UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 500
DENVER, CO 80202-2466
http://www.epa.gov/region08

Ref: 8P-W-MS

OCT 10 2000

Kevin Brown, Director.
Division of Drinking Water
Department of Environmental Quality
PO Box 144830
Salt Lake City, UT 84114-4830

Ref:: Capacity Development

Dear Mr. Brown:

I am pleased to inform you of EPA's approval of Utah's capacity development strategy for existing drinking water systems in conformance with Section 1420(c) of the Safe Drinking Water Act (SDWA).

Our review and approval was completed using the guidelines in EPA's *Handbook for Capacity Development - Developing Water System Capacity Under the Safe Drinking Water Act as Amended in 1996*. In approving the program, we relied on our direct work with your staff as well as the description of Utah's program as documented in the Division of Drinking Water's (DDW) *Capacity Development for Existing Systems* dated August 2000. Within that document, you addressed how the State considered, solicited public comment on and included the five elements required under SDWA §1420(c)(2)(A-E):

- Methods or criteria to prioritize systems [§1420(c)(2)(A)]
- Factors that encourage or impair capacity development [§1420(c)(2)(B)]
- How the State will use the authority and resources of the SDWA [§1420(c)(2)(C)]
- How the State will establish the baseline and measure improvements [§1420(c)(2)(D)]
- Procedures to identify interested persons [§1420(c)(2)(E)]

Utah was one of the first states to develop and implement a capacity development strategy. Your regional planning efforts, together with existing State programs such as water system ratings, operating permits, source water protection, operator certification, backflow technician certification, water system inspections, facility plan reviews, new system capacity reviews and the Utah Water Quality Alliance, all work to help build capacity of systems. We look at your regional planning efforts, in particular, as a great effort to use Federal and State funds to help local water systems work together and with local assistance providers to best determine how they can meet the challenges of providing safe, affordable drinking water to their customers. We encourage you to continue to look for opportunities to utilize the SDWA and its related funding to help water systems build the capacity to provide safe water on a continuing basis.

As you know, there are ongoing reporting requirements associated with the capacity development provisions of the SDWA. These reports will give us all an opportunity to determine what is and what isn't working and allow you the opportunity to review and adapt your strategy to best meet the needs of the water systems in Utah:

- Each year, as a stand-alone submittal or as part of the State's capitalization grant application, Utah must demonstrate the ongoing implementation of the capacity development strategy.

- By August 6, 2001 (five years after the enactment of the 1996 SDWA) Utah must report to EPA on the success of its enforcement mechanisms and initial capacity development efforts in helping community water systems and non-transient, non-community water systems having a history of significant noncompliance improve their capacity.

- Every 3 years, the State must submit to EPA a list of community water systems and non-transient, non-community water systems that have a history of significant noncompliance and, to the extent practicable, the reasons for their noncompliance. DDW submitted Utah's first list in August 1997 and its second list in August 2000. The next list will be due by August 6, 2003.

- Not later than 2 years after Utah adopts its capacity development strategy, and every 3 years thereafter, DDW must submit a report to the Governor on the efficacy of the strategy and progress made toward improving the technical, managerial, and financial capacity of public water systems in the State. The report shall also be made available to the public.

Failure to implement the State's strategy or to provide these reports will serve as a basis for withholding of capitalization grant funds, as stipulated in §1452(a)(1)(G)(i).

I want to thank you for the continuing effort your staff has made to work with local, State and Federal stakeholders throughout the development of your strategy. Your strategy effectively builds upon work the State and other stakeholders have already implemented and effectively utilizes the opportunities provided under the SDWA to help systems provide safe drinking water

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If you have any questions or if we can be of any assistance, please call me at 303-312-6241 or have your staff call Ms. Tracy Eagle, Municipal Systems Unit, Chief, at 303-312-6245.

Sincerely,

for Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

STRATEGY 2000

Utah Division of Drinking Water
Capacity Development for Existing Systems

Background
Utah's population surpassed two million during 1996, a milestone in Utah's history. Almost every county in Utah experienced a population increase between 1995 and 1996. Utah is a large State, geographically, with population areas concentrated along the Wasatch Front, 77% percent of the State population lives in Salt Lake, Davis, Utah, and Weber Counties. The rest of the State is predominantly rural with pockets of rapid growth, especially in Summit Tooele, and Washington Counties. Twenty-six of Utah's 29 counties experienced population increases in 1996.

Basis of Authority
The Drinking Water Board operates under authority granted in 1981 by Section 19-4-104 of the Utah Safe Drinking Water Act. The Utah Drinking Water Board is a 11-person board appointed by the Governor empowered to adopt Administrative Rules governing the design, operation and maintenance of Utah's "public drinking water systems." The Board meets monthly and the public is invited to attend. Utah Code 19-4-104(1)(a)(v) specifically grants authority to make Administrative Rules regarding the Capacity Development Program and references Section 1420 of the Federal Safe Drinking Water Act.

The Division of Drinking Water Director, an appointed position by the Governor, serves as Executive Secretary to the Drinking Water Board. The Division of Drinking Water (DDW) acts as the administrative arm of the Utah Drinking Water Board implementing the Administrative Rules which they adopt. As such, it is engaged in a variety of activities related to the design and operation of Utah's public drinking water systems. DDW's Mission Statement is to "protect the public against waterborne health risks through assistance, education and oversight."

An overview of Utah's Public Drinking Water Systems
The Utah Drinking Water Board and the Division of Drinking Water have authority over "public drinking water systems." A public water system is defined as any water system, either publicly or privately owned, that provides drinking water for 15 or more connections, or 25 or more people, at least 60 days out of the year. Public water systems are further broken down into three types: Community, non transient non community, and Transient non community.

- A community system serves year-round residents. An example of this type of system is one which serves a city or town.

- A non transient non community system serves nonresident users year round. An example of this type of system is one which serves a factory. Workers drink the water year-round, but they do not reside at the place of use.

- A transient non community system does not serve water to the same people year round. An example of this type of system is a highway rest stop. It is highly unlikely that a given individual would consume water from this system on a daily basis.

The distinction among the three types of systems is important because each type of system has different sampling requirements. Figure 1 illustrates the number of each type of system in the State.

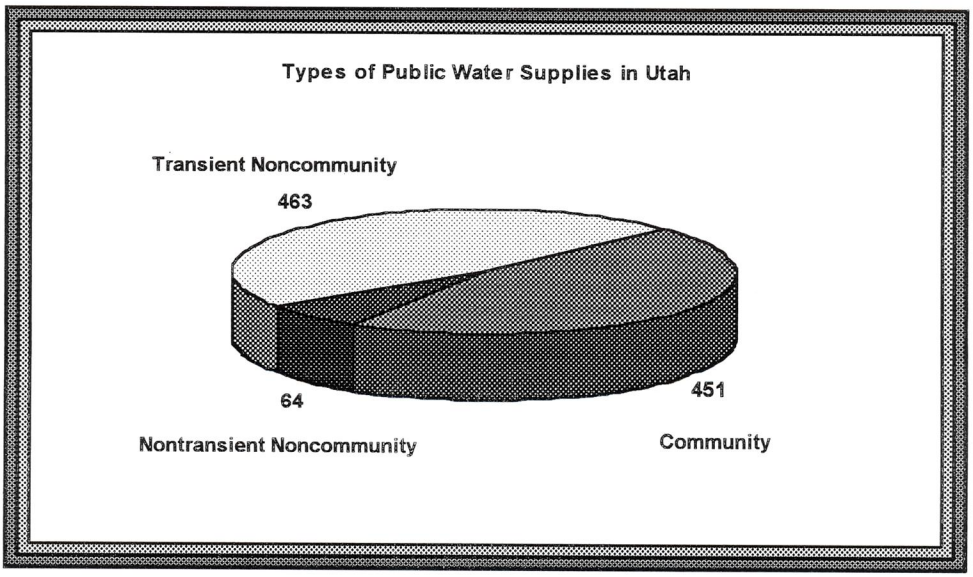

Figure 1.

Figure 2 provides more details on the number and types of water systems in the State. Note that this table shows a significant number of "non-public" systems. These are systems that exist in the Division's database, but do not meet the legal definition of a public water supply. Non-public systems include out-of-service systems, fully constructed systems serving fewer than 15 connections, and planned public drinking water systems.

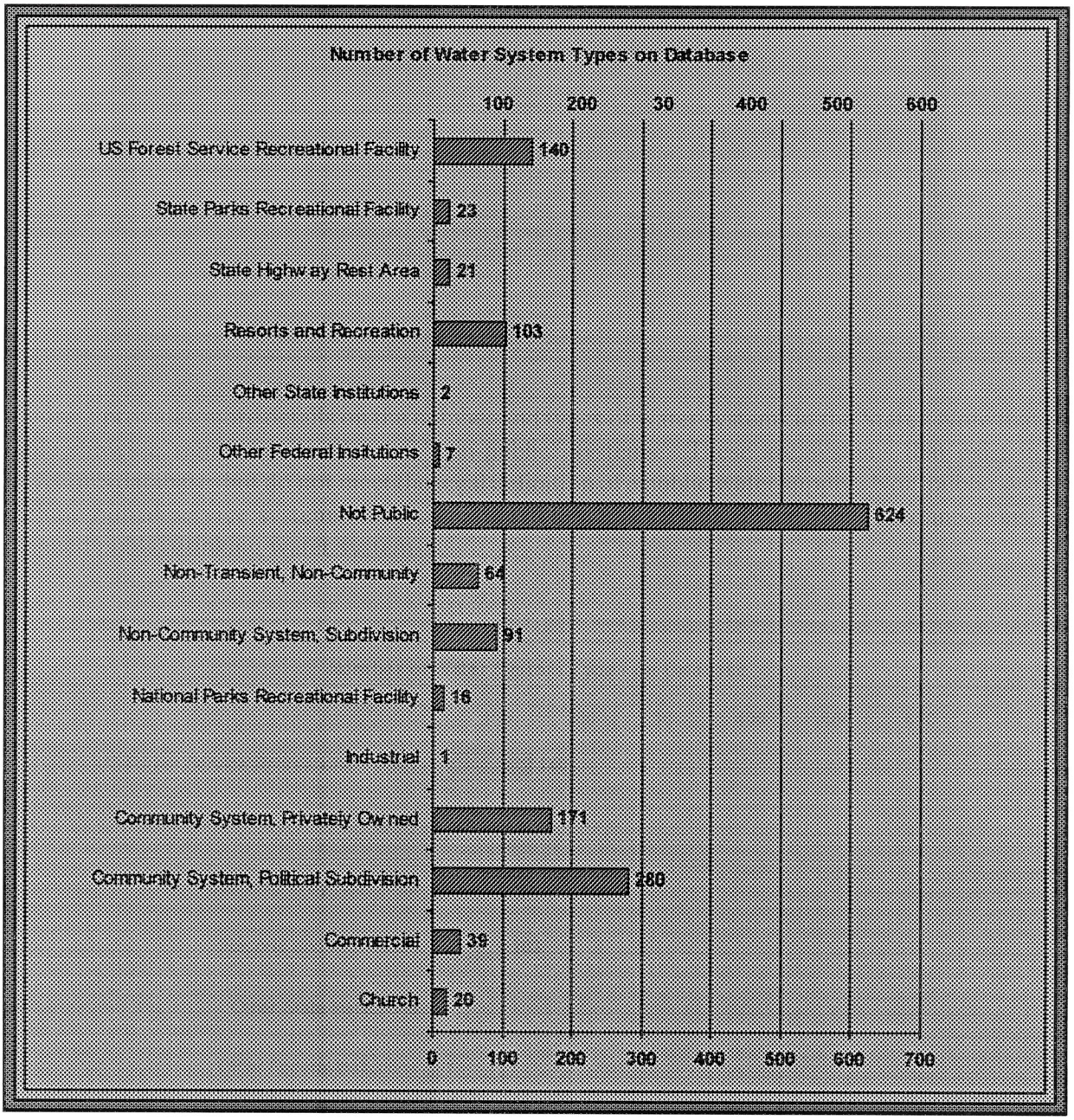

Figure 2.

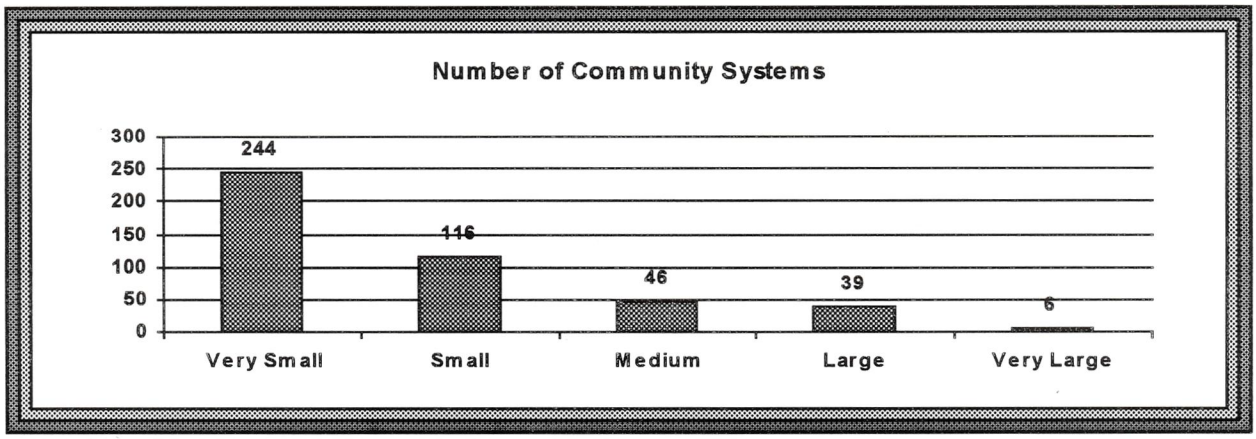

Figure 3.

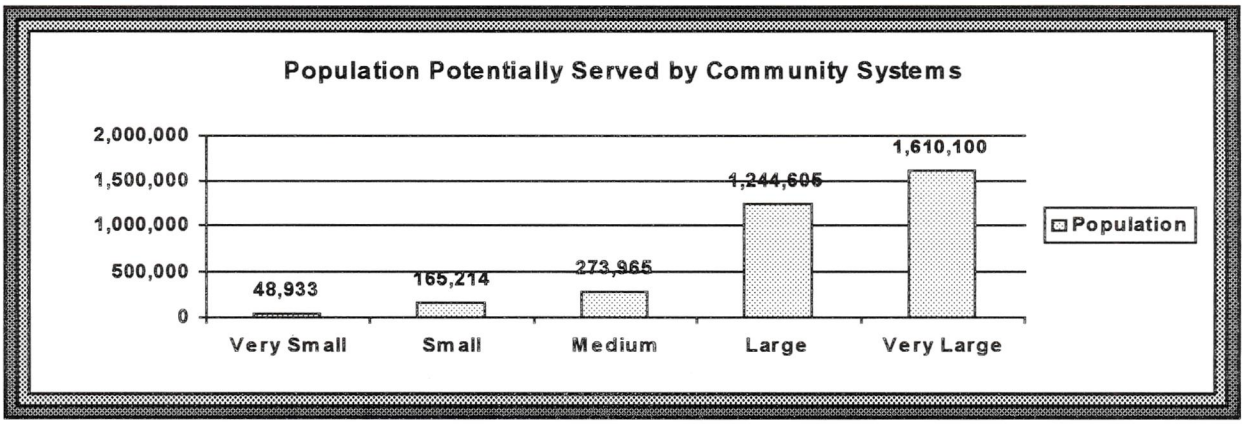

Figure 4. Water System Size Definitions:

Very Small	-	25	to	500	population
Small	-	501	to	3,300	
Medium	-	3,301	to	10,000	
Large	-	10,001	to	100,000	
Very Large	-			>100,000	

Figures 3 and 4 illustrate that the majority of the State's population is served by just a few large water systems. Furthermore, the State has a large number of small systems that serve a relatively small percentage of the State's population. Most community water systems in the State are *very small*, serving from 25 to 500 individuals.

Capacity Development Strategy for Existing Systems

We commend the Environmental Protection Agency for allowing Utah the flexibility in preparing our capacity development strategy. The complex problems facing small water systems in our State can be resolved, using education, partnerships, and funds from the federal grant. We present a brief summary of our approach to implement this portion of the SDWA.

Funding Source
Division of Drinking Water

Assoc. of Gov.	County	(1998 Funds)	(1999 Funds)	Community Dev. (1998 Funds)	Total
Bear River					
	Box Elder	37,988	20,012		58,000
	Cache	39,954	21,046		61,000
	Rich			45,243	45,243
					164,243
Wasatch Reg. Front	Tooele	27,182	18,061		$45,243
	Morgan	18,345	23,588		41,933
					$87,176
Mountainland					
	Summit	78,630	26,210		104,840
	Wasatch	34,990	17,430		52,420
	Utah	17,300			17,300
					174,560
Uintah Basin					
	Uintah	35,003	22,997		58,000
	Duchenne			61,000	61,000
	Dagged			45,243	45,243
					164,243
6 County					
	Mallard	33,012	15,300		48,312
	Sever	33,014	15,300		48,314
	Sanpete	33,012	15,300		48,312
	Juab	33,012	15,300		48,312
	Wayne			29,363	29,363
	Piute			29,363	29,363
					251,975
5 County					
	Washington	38,440	17,475		55,915
	Kane	38,440	17,475		55,915
	Iron	38,440	17,475		55,915
	Beaver	38,440	17,475		55,915
	Garfield			55,915	55,915
					279,575
Southeastern					
	Carbon	24,899	27,523		52,422
	Emery	24,899	17,037		41,936
	Grand			41,936	41,936
	San Juan			41,936	41,936
					178,230
TOTALS		$625,000	$325,000	$350,000	$1,300,000

The Drinking Water Board appropriated $625,000 and $325,000 as set-asides to fund regional plans in 26 of Utah's 29 counties. The Department of Economic and Community Development

authorized an additional $350,000. Each county commission appoints an individual or organization to administer the Drinking Water Regional Management Plan for its county.

The Region Administrator selected a qualified Consultant to provide a technical and financial analysis of the existing water system and proposed consolidations of water systems. The Region Administrator coordinated representatives of public water system as volunteers on committees. The committees met, received education concerning the SDWA, and made recommendations concerning source protection, operation, monitoring, technical, financial, managerial, and funding sources. The committees reviewed each public water system's alternatives in meeting the SDWA.

The Rural Water Association of Utah, Local Health Department, and Drinking Water staff assisted the representatives of the public water systems at local meetings. Division of Drinking Water and Rural Water Association of Utah staff encouraged the implementation of cost-effective recommendations of the Region Plan and provided technical assistance to very small public water systems. Each public water system had the option to accept or reject the recommendations of the Region Plan.

Region Administrator

The role of the Region Administrator was to obtain input from, and coordinate with, representatives of the water systems, the Consultant and other government agencies. The administrator prepared an initial draft of the region plan, submitted it to the owners of each water system, and incorporated each water company's response into a final Region Plan. The Region Administrator advertized for consultants and prepared and printed both the draft and final copies of the Region Plan. The Region Administrator and the local committee selected the Consultant.

Guidance documents concerning each phase of regional planning, such as source protection, certified operators, monitoring requirements, consumer confidence reports, capacity development (technical, financial, and managerial analysis), and available funding for construction, were made available to the Region Administrator by the Division of Drinking Water. The guidance documents included information from EPA guidance statements concerning the SDWA.

The Region Administrator scheduled a meeting, then advertised in local newspapers to request attendance of all interested persons involved in drinking water systems. Representatives of each water system in the county were encouraged to attend. In the initial meeting, the administrator explained the scope of work and goals of regional planning. Guidance documents were made available and individuals asked to volunteer to serve on one or more committees, including source protection, operator and monitoring, technical, financial and management.

On a regular basis, the administrator scheduled meetings and worked with each committee. Each committee appointed a lead member to work with the Administrator. A representative of the Local Health Department, Rural Water Association of Utah, and the Administrator advised the committees. The committees were the prime source of input and the most important decision-making group in this regional planning effort. The Administrator recorded the comments of each committee. The recommendations came from the local committees. Decisions were made by the respective owners of each water system.

Consultant

The detailed scope of work for the Consultant included the following tasks or categories of work. The Consultant in each county entered into an agreement to ensure the following work was completed.

The Consultant met with the drinking water provider agencies individually or as a group. Using a prepared form, the Consultant obtained information concerning each water system, such as:

1. Names and phone numbers of each board member and key employees;
2. Monthly charge rates for the base amount and the cost for the overages;
3. Impact fees;
4. Type of organization, such as mutual, or governmental and whether it is publicly or privately owned;
5. Number of connections and number of approved lots without a building unit;
6. Financial audit or statement of expenses and income for the past year;
7. Number of new connections during the past five years;
8. Evidence of water rights;
9. As-built drawings of wells, storage facilities and distribution systems;

The Consultant maintained contact with the Rural Water Association of Utah representative, Paul Fulgham. In many water systems, representatives from the Rural Water Association are aware of the current condition of the infrastructure, and have excellent rapport with the owners. Mr Fulgham provided valuable input to the technical committee.

Evaluations and locations of sources and storage facilities were determined as accurately as possible using maps, engineering plans and other available information. The Consultant met with the Local Health Department representatives to acquire copies of past sanitary surveys. This information was useful to the Consultant in evaluating the physical condition of each water system. The Consultant prepared a geographical map showing all existing infrastructure, in a manner compatible with the Division of Drinking Water's Geographical Information System (GIS).

Using the State of Utah Administrative Rules for Public Drinking Water Systems, the Consultant determined the present capacity of the existing source, storage, and distribution system. Water rights were considered in determining the source capacity. Sizing and location were reviewed using generally accepted engineering guidelines to determine where upgrades or new improvements would be needed. The Consultant reviewed the State Water Plan for the river basin in which the county is located. The Consultant used existing county land use planning documents prepared through the Governor's Office of Planning and Budget. This information assisted the Consultant in making five- and twenty-year population projections. The local committee reviewed and appropriately modified the population projections. Using the five- and twenty-year projections, the Consultant recommended size and location for new facilities. Maps showing the existing and proposed infrastructure were included with the written report.

Reviewing the five- and twenty-year projections, and the pressure zones, the Consultant determined if there are be any technical advantages that could be cost effective, such as an existing or future common infrastructure (e.g., storage, source, storage, pipelines, etc.) that could be used jointly between several water companies.

The Consultant obtained five-year projected costs from the Region Administrator, working with the operator certification, monitoring, and management committees, for each of those areas. The

Consultant completed a rate study to determine the recommended monthly user fee and impact fee. All governmental water companies were required to establish their impact fees by July 1, 1997, as per the Development Impact Fee Act adopted by the State legislative session in April 1995. Privately owned water systems don't have guidelines for impact fees.

The Consultant prepared a five-year financial plan showing the previous year's budget, the current year and four years into the future. This plan showed the projected income and expenses. Income includes all sales, interest and impact fees or income from the sale of shares. Expenses include both operation and maintenance as well as the replacement and capital facility costs. The Consultant recommended monthly user fees that would allow a reserve account to be established. The operating ratio as shown in the technical and financial portion of the regional planning seminar manual should not be less than 1.2 and the coverage ratio should not be less than 1.5. The Consultant prepared a five-year financial plan for each proposed consolidated or regional water system.

The Consultant submitted draft copies of the technical and financial data to the Region Administrator. This information was given to each water company with a request for response within a 30-day period. Each water company was asked to concur or reject the recommendations of the Consultant. After reviewing the input from each water company, the Consultant submitted a final copy of the technical and financial recommendations to the Region Administrator.

Public input was interspersed throughout the process. A Regional Planning Seminar was presented on May 26 & 27, 1998 to County representatives and Consultants, and included the Guidance Document and program expectations. The Capacity Development Rule went through the process of publication, public comment period, and public hearings twice. The first time was for the approval of the budget and process of region planning for the existing systems, and a second time was for the strategy for new systems and federal SRF applicants. The local planning focused on soliciting maximum comments for the water systems and customers closest to home and most directly affected by the results.

Copies of the Final Regional Drinking Water Management Plans were furnished to the County, Local Health Departments, Regional Engineers, and the Division of Drinking Water. Copies of all the County Plans are available to Drinking Water staff in the Library. Recommendations and conclusions from the management plan are referenced when water systems in significant noncompliance with the EPA or unapproved status with the State of Utah enter into discussions with the Division of Drinking Water.

Utah Division of Drinking Water Programs

Plan Review

Engineering plans and specifications for water system projects must be reviewed and approved prior to construction. This is done to insure that facilities are constructed in such a way as to minimize threats to public health.

Operating Permits

The issuance of an Operating Permit is the last step or closure of the approval for a project. The Operating Permit may be considered as a follow-up to plan approval of a Public Drinking Water project. The intent of the rule is threefold: (1) ensure quality control and rule conformance of the

Public Drinking Water project during construction, (2) provide the water system owner with a quality project, and (3) safeguard the health of the public.

Loan Program
Federal and State funds are available for the construction of public drinking water projects.

Source Protection
Water suppliers must protect their sources from pollution. Protection zone assessments and management plans are reviewed by the Division.

Compliance Assurance
Systems must take chemical and bacteriologic samples at prescribed intervals. These samples must indicate adequate quality. If samples are not taken often enough, or quality standards are not met, a violation is recorded. The water supplier will be required to give *public notice* if this occurs.

Utah Water Quality Alliance
The Division has coordinated the formation of the Utah Water Quality Alliance which is dedicated to "achieving the highest possible standards of water treatment." The Alliance consists of the largest surface water suppliers in Utah, and small- and medium-sized systems that operate water treatment plants.

Water System Inspections(Sanitary Surveys)
Each public drinking water system is inspected at least once every four years.

Water System Ratings
Water system performance is summarized by the assignment of a rating. The following classifications are used: *Approved*, *Undergoing Corrective Action*, or *Not Approved*. These ratings are based on the State's Improvement Priority System Rule.

Operator Certification
All community water systems serving more than 800 people, and all systems having treatment plants, must be operated by a certified operator. The Division of Drinking Water administers an operator certification program.

Backflow Technician Certification
Backflow technicians insure that contaminated water cannot enter a drinking water system through *cross-connections*. Often *cross-connections* are prevented by the use of special valves. Backflow technicians are trained to test and repair these valves. The Division of Drinking Water administers a backflow technician program.

Capacity Development
This program is designed to promote the establishment of drinking water systems that are financially viable and able to meet the challenges of the State's rapid growth. Toward that end, regional water systems are encouraged.

New System Capacity Review
Utah's Capacity Development Administrative Rule requires that a new water system demonstrate that it has adequate technical, managerial, and financial capacity before it may be approved to

provide water for human consumption. New community, and non transient non community, water systems must submit a Capacity Assessment Review, which includes a project notification form and a business plan.

Facility Plan Review

Engineering plans and specifications for water system projects must be reviewed and approved prior to construction. This is done to assure that facilities are constructed in such a way as to minimize threats to public health. Construction of a public drinking water project shall not begin until complete plans and specifications have been approved in writing by the Executive Secretary unless waivers have been issued as allowed by R309-201-6(3).

A public drinking water project is any of the following:

- The construction of any facility for a proposed drinking water system (see 19-4-106(3) of the Utah Code Annotated or R309-201-4(1) describing the authority of the Executive Secretary);
- Any addition to, or modification of, the facilities of an existing public drinking water system, which may affect the quality or quantity of water delivered;
- Any activity, other than ongoing operation and maintenance procedures, which may affect the quality or quantity of water delivered by an existing public drinking water system.

Project Notification.

The Division shall be notified prior to the construction of any public drinking water project. The notification may be prior to, or simultaneous with, submission of construction plans and specifications. A form is provided by the Division. Information required by this form includes:

(a) whether the project is for a new or existing public drinking water system;

(b) the professional engineers, registered in the State of Utah, designing the project and their experience designing public drinking water projects within the State;

(c) the individual(s) who will be inspecting the project during construction and whether such inspection will be full-time or part time;

(d) whether required approvals or permits from other governmental agencies (e.g., local planning commissions, building inspectors, Utah Division of Water Rights) are awaiting approval by the Executive Secretary, the agency's name, and contact person;

(e) the Fire Marshall, fire district, or other entity having legal authority to specify requirements for fire suppression in the project area;

(f) for systems serving more than 800 individuals or treating surface water, the name of the certified operator who is, or will be, in direct responsible charge of the water system;

(g) whether the water system has a registered professional engineer employed, appointed or designated as directly responsible for the entire system design and his or her name;

(h) the anticipated construction schedule; and

(i) a description of the type of legal entity responsible for the water system (i.e., corporation, political subdivision, mutual ownership, individual ownership, etc.) and the status of the entity with respect to the Administrative Rules of the Utah Public Service Commission.

Pre-Construction Requirements.

All of the following shall be accomplished before construction of any public drinking water project commences:

(a) Contract documents, plans, and specifications for a public drinking water project shall be submitted to the Division at least 30 days prior to the date on which action is desired. This

shall include engineering reports, pipe network hydraulic analyses, water consumption data, supporting information, evidence of rights-of-way and master plans pertinent to the project, along with a description of a program for keeping existing water works facilities in operation during construction so as to minimize interruption of service;
(b) Plans and specifications shall be prepared for every anticipated public water system project. The design utilized shall conform to the requirements of R309-201 through R309-211. Furthermore, the plans and specification shall be sufficiently detailed to assure that the project shall be properly constructed;
(c) The plans and specifications shall be stamped and signed by a licensed professional engineer in accordance with Section 58-22-602(2) of the Utah Code Annotated;
(d) Plans and specifications shall be reviewed for conformance with R309-201 through R309-211. No work shall commence on a public water system project until plan approval has been issued by the Executive Secretary. If construction or the ordering of substantial equipment has not commenced within one year, a renewal of the Plan Approval shall be obtained prior to proceeding with construction.

Financial Viability.
Owners of new or existing water systems are encouraged to develop realistic financial strategies for recouping the costs of constructing and operating their systems. Plans for water system facilities shall not be approved when it is obvious that public health will eventually be threatened because the anticipated usage of the system will not generate sufficient funds to insure proper operation and maintenance of the system.

Operating Permit
The *Issuance of Operating Permit* requirement [R309-201-9] became effective January 1, 1998, with the adoption of the Public Drinking Water Systems Administrative Rules R309-200 through R309-211 of the Utah Administrative Code (UAC). The issuance of an *Operating Permit* is the last step or closure of the approval for a project. The purposes behind the *Operating Permit* include the following:

- Ensure that the public drinking water project conforms to drinking water Administrative Rules, including assurance that all conditions of approval (from plan review) have been met;
- Ensure that both the water system owner/operator and the Division of Drinking Water receive record or as-built drawings;
- Ensure the water system owner has received sufficient information/instructions (e.g., O&M manual, manufacturer's name and phone number, model numbers, etc.) to efficiently operate and maintain the new facility.

The *Operating Permit* is necessary for all public drinking water projects. The requirements are outlined in R309-201-9 of the UAC and are listed below:

- A statement from a registered professional engineer that all conditions of Plan Approval were accomplished;
- As-built drawings;
- Confirmation that a copy of the as-built drawing has been received by the water system owner;
- Evidence of proper flushing and disinfection in accordance with the appropriate ANSI/AWWA Standard;
- Water quality data when appropriate;
- A statement from the Engineer indicating necessary changes during construction, and certification that changes were in conformance with the Administrative Rules;
- All other documentation which may have been required during the plan review process;

- Confirmation that the water system owner has been provided with an operation and maintenance manual for the new facility.

Water System Rating

Each water system in Utah is evaluated based on its compliance with the Division's Administrative Rules. See our Administrative Rules (Section R309-150) for a more detailed description of Utah's Improvement Priority System (IPS) used in assigning water system ratings. Each violation is assigned violation points based on the severity of the infraction. The accumulation of violation points forms the basis for enforcement decisions by the Division. One enforcement tool used by the Division is the rating system described below. Other tools include site visits, administrative orders, hearings, and penalties, and even court action.

The Division has had a system for rating community water systems since 1962, and for rating all systems statewide since 1995. Federal lending agencies (Farmers Home Administration, the Veterans Administration, and the Federal Housing Administration) have supported our efforts to deny the expansion of water systems with serious defects. Local Health Departments are also using our *Not Approved* listing to advise local banks and title companies that there are problems associated with water systems rated *Not Approved*. A system with this type of rating is not addressing known problems in a timely manner. Traditionally, a *Not Approved* system can be assigned a *Corrective Action* rating upon written request which documents a specific timetable of action items as well as source of funding. The Division believes publicizing *Not Approved* systems will focus attention on water systems with known health hazards so that the public can support corrective actions taken. This has been done by posting water system ratings on the Division website.

Each Public Water System is assigned a rating of either: *Approved, Corrective Action or Not Approved* based on the system's compliance with the Administrative Rules. In order to qualify for an *Approved* rating, the public water system is classified based on demerit points for violations. The point total must be less than the following: Community water system - 150 points; Non Transient Non Community water system - 120 points; Non Community water system - 100 points. The reason for this graduated point scale is that a lot more requirements apply to Community water systems, fewer to Non Transient Non Community systems, and the fewest of all to Non Community systems. For a public water system to receive a *Not Approved* rating the accumulation of points for the water system must equal or exceed the totals listed above.

In order to qualify for a *Corrective Action* rating the public water system must submit the following:

- A written agreement to the Executive Secretary stating a willingness to comply with the requirements set forth in the Administrative Rules;
- A compliance schedule with a time table agreed upon by the Executive Secretary outlining the necessary construction or changes to correct any physical deficiencies or monitoring failures;
- Proof of financial ability to correct the deficiencies.

The *Corrective Action* rating shall continue until the total project is completed. The Executive Secretary may at any time rate a water system *not approved* if an immediate threat to public health exists. This rating shall remain in place until such time as the threat is alleviated and the cause is corrected. Any water system may appeal its assigned rating or assessed points to the Drinking Water Board by filing a request for a hearing with the Executive Secretary.

Other Control Points

Feasibility Review of Water Supply and Wastewater Disposal (optional)
Utah Department of Environmental Quality reviews the feasibility of water supply and wastewater disposal for proposed developments.

Public Service Commission
The Utah Public Service Commission (PSC) regulates water utilities that meet the definition of a *water corporation* as found in 54-2-1 of the Utah Code Annotated.

Operator and Backflow Technician Certification
Currently, all community drinking water systems serving more than 800 individuals and all public drinking water systems that utilize surface water sources or groundwater under the direct influence of surface water must have a certified operator. When a system required to have a Certified Operator finds itself without one, it must obtain an appropriately certified operator within one year. A regional operator must have an unrestricted certificate equal to or higher than the grade and discipline of the rating applied to each system he/she is operating. Operators and Backflow Technicians certify by participating in an approved course of instruction and passing the examination required for the class of certification.

Source Protection Plans
The selection, development, and operation of a public drinking water source must be done in a manner that will protect public health and assure water quality standards, as described in R309-103.

Under authority of Section 19-4-104(1)(a)(iv), the Drinking Water Board adopted the Administrative Rule that governs the protection of groundwater sources of drinking water. Public Water Systems (PWS's) are responsible for protecting their sources of drinking water from contamination. R309-113 sets forth minimum requirements to establish a uniform, Statewide program for implementation by PWS's to protect their groundwater sources of drinking water. PWS's are encouraged to enact more stringent programs to protect their sources of drinking water if they decide they are necessary.

R309-113 applies to all groundwater sources of drinking water that are used by PWS's to supply their systems except sources that are under the direct influence of surface water and are treated in accordance with surface water treatment Administrative Rules (refer to R309-206 through R309-208). Additionally, compliance with this Administrative Rule is voluntary for existing groundwater sources of drinking water that are used by public (transient) non community water systems.

Water Rights
Submit evidence that the water system owner has a legal right to divert water from the proposed source for domestic or municipal purposes.

Local Construction Permits, Planning, and Zoning
Local, county, or other State permits may also be necessary before beginning construction of any drinking water project.

Plan for Implementation and Periodic Review

A measure of the success of the program is through a comparison of the number systems in an approved status. Another measure is the number of systems receiving technical assistance from the Division of Drinking Water and partners in promoting safe drinking water, such as the Rural Water Association of Utah and the Local Health Departments. The Division of Drinking Water tracks the number of self-assessment checklists completed, and used to analyze Federal SRF assistance applicants and unapproved systems. Rural Water Association of Utah has a similar self-assessment form.

The Division of Drinking Water will prepare a triennial report to the Governor on the effectiveness of the capacity development strategy and progress made towards improving the technical, managerial, and financial capacity of public water systems in the State. The first report will be prepared by August 6, 2001, and will include a report on the success of enforcement mechanisms and initial capacity development efforts in helping community water systems and non transient non community water systems with a history of significant noncompliance to improve technical, managerial, and financial capacity. Assessing system capacity is an iterative process, which may change as we evaluate capacity development strategy and measure the strategy's success. The report will summarize the results of the previous assessment and describe any changes to the procedures for assessing technical, managerial, and financial capacity.

Systems in Significant Noncompliance
The Division of Drinking Water will prepare, periodically update, and submit to the EPA Administrator a list of community water systems and non transient, non community water systems that have a history of significant noncompliance, and indicate, to the extent practicable, the reasons for this noncompliance.

Portions of this document will be distributed in an implementation/education circular for distribution to our partners in the formation and regulation of drinking water systems (i.e., Department of Environmental Quality's District Engineers, Local Health Departments, Planning and Zoning Agencies, Rural Water Association of Utah, etc.).

R309. Environmental Quality, Drinking Water.
R309-352. Capacity Development Program.
R309-352-1. Authority.

(1) Under authority granted in Subsection 19-4-104(1)(a)(v), the Drinking Water Board adopts this rule implementing the capacity development program and governing the allotment of federal funds to public water systems to assist them to comply with the Federal 1996 Reauthorized Safe Drinking Water Act (SDWA).

R309-352-2. Purpose.

(1) The SDWA makes certain federal funds available to states, section 1452(k)(2)(C) to provide assistance to any public water system as part of a capacity development strategy developed and implemented in accordance with section 1420(c) to ensure all new public water systems will be able to comply with the SDWA, to enhance existing public water systems' capability to comply with the SDWA, and determine which public water systems applying for financial assistance are eligible to use the State Revolving Funds.

(2) The purpose of the Capacity Development Program is to enhance and ensure the technical, financial, and managerial capacity of water systems. The long range goals are to promote compliance with drinking water regulations for the long term and the public health protection objectives of the Safe Drinking Water Act.

R309-352-3. Definitions.

(1) Definitions for terms used in this rule are given in R309-200, except as modified below.

(2) "Capacity Development" means technical, managerial, and financial capabilities of the water system to plan for, achieve, and maintain compliance with applicable drinking water standards.

(3) "Drinking Water Region Planning" means a county wide water plan, administered locally by a coordinator, who facilitates the input of representatives of each public water system in the county with a selected consultant, to determine how each public water system will either collectively or individually comply with source protection, operator certification, monitoring including consumer confidence reports, capacity development including technical, financial and managerial aspects, environmental issues, available funding and related studies.

(4) "Small Water System" means a water system with less than 3,300 people being served.

(5) "Public Water System" means a system providing water for human consumption and other domestic uses through pipes or other constructed conveyances, which has at least 15 service connections or serves an average of at least 25 individuals daily at least 60 days out of the year.

(6) "Non-Community Water System" (NCWS) means a public water system that is not a community water system. There are two types of NCWS's: transient and non-transient.

(7) Non-Transient Non-Community Water System (NTNCWS) means a public water system that regularly serves at least 25 of the same nonresident persons per day for more than six months per year. Examples of such systems are those serving the same individuals (industrial workers, school children, church members) by means of

a separate system.

(8) "New Water System" means a system that will become a community water system or non-transient, non-community water system on or after October 1, 1999.

(9) "Required reserve" means funds set aside to meet requirements set forth in a loan covenant/bond indenture.

R309-352-4. General.

(1) Capacity development criteria are to be used as a guideline for all water systems. These criteria constitute a standard applied when reviewing new systems applications, reviewing applications for financial assistance and assessing capacity of water systems rated unapproved or in significant non-compliance by the State or the EPA.

(2) Water systems shall meet the following criteria:

(a) Technical Capacity Criteria:

(i) Finished water shall meet all drinking water standards as required by Utah State Rules;

(ii) Personnel shall operate the system in accordance with the operations and maintenance manual;

(iii) A valid water right shall be obtained;

(iv) Water system shall meet source, storage, and distribution requirements as per Utah State Rules;

(v) Water system shall not be rated unapproved or in significant noncompliance by the State or the EPA.

(b) Managerial Capacity Criteria:

(i) The system owner(s) shall be clearly identified to the Executive Secretary;

(ii) The system shall meet all of the operator certification requirements as per R309-301 and backflow technician certification requirements as per R309-302.

(iii) A system or method shall be in-place to effectively maintain all requisite records, distribution system histories/maps, and compliance information; and

(iv) An operating plan shall include names and certification level of the system operator(s), facility operation and maintenance manuals, routine maintenance procedures, water quality violations response procedures, water quality monitoring plan, training plan, and emergency response plan;

(v) The Executive Secretary of the Drinking Water Board shall be informed of management changes.

(c) Financial Capacity Criteria:

(i) Revenues shall be greater than expenses;

(ii) A financial statement compilation by a Certified Public Accountant, or an audit if otherwise required of the water system, shall be completed every three years;

(iii) The water system shall devise and implement a managerial budget and accounting process in accordance with generally accepted principals;

(iv) The operating ratio (operating revenue divided by operating expenses excluding depreciation and required reserves) shall be greater than 1.0;

(v) The coverage ratio (total revenues minus operating expenses excluding depreciation and required reserves divided by

annual debt service) shall be greater than 1.0;

(vi) Customers shall be metered; and

(vii) An emergency/replacement reserve shall be created and funded.

R309-352-5. Requirements for New Community and New Non-transient, Non-community Water Systems.

(1) Feasibility Review, (See R309-101-3).

(2) Each proposed, new water system must demonstrate that it has adequate technical, managerial, and financial capacity before it may provide water for human consumption. Proposed water systems shall submit the following for Capacity Assessment Review:

(3) Project Notification form (see R309-201-6),

(4) A business plan, which includes a facilities plan, management plan, and financial plan.

(a) Facilities plan. The facilities plan shall describe the scope of the water services to be provided and shall include the following:

(i) A description of the nature and extent of the area to be served, and provisions for extending the water supply system to include additional area. The description shall include population and land use projections and forecasts of water usage;

(ii) An assessment of current and expected drinking water compliance based on monitoring data from the proposed water source;

(iii) A description of the alternatives considered, including interconnections with other existing water systems, and the reasons for selecting the method of providing water service. This description shall include the technical, managerial, financial and operational reasons for the selected method, and

(iv) An engineering description of the facilities to be constructed, including the construction phases and future phases and future plans for expansion. This description shall include an estimate of the full cost of any required construction, operation, and maintenance;

(b) Management plan. The management plan shall describe what is needed to provide for effective management and operation of the system and shall include the following:

(i) Documentation that the applicant has the legal right and authority to take the measures necessary for the construction, operation, and maintenance of the system. The documentation shall include evidence of ownership if the applicant is the owner of the system or, if the applicant is not the owner, legally enforceable management contracts or agreements;

(ii) An operating plan that describes the tasks to be performed in managing and operating the system. The operating plan shall consist of administrative and management organization charts, plans for staffing the system with certified operators, and provisions for an operations and maintenance manual; and

(iii) Documentation of credentials of management and operations personnel, cooperative agreements or service contracts including demonstration of compliance with R309-301 water system operator certification rule; and

(c) Financial plan. The financial plan shall describe the system's expected revenues, cash flow, income and issuance and repayment of debt for meeting the costs of construction, and the

costs of operation and maintenance for at least five years from the date the applicant expects to begin system operation.

(5) After the information submitted by the applicant is complete, the Division of Drinking Water shall conduct a Capacity Assessment Review. The applicant shall be notified in writing whether or not the new system has demonstrated adequate capacity. No new community or non-transient, non-community system will be approved if it lacks adequate capacity.

(6) Those systems constructed without approval shall be subject to: points as per R309-150, administrative and/or civil penalties and fines.

R309-352-6. Minimum Capacity Required for Financial Assistance Under Provisions of R309-351.

(1) To obtain financial assistance, the applicant shall follow a two-step application process. First, the applicant shall complete a short application to establish a position on the priority list. A second application shall include Capacity Assessment Worksheets, project information, and financial information to verify priority ranking, determine eligibility, and provide a basis for grant/loan parameters.

(2) Financial assistance under the provisions of R309-351 shall not be available to a system that lacks the technical, managerial, or financial capability to maintain SDWA compliance, or is in significant noncompliance with any R309-101 through 104 or 200 through 211, unless the use of the financial assistance will ensure compliance or if the owner of the system agrees to undertake feasible and appropriate changes in operation to ensure technical, managerial, and financial capacity to comply with the SDWA over the long term.

KEY: drinking water, funding, regionalization, capacity development
1999

State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF DRINKING WATER

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MEMORANDUM

TO: Linda Kruse
Dan McArthur, Chairman

FROM: Frank L. Roberts, P.E.
Environmental Engineer

DATE: June 1, 1999

SUBJECT: Final Capacity Development Rule

Since approval of the draft rule at the last board meeting, I solicited comments in person at several Drinking Water Region Plan meetings, by Email, and mail.

The capacity development rule was introduced at Drinking Water Region Planning meetings in Tooele County and Daggett County.

The following persons and organizations were contacted by Email:

Dwight Hill	halengpr@castlenet.com
Bill Birkes	Bob Lowe
Cleve Bolingbroke	David Hansen
Eva Nieminski	Frank Roberts
Heather Seve	James Brough
Janet Keller	Jim Martin
Ken Bousfield	Kevin Brown
Kim Dyches	Linda Matulich
Larry Scanlan	Mark Bertelson
Michael Georgeson	Margaret Hand
Mark Jensen	Michael Moss
Patricia Adams	Patti Fauver
Rachael Cassady	Russ Topham
Sumner Newman	Steven Onysko
Tim Pine	Warren Worsley
Bruce Slater	David Ariotti
Roger Foisy	Scott Hacking
Ted Allen	Wayne Thomas

teamstarkey@earthlink.net
ext.usu.edu, Randy Sessions
Bill Luce
Garth Haslem
epa.gov, Paul Felz, Jack Theiss
Paul Fulgham
bhowell@seualgnet.seualg.dst.ut
DCWSD@union-tel.com

We solicited comments and Sent information to the following mail list:
Richard Noble, Franson & Noble Associates
Lewis Young
Sunrise Engineering
EWP Engineering
Kimball Wallace
Central Utah Public Health Department
Salt Lake City/County Health Department
Southwest Utah Public Health Department
Tooele County Health Department
Wasatch City/County Health Department
Doug Carriger
Mark Teuscher
Carl Empey, Zions Bank
Kelly Murdoch, First Security
Jones & Demille Engineering
Gale Larsen, Larwest Engineering
Bear River Health Department
Davis County Health Department
Southeastern Utah District Health
Summit County Health Department
Tricounty Health Department
Weber-Morgan Health Department
Frank Nishiguchi
Joe Wahlquist
Randy Crozier, Duchesne County Water Conservancy District
Lance Christy
Bulloch Brothers Engineering
Mike Noel
Randy Sessions
Allen Harrison
City Manager, City of Monticello
Ray Johnson
David Rasmussen
Dwight Hill
Utah Association of Counties
Steve Platt, Region Administrator
Leslie & Associates
Alpha Engineering
Weston Engineering
City Manager, Blanding City
Robert Hilbert
Jeff Coombs
Verland Vincent
Phil Wright

I received comments from the following:
Kevin Brown, Director of Utah Division of Drinking Water

1. Under R309-352-1, add the phrase "implementing the Capacity Development Program." *It is included in the final rule.*
2. Under R309-352-4, add certified operator under Technical Capacity Criteria. *Operator certification is covered under the Managerial Capacity Criteria.*
3. Under R309-352-4, add requirements for a sufficient water supply, distribution system, and storage facilities. *It is included in the final rule.*
4. Under R309-352-4, add that the water system shall not be on the EPA significant non-complier list or the State's non-approved list. *It is included in the final rule.*
5. Under R309-352-4, add that the Executive Secretary shall be made aware of any changes in management. *It is included in the final rule.*

Carl Empey, Zions Bank

1. R309-352-2(8) - Should it be community water system or public water system? *Community water system is the term used in the 1996 amendment to the SDWA.*
2. R309-352-4.3.d. - "Financial audit" is not always available. Require a "compilation" of financial statements (or an audit upon request). *It is included in the final rule.*
3. R309-352-4.3.g - How much goes to an emergency/replacement reserve? Cash on-hand is a

good idea. Oregon requires 1/12 of the annual operation and maintenance cost.

4. R309-352-5(2)(c) - In the description of the financial plan portion of the business plan, add "issuance and repayment of" before debt. *It is included in the final rule.*
5. R309-352-6 - Consider adding a Collateral Section. Protection against default by private systems is needed. Consider liens against water rights and revenue. *Carl would be happy to participate in a roundtable discussion of this issue when appropriate.*

Russ Donahue, Rural Water Association of Utah

1. Under R309-352-2(2), re-word so that the purpose of the rule is to aid new water systems and those seeking SRF funding. *The broader application to all water systems is appropriate as stated.*
2. Under R309-352-3, add a definition for transient water system. *It is included in the final rule.*
3. Under R309-352-4.1b, an operations and maintenance manual is required. Is this a new requirement? Will checking on manuals become part of sanitary surveys? *An operation and maintenance manual is required for an operating permit for new projects under the current rules.*
4. Under R309-352-4.1b, minimal downtime is vague. What constitutes minimal downtime and who makes the determination? *True, it is vague. Rating of the system will be on a scale, not a pass/fail. Division of Drinking Water staff "grades" the capacity of the applicant. The Drinking Water Board makes the decision whether the water system is eligible for funding.*
5. Under R309-352-4.3b, a financial audit is required every three years. Recommends the phrase that "all financial reporting shall be in compliance with the Utah State Auditors Office." *The audit requirements are loosened in the final rule to a compilation of financial statements, unless an audit is otherwise required.*
6. Under R309-352-4.3g, there is no guidance as to the size of the emergency/replacement reserve fund. Suggests a percentage of the budget or a percentage of the total capital investment. Allow a period of time to build up the fund.

Ed McCauley, Ward Engineering

1. Under R309-352-4, add requirements for a sufficient water supply, distribution system, and storage facilities. *It is included in the final rule.*

Lance Christie, Grand County Region Administrator

1. Is there another funding source for very small rural systems? *Funding for very small water systems is available through DDW State SRF and Federal SRF programs, Rural Water, and the Division of Water Resources.*
2. The financial criteria are impossible for small systems, in particular, audits, emergency/replacement reserve, depreciation. *The requirement for an audit has been loosened to a compilation of financial statements, unless otherwise required. The financial measures are valuable and important guides. Rating of the system will be on a scale, not a pass/fail. The Drinking Water Board makes the decision whether the water system is eligible for funding.*

David Clark, Cadmus

1. Do you require a feasibility report before a new system can proceed with engineering plans and specifications? *No, there is an optional feasibility review service that is pre-design. Plan review of the engineering plans and specifications is post-design.*
2. How do you define adequate capacity? Is the applicant to meet 100% of the criteria? *Rating of the system will be on a scale, not a pass/fail. Division of Drinking Water staff "grades"*

the capacity of the applicant. The Drinking Water Board makes the decision whether the water system is eligible for funding.

3. How do you ensure the new system continues to meet the capacity requirements? *There are no guarantees. The purpose of all DDW programs is to assist water systems in providing safe water to their customers.*
4. Are community and non-community systems to meet the same capacity requirements? *Yes.*
5. Who prepares and submits the business plan? *The desired end product is described rather than the process. Decisions regarding the preparation of the plan are left to the owners.*
6. There is no reference to adequacy of source and treatment process. What period is used for growth projections? Suggests that review and concurrence by local governments or land use planners is appropriate. Provide a definition of engineering facilities. Identify critical facilities and their replacement cost. Provide a replacement plan and capital improvement plan. Provide a source protection plan. Provide an emergency plan. *The final rule includes source, distribution and storage provisions. A five-year planning period is required for the budget projection. In the Drinking Water Management Region Planning, the consultant has obtained growth projection estimates from the Governors Office of Planning & Budget and modified the growth estimates using judgment, and input from the water system. Capacity Assessment Worksheets and financial spreadsheet forms will be required of applicant and provide detail information not included in the Rule. The mentioned programs are required by other drinking water rules.*
7. Expand and detail the requirements of the O&M plan. Ask that owners provide information on past involvement with public water systems. *This may be addressed in a future revision.*
8. Define specific elements of the five-year budget projection. Define budget control procedures. Require an emergency/replacement reserve and funding of the five-year capital improvement plan. *Capacity Assessment Worksheets and financial spreadsheet forms will be required of applicant and provide detail information not included in the Rule.*