY2009	FY2010
Engineering Review Submittals Received	1015	1243	1186
Approvals Issued	249	276	290
Operating Permits Issued	103	187	214
Exception to Rule Letters Issued	37	52	95

As the table implies, a back log of unreviewed plans is developing. This has resulted in some projects being delayed into the next construction season. Management is attempting to deal with the backlog by focusing on reviewing plan submittals at the expense of performing follow-up construction inspections. We strongly encourage that increased plan reviews be matched with an increase in the number of construction inspections to ensure the plans are carried out as approved.

Utah DDW employs 6.55 FTE for plan reviews compared with the 3.0 FTE recommended by ASDWA for a small state. However, the ASDWA Model assumes that a Small State will have a limited number of reviews per year, i.e., no more than 100 per FTE, and that the reviews will not include treatment process analysis under new rules such as LT2 SWTR and GWR. Using the 100 per FTE review criteria, it can be seen from the table above that Utah’s current 6.55 FTE is understaffed for the workload. Not shown in the table above are 4-log treatment analyses required under the GWR to date. The workload requirements for this function are currently indeterminable as the number of analyses required cannot currently be anticipated.

The table also does not show the increasing level of technical expertise needed to assess the new drinking water treatment requirements. This means that to continue to be effective, the engineers must continually upgrade their skills and become familiar with new technologies, such as UV disinfection and membranes. Retention of staff experienced in drinking water treatment technologies

is critical. Time and resources available for training of Utah DDW engineers is increasingly limited and, if unaddressed, could lead to significant problems in this area. Utah DDW is asking for an additional staff person to address this shortcoming. EPA Region 8 supports this effort.

## **SANITARY SURVEYS**

A sanitary survey is an eight part assessment of technical and managerial capacity for a public water system to comply with Safe Drinking Water Act regulations. A sanitary survey is not an inspection looking for violations. However, a Sanitary Survey may uncover a system that is out of compliance, particularly when rules are not being properly implemented by a state. Compliance is normally assessed under SDWA through the monitoring and reporting process. It is not a violation for a system to have a Significant Deficiency identified in a Sanitary Survey. However, under the Interim Enhanced Surface Water Treatment Rule (IESWTR), and the new GWR, it is a violation if a PWS fails to address a Significant Deficiency.

States are required to conduct Sanitary Surveys at three (3) or five (5) year frequencies under the SWTR and GWR, depending upon system classification and performance. Utah's rules require a survey for every system every three (3) years. Utah DDW staff from the Administrative Services, Construction Assistance, Engineering, Field Services, and Rule Sections collectively contribute 3.33 FTE to this function compared with the ASDWA recommendation of 7.0. The 3.33 FTE are aided by Local Health Department Personnel and four UDEQ District Engineers. To attain efficient use of personnel time on these surveys, Utah has adopted the ESS, an electronic reporting tool developed by EPA's Drinking Water Academy to shorten survey preparation and reporting time. As discussed earlier, when first developed the ESS functioned well and significantly shortened the administrative time associated with the Surveys. However, as EPA has developed newer versions of both the ESS and SDWIS, compatibility between the two systems has become an issue. Of particular concern to Utah is the extra manpower required to correctly manipulate the data between software systems and manually track identified Significant Deficiency corrective actions with differing requirements between SWTR and GWR.

Based upon information available in August 2010, Utah was not meeting its state requirement mandating a survey of community water systems every three (3) years. As of December 2009, under federal SDWA regulation Utah DDW should have been surveying community surface water systems every three (3) years and non-community systems every five (5) years. The data provided to the August 2010 EPA Review Team showed that Utah is meeting only 77% of the Federal requirement for its 109 community surface water systems. Surface water systems are more complex than other systems and require a higher level of expertise, as well as time, to conduct these surveys. The new requirements under the GWR also require a more complex survey, which can only increase the Sanitary Survey workload. Although the first round of surveys under the Federal GWR is not due to be completed until 2012 and 2014, this likely will further strain Utah DDW resources.

The EPA Review Teams did not review specific sanitary survey reports. However, from interviews conducted with Utah DDW managers, there was a consensus that the quality and thoroughness of the reports varied greatly among those conducting the surveys. To address this issue, Utah DDW expends considerable effort each year in training its surveyors to improve Sanitary Survey quality. Despite limited resources, the State needs to continue with these efforts.

## **DRINKING WATER STATE REVOLVING FUND (DWSRF)**

Performance of the DWSRF is reviewed directly by the EPA Region 8 DWSRF Program. However, as noted above, considerable funding for the PWSS Program itself is derived from funds set aside under the DWSRF Grant, and therefore it becomes important not only to Utah's management of its SRF funds but also to the entire Utah DDW program.

The State DWSRF is well established in the State. The State DWSRF is currently funded through Sales Tax revenues and revolving State loan funds. Generally, this program focuses on disadvantaged communities without incurring extra costs imposed by Federal crosscutter requirements and handles small projects. State and Tribal Assistance Grants, previously from "earmarks," and now from the American Recovery and Reinvestment Act (ARRA) Legislation, have imposed an extra workload on this section. Utah was working on 25 projects, and 14 proceeded with ARRA funding. At the time of this review, this additional workload has caused the engineers in this section, who previously helped out the PWSS Program with plan reviews and follow-up inspections, to devote this time strictly to ARRA and DWSRF Projects. Also, it takes an extra 0.25 FTE to handle the new Davis Bacon, Buy American and Green Project Reserve provisions.

It is worth noting that Utah's SRF program, with only 3.6 FTE, is staffed below ASDWA recommendations of 6.0 FTE. Another 0.5 FTE is devoted to State and Tribal Assistance Drinking Water Grants and the State DWSRF Program. Although operating with less staff than the ASDWA recommendations, the Utah DWSRF programs are effectively managed.

## **ENFORCEMENT**

Utah DDW follows the ASDWA Model for Small States, which assumes that enforcement will be carried out by Rule Managers and allocates resources accordingly. Utah also involves personnel from the Field Services Section, particularly for any on site follow-up. However, the SDWA Model does assume that one-half (0.5) FTE will be devoted to tracking and follow-up with enforcement actions. As noted above, resources devoted to Rule Management are significantly below the ASDWA recommendations, and the resources identified by Utah for enforcement do not make up the difference. EPA Region 8 does initiate enforcement on a few water systems in Utah every year. This enforcement involves Notices of Violation, Administrative Orders, and appropriate follow-up. By contrast, enforcement actions taken by the State often receive little or no follow-up by understaffed Rule Managers. There are no resources devoted to tracking and follow-up as described by the ASDWA Model. Utah DDW is asking for an additional staff person to address this shortcoming. EPA Region 8 supports this effort.

## **SOURCE WATER PROTECTION**

The Source Water Protection Program in the Utah DDW was originally staffed with four (4) scientists, but retirements and position transfers have resulted in a reduction to two (2) full time staff. In addition to managing the Source Water Protection Program (including reviews of submittals and technical assistance and guidance to water systems), these same two staff also:

- Support the Division in the loan programs (through managing the National Environmental Protection Act (NEPA) process);
- Entirely manage the Division's GIS system;
- Conduct Microscopic Particulate Analysis (MPA) testing;
- Consult on well issues;
- Manage portions of one Division's database;
- Support other Division databases;
- Act as liaisons to outside groups (such as the Salt Lake County Source Protection, Technical Assistance Committee, and the American Waterworks Association (AWWA) Public Officials Committee); and
- Support local government in development of source water protection ordinances.

This work load has resulted in a backlog of Source Water Protection reviews that currently stands at 380 submittals for individual sources. Utah DDW expects to receive in the neighborhood of 400 more submittals by the end of 2010 and another 500 by the end of 2011. Utah DDW has requested at least one additional FTE to assist in meeting its obligation to its customers. EPA Region 8 supports this effort.

## **OPERATOR CERTIFICATION**

Utah maintains an active Operator Certification Program. This program is funded mostly through operator fees, with renewal required every three (3) years. The program reciprocates with Nevada, Wyoming, Idaho, and Colorado. In the previous four (4) quarters, 316 Operator Certification exams were given in all classifications with 243 passing. There are 2100 operators currently certified at some level but only 72 at the most advanced treatment level. There are currently 33 community systems and 13 non-transient non-community systems lacking certified operators. Major problems exist trying to obtain certified operators for complex systems in remote areas. Statistics dating from 1994 show a high correlation between having a certified operator and a PWS's compliance and approval record. Both factors have improved dramatically with the rise in number of certified operators. Utah DDW devotes 1.15 FTE to the program, which is somewhat less than the ASDWA 1.5 recommendation. Utah DDW is also anticipating an upcoming retirement wave among operators which will require attention and resources of Utah DDW's staff to train and certify necessary replacements.

## **CAPACITY DEVELOPMENT (CD)**

The CD Program uses EPA's Check Up Program for Small Systems (CUPSS) for its analysis of systems. Reviews are conducted for both DWSRF and compliance purposes as well as for new systems seeking operating permits. This area is short staffed but still functioning. Problems have been encountered with timely issuance of Operating Permits as CD records are on paper and not yet in SARA. ARRA project emphasis on "green" differs from DWSRF public health emphasis when assigning project priorities. Since ARRA projects were limited to "shovel ready" projects already in the pipeline, no significant impact was noted rearranging the project priority list. However, the State expressed concern that continued emphasis on "green" could have a negative impact on the public health priorities. Despite the fact that the 0.3 FTE Utah DDW devoted to CD is significantly below the ASDWA recommendation of 3.5, minimal requirements are being met.

## **RULE MANAGEMENT**

### **SURFACE WATER TREATMENT RULES (SWTR)**

The SWTRs and their initial compliance dates consist of: the original SWTR (1991); the Interim Enhanced Surface Water Treatment Rule (IESWTR) (2002); the Filter Backwash Recycling Rule (FBRR) (2004); the Long Term 1 Enhanced Surface Water Treatment Rule (LT1) (2005); and the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) (2006). These five (5) rules regulate systems that use surface water or groundwater under the direct influence of surface water (GWUDI) as their source. These regulations use a treatment technique approach to address acute contaminants such as *Cryptosporidium parvum* and *Giardia lamblia*. They require certain treatment unit processes such as filtration and disinfection to be installed. They also require specific periodic assessments of systems, analysis of treatment processes, and continuous monitoring and review requirements to ensure that effective treatment is being maintained. The water systems must send monthly treatment reports to the State. LT2 Rule required source water monitoring for all SW systems, including evaluation for the risk of *Cryptosporidium parvum*, and analysis of additional treatment needs.

Utah DDW is implementing these five rules with 0.6 FTE to address 103 systems. This position was vacant at the time the requirements for a majority of the systems were imposed. Utah DDW's Rule Manager has worked hard to catch up implementing these rules, but much work remains to be done.

Utah does not allow water systems to avoid filtration so managing the Filter Avoidance criteria was not a problem in 2010. In August 2010, four (4) water systems had been determined to be ground water under the direct influence (GWUDI), triggering the requirement to comply with the SWTR and four (4) more systems were under investigation as to GWUDI status. Of these systems, one (1) has a filter under construction and two (2) tried remediation efforts, which unfortunately were unsuccessful. The remaining water system is under a Bilateral Compliance Agreement but lacks resources to resolve the problem. The Rule Manager is tracking monitoring results on separate spreadsheets as opposed to using SDWIS. Utah DDW needs to take the next step and enter the summary data into SDWIS. Implementation of LT2 is proceeding with the smaller water systems but several systems have not yet submitted the required reports.

The EPA Review Teams did not do a file review to ascertain whether proper submissions had been received and reviewed under the various rules. It notes that recent file reviews by the EPA Region 8 Enforcement Program had noted improvements in that area. Issues remain with data entry and an historical lack of violations in SDWIS, which raises questions as to whether violations tracked on spreadsheets are being properly entered into SDWIS.

Due in part to the lack of historical violations in SDWIS, the EPA Region 8 SWTR Manager attended the April 2011 visit to Utah. In addition to providing technical assistance, several findings and recommendations were made. First, it was found that older Utah regulations governing the SWTRs are spread out through various sections of Utah's regulations and, as such, become very confusing. EPA Region 8 staff recommended that Utah DDW review and revise these regulations to enhance clarity and ensure consistency with federal regulations. Next, Utah DDW Rule Managers should ensure that they are accurately tracking disinfection profiling and the Filter Backwash Recycling Rule status. The SDWIS inventory module can be used for tracking. Additionally, it was recommended that SWTR-related questions be added back on to sanitary survey forms to help verify regulatory compliance. Finally, the monthly SWTR report formats should be re-evaluated to ensure treatment plants are using the correct form for their filtration process. EPA staff found that additional time and resources are needed to ensure all surface water systems, particularly smaller water systems, are well-understood and in compliance.

### **DISINFECTION BYPRODUCT (DBP) RULES**

The Stage 1 DBP Rule applies to all Community and Non-Transient Non-Community water systems that use a chemical disinfectant in any part of the treatment process. This applies to both surface and groundwater systems.

The Stage 1 DBP Rule requires PWSs to monitor and control disinfectant levels as well as monitor and control levels of specific disinfection byproduct contaminants regulated by this rule. These contaminants are total Trihalomethanes (TTHMs), Haloacetic Acids 5 (HAA5), Bromate, and Chlorite. The PWS must submit monitoring plans to be reviewed and approved by the State. Utah DDW is also required to determine if Total Organic Carbon (TOC) requirements are being met by systems using conventional filtration.

Initial efforts to implement this rule in Utah were delayed by personnel vacancies. Neither Maximum Residual Disinfectant Levels (MRDLs) nor daily distribution system disinfection residuals were being tracked. This has now been corrected. DBP rules also require ascertainment of proper TOC removal and determination of distribution system DBP monitoring requirements. Utah DDW must also balance DBP requirements with Optimal Corrosion Control requirements

under the Lead and Copper Rule (LCR) while maintaining simultaneous compliance with IESWTR and LT1. No review was made to determine the effectiveness of these efforts.

The current Utah DBP Rule Manager is inundated with data entry requirements and requirements for follow-up phone calls and has little time to track and submit reports. In August 2010, this Rule Manager was unfamiliar with the status of monitoring plan submittals. The administrative workload also precludes more contact with the systems and providing assistance. Although the EPA Review Teams did not review files, the amount of data, tracking and analysis necessary combined with a paucity of violations in SDWIS suggest there is room for improvement with respect to these rules. The Utah DBP Rule Manager is a former operator with considerable field experience and technical knowledge, who would benefit immensely from dedicated administrative help, particularly with data entry and scanning paper reports into E-Doc's. Administrative help would allow Utah DDW to better utilize the DPB Rule manager's technical skills. Additional SDWIS training for the DBP Rule Manager would also be helpful.

Based upon the findings above, the EPA Region 8 DBP Rule Manager also attended the visit in April 2011. In addition to other technical assistance, the Utah DBP Rule manager was provided with several templates that may be helpful to streamline reporting and received assistance with setting up groups for different monitoring requirements in SDWIS. EPA Region 8 recommends that Utah DDW require PWSs to report TTHM and HAA5 as a sum rather than each individual component in order to reduce the reporting burden on water systems and the data tracking/entry for Utah DDW staff. The Utah DBP rule manager spends a tremendous amount of time entering TTHM/HAA5 lab analysis data into both the spread sheets and SDWIS. Additionally, because DBPR is tracked by different spreadsheets, it is burdensome to retrieve the TTHM/HAA5, RAA data and the enhanced coagulation status for specific compliance periods to identify potential problems. If Utah DDW continues with its current practice, it is recommended that additional help be provided to the DBP rule manager to allow more focus on compliance, technical assistance and enforcement.

Additionally, it is recommended that Utah DDW more fully utilize the capabilities of SDWIS by tracking all data (TTHM/HAA5, the RAA, TOC/alkalinity and the removal ratio RAA) in SDWIS and develop SARA or other tool, such as a version of EPA Region 8's Reporting Tool, to assist the rule manager for compliance, technical assistance and enforcement tasks. It was noted that because Utah DDW has a more stringent MRDL monitoring requirement than NPDWR, SDWIS may need to be modified if DDW wants to use the SDWIS to track the MRDL implementation.

#### **TOTAL COLIFORM RULE (TCR)**

The TCR regulates the bacteriological quality of the water and acute contaminants such as fecal coliforms, which cause intestinal disease. The TCR is applicable to all of Utah's 1020 PWSs. Monitoring Schedules are mailed out to systems twice a year. The TCR Rule Manager is reviewing and entering electronic and paper TCR sample data, making compliance determinations and issuing health advisories and boil water notices. Telephone calls to systems are made to ensure routine follow-up samples are taken and GWR Triggered Monitoring is initiated. A significant portion of the TCR Rule Manager's time is used following-up on correctly identifying laboratory samples and their application under either the TCR or the new GWR.

SDWIS 2.3 has a bridge for the new GWRs that have created a problem for TCR violation determinations. Laboratory samples identified as source samples for Triggered Monitoring under the GWR may also be used as a fourth (4) TCR routine sample for small systems. However SDWIS does not recognize this and creates a monitoring violation under the TCR. This must then be corrected, by hand, in the database.

Although the TCR Rule Manager is receiving data entry assistance, this individual is also administering the monitoring portion of the new GWR which is creating complications and using more time than management may realize. Previous file reviews by EPA Region 8's Enforcement Program have consistently raised issues with missed TCR violations and compliance determinations. During the second quarter of calendar year 2010 alone, Utah experienced 20 Community Water Systems and 64 Non-Community Water Systems with simple failure to monitor violations. Each required follow-up action. The TCR is an extremely meticulous rule to implement. The TCR Rule Manager, with limited time, is properly focused on acute violations with immediate public health implications. Impacts of the new GWR with its complex requirements may cause further deterioration in TCR implementation.

## **GROUNDWATER RULE**

The GWR became effective December 1, 2009. Utah DDW's implementation of the GWR has been hampered by the lack of staff resources dedicated to this rule. The GWR has two parts; the first is the monitoring portion where sources must be sampled every time there is a total coliform positive (TC+) under the TCR. If a source sample is fecal indicator positive (FI+), five additional samples must be taken. If one is positive, corrective action must be taken. The other portion of the GWR is Sanitary Surveys, which includes the identification of Significant Deficiencies that must be corrected. Under the GWR, there are no violations for the presence of contaminants or significant deficiencies, only if they are not corrected within prescribed time frames.

The monitoring portion is being implemented by the TCR Rule Manager while the Sanitary Survey and corrective action portions are being implemented by two additional staff, one in the Rules Section and the other in the Field Services Section. Systems unable to resolve FI+ source sample issues are required to install 4-log (99.99%) disinfection/removal and utilize a different monitoring scheme called compliance monitoring. So far four (4) systems have been evaluated for 4-log treatment.

The TCR Rule Manager is spending considerable time educating laboratories and systems on the importance of properly identify samples as either distribution or source samples. The three large laboratories that are sending results electronically are often sending incomplete reports that need correction. Monitoring violations must be assessed manually as SDWIS 2.3 does not adequately determine compliance. SDWIS 2.3 allows listing with some difficulty but not tracking of significant deficiencies and corrective actions. This is further complicated by the fact that approximately 60% of Utah's surface water systems are mixed (groundwater introduced after surface water treatment) and must also comply with the GWR. There are differing violations, corrective action requirements and time lines, so a determination as to which rule applies in which situation must be made. Therefore, all tracking and compliance determinations with this portion of the rule must also be done manually.

Based upon both the new implementation of the rule and Utah's unique approach to managing GWR implementation, the EPA Region 8 GWR Rule Manager attended the visit in April 2011. In addition to the provision of technical assistance, several recommendations related to the GWR were made. It was recommended that Utah DDW not allow water systems that provide treatment to utilize their 4th repeat TCR sample as a GWR source sample because doing so affects the MRDL of the DBPRs. Allowing this sample to be used in this manner is also confusing for operators and can cause confusion for the labs in identifying samples. Additionally, Utah DDW may want to start making determinations whether a TC+ qualifies as a distribution system deficiency, as allowed under the GWR. These determinations may cut down on staff time tracking source water sampling as well as reduce costs for water systems sampling their source(s). It was recommended that Utah DDW incorporate significant deficiencies and their associated corrective actions into Utah DDW's quarterly CAP meetings and consider developing schematics for its water systems that can be accessed as needed in SARA or EDocs.

## **LEAD AND COPPER RULE (LCR)**

This area has long been a red flag in EPA Region 8 Enforcement Reports due to incorrect implementation of the rule by Utah DDW staff. According to Utah DDW's staff, progress has been made to have all systems now on correct monitoring schedules. Difficulties are still encountered with data entry and instructing operators on proper sampling techniques, particularly with first draw samples. Utah DDW has identified one system with high copper levels. It has determined the water source is not the concern, so the system is implementing a new system study to determine the cause of the high copper levels. Turnover of operators in small systems continues to create problems related to proper sampling techniques. The LCR rule manager may still benefit from additional training and support. Since Region 8 EPA has previously sent staff to Utah DDW to provide technical assistance on the LCR, it was determined that the focus would be in other rule areas for the April 2011 trip.

## **INORGANIC CHEMICALS (IOC), VOLATILE ORGANIC CHEMICALS (VOC), and SYNTHETIC ORGANIC CHEMICALS**

This has been another problem area identified repeatedly in the Enforcement Reviews and Data Verifications. However, Utah DDW now has all systems using the standard monitoring framework which has eased the tracking problem and should significantly reduce future violations. The Chemical Rule Manager reports that the monitoring framework and electronic data submission by some Utah laboratories has significantly reduced the Rule Manager's administrative burden, allowing this individual more time to work with systems on compliance issues and monitoring waivers. The EPA Review Teams were particularly impressed with the quality of performance by the Rule Manager, who is only able to devote 0.4 FTE to this maze of chemical rules. With some of the administrative burden removed, significant improvement in the performance of this understaffed area can be expected.

## **ARSENIC**

Although arsenic is usually included in the IOC chemical rules, a new Arsenic Rule was promulgated in 2002, which impacted Utah significantly. As such, Utah DDW decided to separate this function from the Chemical Rules Manager. The Arsenic Rule Manager is devoting 0.35 FTE to administering this rule, which is included under chemical rules in the table above. In 2006, thirty-two (32) Utah systems applied for an exemption as allowed when an MCL is lowered. Thirty-one (31) exemptions were granted. These systems were not considered in violation even though they exceeded the Maximum Contaminant Level (MCL). Nevertheless, these PWSs were required to have a plan and be on a schedule to come into compliance. During the April 2011 evaluation, Utah DDW agreed to put any systems that had not come into compliance with the lower MCL under a Bilateral Compliance Agreement (BCA). EPA Region 8 would like to receive copies of the BCAs associated with arsenic MCLs, as well as the compliance/monitoring plans for systems using point-of-use or point-of-entry devices to treat arsenic.

## **RADIONUCLIDES**

The Radionuclides Rule was initially promulgated in 1976 establishing MCLs for Radium, Beta/Photon Radiation, and Gross Alpha. It applied only to Community Water Systems. It was updated in 2000 adding an MCL for Uranium and setting new monitoring requirements. This rule applies to 466 Community Water Systems in Utah. Utah DDW implements this rule with the same Rule Manager who implements the Chemical Rules and is only able to devote 0.1 FTE to this rule.

The current Rule Manager is analyzing and performing quality assurance/quality control (QA/QC) on sampling results, determining compliance, entering data and filing. The Rule Manager has also corrected a serious deficiency in the program by now recording sample results for Radium 228 and completing combined Running Annual Averages for the last two years for Radium 226/228.

#### **CONSUMER CONFIDENCE RULE (CCR)**

Utah DDW devotes 0.15 FTE of the Chemical Rules Manager's time to assisting PWSs with preparing their reports. The Database Manager is responsible for ensuring the reports are submitted and filed. No review of the content or quality of the reports is undertaken.

#### **PUBLIC NOTICE RULE (PN)**

The PN Rule is implemented within Rule Manager's duties as assumed in the ASDWA Model. Public Notice requirements and sample language are sent to PWSs as required. Returned PNs are filed. According to the Rule Managers, only Tier 1 and Tier 2 Notices, those with immediate or significant public health implications, are tracked. PN is not tracked in SDWIS, nor are violations for public notice issued to water systems.

#### **UTAH SPECIFIC REQUIREMENTS**

##### **TECHNICAL ASSISTANCE**

Utah DDW's management philosophy is that providing technical assistance to systems, particularly small systems, is less resource intensive than more formal enforcement in achieving compliance. Therefore, it sets aside funds from its DWSRF specifically for this purpose and identifies this item separately because of its funding source. The ASDWA model does not address this issue specifically. Some of the functions performed in this area could fall within the CD program. The effort supports, but is not limited to, the rule management functions. EPA Region 8 commends Utah for its strong effort in this area and agrees it is an essential function, especially when working within marginal resources.

##### **CROSS CONNECTION CONTROL**

The ASDWA Model assumes that in Small States this function will be performed by County Governments and limited to enforcing the Plumbing Code. Utah DDW has a strong program devoting 1.25 FTE located at Utah DDW with stronger coverage than is usually seen in Plumbing Code States with large rural areas. EPA Region 8 commends Utah DDW for addressing this often ignored but vital public health issue.

##### **IPS REPORTING**

Utah DDW uses this system to assess the status of each PWS. It is broader than EPA's reporting system which focuses on enforcement and provides Utah DDW management with a more complete picture of system status. The August 2010 EPA Review Team sat through DDW's quarterly meeting where the status of problem systems was addressed with District Engineers, County Health Personnel, the Rural Water Association personnel, and a phone link with EPA Region 8 Enforcement staff. During the meeting specific corrective action assignments were made. The EPA Review Team was impressed with the intricate system knowledge displayed at this meeting. This process has a very positive effect on water system performance. However, the absence of SDWIS data was often noted during the system review on IPS Score Sheets. This indicates that SDWIS data entry problems, including entry of violations and their subsequent return to compliance, are affecting the ability to accurately access water system status, as noted throughout this report. Adequate tracking of sampling and violations in SDWIS would improve

the quality of the IPS System and Utah's overall enforcement schema. Utah DDW is devoting 0.2 FTE to maintain this beneficial system.

## CONCLUSIONS

- None of the current drinking water rules are being fully implemented in all respects due to limited resources.
- Limited resources are focused on public health issues and return to compliance assistance, with enforcement taking a secondary priority.
- Timely and complete data entry and consistent use of SDWIS is a recurring problem noted within most rules.
- Further cuts in funding could have significant negative impacts on the ability of Utah DDW to meet minimal requirements.
- The volume of work entailed in tracking, reporting, compliance determination, and enforcement limits existing Rule Managers' ability to provide proactive technical assistance to PWSs, resulting in violations that could be avoided.
- Personnel stability and the high quality of personnel are allowing Utah DDW to meet most of its obligations with only marginal staffing. However, any loss of experienced personnel will significantly degrade Utah DDW's performance.
- Implementation of the new GWR is stretching current resources and may cause further program degradation.

## RECOMMENDATIONS

EPA recommends that the State of Utah take the following actions:

1. Analyze its staffing needs and determine how to address, at minimum, the additional needs identified in this report. Those needs as identified by EPA Region 8 are an additional staff person each for Plan (engineering) Reviews, for Enforcement, for Source Water Protection, and additional administrative (data entry) help to relieve some workload burden on Rule Managers.
2. Increase use of SDWIS for entry of violations and subsequent return to compliance. Additional staff responsible for enforcement and data entry may relieve some workload burden on Rule Managers to allow this.
3. Continue the excellent focus on use of electronic and data management tools to streamline program implementation and allow staff to focus on rule management, technical assistance and enforcement. Key areas identified in this report include:
  - a. Encourage electronic reporting of laboratory analytical data;
  - b. Successfully deploy and fully utilize the functionalities of SDWIS 3.0, including:
    - i. Ensure ESS compatibility with SDWIS 3.0
    - ii. Ensure ability to upload state data from SDWIS 3.0 to SDWIS-Fed
    - iii. Change to operating SDWIS 3.0 in a live version rather than using replication server
    - iv. Encourage Rule Managers to use more of the SDWIS capabilities for rule management (see discussion of each specific rule for details)
4. Analyze resource needs and priorities to be able to meet the requirements for conducting sanitary surveys at all community water systems every 3 years.

5. Address systems exceeding the Arsenic MCL with Enforcement Orders; send EPA Region 8 copies of the Orders as well as compliance/monitoring plans for systems using point-of-use or point-of-entry devices.
6. Provide additional training in critical areas such as SDWIS 3.0, database administration (for new DBA), new drinking water treatment technologies, sanitary surveys (including adding questions to the survey forms specific to Surface Water systems), and Lead and Copper Rule.

#### **FOLLOW UP ACTIONS**

EPA requests that within 90 days, the Utah DDW submit a response to the findings outlined in this report and summarized in the Conclusions and Recommendations. The response should outline any actions that have been or will be taken to address identified deficiencies and areas in which EPA could provide additional support or training to Utah DDW.