

# Idaho Capacity Development Strategy



**State of Idaho**  
**Department of Environmental Quality**



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## Acronyms

CEUs	Continuing Education Units
CCR	Consumer Confidence Report
DEQ	Idaho Department of Environmental Quality
DWAC	Drinking Water Advisory Committee
DWSRF	Drinking Water State Revolving Fund
EPA	US Environmental Protection Agency
ETT	Enforcement Targeting Tool
IDOPL	Idaho Division of Occupational and Professional Licenses
IRWA	Idaho Rural Water Association
PWS	public water system
PIFF	Preliminary Inspection Findings Form
RCAC	Rural Community Assistance Corporation
RRA/ERP	Risk and Resilience Assessment/Emergency Response Plan
SDWA	Safe Drinking Water Act
SDWIS	Safe Drinking Water Information System
TFM	technical, financial, and managerial

# 1 Introduction

The Idaho Department of Environmental Quality's (DEQ's) updated Capacity Development Strategy provides a framework to ensure that public water systems (PWSs) acquire and maintain the technical, financial, and managerial (TFM) capacity to achieve the health objectives of the Safe Drinking Water Act (SDWA). Capacity development supports water system efforts to provide safe drinking water in a consistent and cost-effective manner:

- *Technical capacity* refers to the adequacy, operation, and maintenance of a drinking water system's infrastructure (e.g., water source, water treatment, storage, and distribution network).
- *Financial capacity* refers to the monetary resources of a public drinking water system including revenue sufficiency and credit worthiness to support the cost of operating, maintaining, and improving the system.
- *Managerial capacity* is the management structure of the water system including ownership accountability, staffing, organization, and communication.

The SDWA amendments of 1996 authorize a Drinking Water State Revolving Fund (DWSRF) loan program to help PWSs finance the infrastructure improvements needed to achieve or maintain compliance with SDWA requirements and to achieve the public health protection objectives of the SDWA. SDWA § 1420(c) directs the US Environmental Protection Agency (EPA) to withhold a portion of a state's allotment under § 1452(G)(i) if the state fails to develop and implement a capacity development strategy to assist PWSs in acquiring and maintaining capacity.

## Capacity Development Strategy History

In 1998, the Capacity Development Citizens Advisory Committee to DEQ considered the challenge of improving the TFM capabilities of PWSs. The committee represented a broad spectrum of groups with an interest in drinking water issues. The *Report of Findings* submitted by the advisory committee provided a comprehensive discussion of the five elements required when preparing its strategy. All five elements are incorporated in DEQ's strategy and are the foundation used to assist water systems in building capabilities to achieve compliance with the SDWA requirements. The strategy was finalized in 2000. Since implementation of the original strategy, changes to federal regulatory requirements through the America's Water Infrastructure Act and an evolving capacity development program initiated an update of the strategy.

## 2 SDWA Requirements

The 1996 SDWA amendments require states to implement drinking water primacy programs that ensure new community and nontransient water systems acquire and maintain adequate TFM capacity to provide safe drinking water and to develop a strategy that addresses the capacity of all existing water systems.

To comply with the SDWA, Idaho developed and implemented a strategy to assist PWSs in acquiring and maintaining capacity. SDWA § 1420(c)(2) required states to consider, solicit public comment on, and include as appropriate the following:

- Methods or criteria the state will use to identify and prioritize the PWSs most in need of improving TFM capacity.
- Description of the institutional, regulatory, financial, tax, or legal factors at the federal, state, or local level that encourage or impair capacity development.
- Description of how the state will use the authorities and resources of SDWA § 1420(c)(2) or other means to assist PWSs in complying with national primary drinking water regulations, encourage the development of partnerships between PWSs to enhance the TFM capacity of the systems, and assist PWSs in training and certifying operators.
- Description of how the state will establish a baseline and measure improvements in capacity with respect to national primary drinking water regulations and state drinking water law.
- Identification of persons interested in and involved with developing and implementing the capacity development strategy (including all appropriate agencies of federal, state, and local governments, private and nonprofit PWSs, and PWS customers).

## 2.1 Prioritizing Systems for Assistance—SDWA § 1420(c)(2)(a)

As a key component of the state’s core drinking water program, DEQ’s capacity development efforts target water systems experiencing compliance problems. Prioritization is considered based on potential public health impacts. Water systems that have compliance issues are more likely to lack TFM capacity and need assistance.

Assistance is available to all PWSs in need and willing to work with DEQ or its partners in achieving compliance. Capacity development efforts are directed towards providing the necessary tools to assist PWSs in maintaining compliance and protecting public health:

- **Compliance Data**—The observation of compliance trends on a statewide basis are indicators of water systems needing TFM assistance. Data entered in the Safe Drinking Water System (SDWIS) is queried daily through an automated system. If an exceedance of a maximum contaminant level or trigger level is detected, an automated “Exceedance Notification” email is sent to DEQ staff to ensure appropriate follow-up actions are taken. The maximum contaminant level is the highest level of a contaminant that is allowed in drinking water. The trigger level is a value when achieved or exceeded, requires a specific action be taken by the PWS.
- **Enforcement Targeting Tool (ETT)**—This EPA tool helps states identify PWSs with violations that rise to a level of significant noncompliance by focusing on systems with health-based violations and those that show a history of violations across multiple rules. Health-based violations are reviewed by DEQ staff monthly to proactively address these violations and assist PWSs in their goal to serve water that meets all health-based standards. Proactive work on health-based violations may also prevent water systems from being placed on the ETT list. Through proactive review of health-based violations,

resources can be targeted to address those PWSs determined to have the most significant problems.

- **Sanitary Surveys**—An on-site review and evaluation of a PWS’s water sources, treatment, storage, distribution system, facilities, operation and maintenance, and overall management and financial capacity to provide safe water. Comprehensive sanitary surveys continue to be a fundamental public health protection tool for assessing, evaluating, and documenting the TFM capacity of PWSs throughout the state. The surveys assist owners and operators in both short and long-term planning activities associated with their systems.
- **System Operations**—PWSs need a certified operator that understands the system’s technical and operational features, knows the drinking water standards, and implements the system’s operation and maintenance plan.
  - Systems lacking a qualified certified operator often need capacity development assistance.
  - On a quarterly basis, compliance with operator licensing requirements is evaluated, and water systems are notified of any operator licensing issues.
- **Tracking facility plans, water system improvements, and DWSRF loan applications**—These factors indicate the water systems needing capacity development assistance.

## 2.2 Factors that Encourage or Impair Capacity—SDWA § 1420(c)(2)(b)

### 2.2.1 Factors that Encourage Capacity

#### *Regulatory*

- SDWA and “Idaho Rules for Public Drinking Water Systems” (IDAPA 58.01.08)—Water systems that meet these regulatory requirements demonstrate capacity.
- Sanitary Survey Inspections—These inspections assess the TFM capacity of a water system.
- Operator Certification—Certified operators are a critical part of ensuring that PWSs are managed in a manner that provides an adequate and safe supply of water. Water systems operated by properly certified operators demonstrate a higher level of capacity compared to systems without properly certified operators.
- Source Water Assessments—Used as an indicator of capacity. Systems that use the source water assessment as a basis for managing sources of contamination are demonstrating managerial and technical capacity. Source water assessments are reviewed during monitoring waiver evaluations.

#### *Institutional*

- Third-party technical assistance is available to water systems for a variety of capacity-related issues. Third-party assistance providers include the Idaho Rural Water Association (IRWA) and Rural Community Assistance Corporation (RCAC). These

providers help PWSs implement changes to address significant deficiencies and assist operators with managing their systems.

- Source Water Protection Plans—Systems that adopt source water protection strategies will protect their capital investment in system infrastructure and minimize source water quality problems, which reduces monitoring and treatment costs.
- Public Water System Switchboard and guidance documents—The switchboard provides resources to assist water systems with maintaining capacity.
- Training—Properly trained water system staff are critical for delivering safe drinking water and protecting public health. DEQ maintains an online training calendar for PWS operators to easily access and identify upcoming operator training resources.

### ***Financial***

- The DWSRF is an important resource for TFM capacity. Financial assistance, including below-market rate loans, planning grants, longer loan terms, and in limited circumstances principal forgiveness, aid PWSs with construction of cost-effective drinking water facilities and development of multiyear planning assessments. The DWSRF, DWSRF set-asides, and continued funding for state public drinking water programs benefit the capacity of PWSs.
- SMART Management Financial Tool—Designed to assist water systems with assessing overall financial health, this tool guides a water system through a series of questions about operating revenues, expenses, assets, liabilities, debts, and reserves and user fees. Based on these entries, a set of dials indicates poor, fair, or excellent financial health.

## **2.2.2 Factors that Impair Capacity**

### ***Regulatory***

- A growing body of federal regulations presents PWSs with compliance obstacles and challenges that may impair capacity. The location of a water system can compromise its ability to develop the required capacity. Water systems located in sparsely populated areas are less likely to rely on a regional water provider and will have more technical and financial challenges.
- There is currently no regulatory requirement for a PWS to develop an Asset Management Plan. PWSs are “encouraged” to have an Asset Management Plan. Proper asset planning is critical to a PWS’s capacity, and lack of regulatory requirements surrounding asset planning may leave a PWS with a financial gap when asset replacement or repair becomes necessary.
- There is currently no regulatory authority to require system consolidation. Many water systems are located in rural areas making consolidation difficult.

### ***Institutional***

- PWSs may lack adequate staffing and properly trained operators due to retirements, turnover, and a shortage of qualified work force, volunteer boards, and funding.
- PWS board members and those responsible for PWSs may lack sufficient training.

- Source water protection is a voluntary effort and not all PWSs choose to participate.

### ***Financial Impairments***

- Finances are the most common impairment stated. A lack of a rate review and an appropriate rate structure can impair capacity. Small water systems may lack financial viability to fund the cost of upgrades, repairs, and infrastructure due to deficiencies in financial management.
- The cost of physical and managerial improvements can be difficult for a PWS to overcome. This difficulty may be compounded by a lack of knowledge at the community level regarding capacity development and the importance of asset management planning, making it difficult for PWS managers to raise rates or set appropriate budgets to manage improvement needs.
- Funding requirements through the DWSRF are often complex and may be too difficult for small PWSs to navigate.

### ***Legal***

- Water system oversight responsibility is not clearly defined between the board, owner, or operator.
- Lack of understanding of SDWA regulations.

## **2.3 Use of State Authority and Resources—SDWA § 1420(c)(2)(c)**

The state uses resources and authorities to assist PWSs regarding compliance with national primary drinking water regulations, encourage the development of partnerships between PWSs, enhance the TFM capacity of systems, and assist in the training and certification of operators.

### **2.3.1 Public Water System Switchboard**

Web-based resources and training materials are available to assist PWSs in maintaining compliance and building capacity. The Public Water System Switchboard provides access to state and federal regulations and policies, and instructional aids can be downloaded. Using information from DEQ's SDWIS database, the switchboard provides PWS owners and operators with links to rules, checklists to assist in preparing plans and specifications, public notification templates, sanitary survey forms, drinking water system classification requirements, operator training and licensing, sample schedules, and sample site plans.

### **2.3.2 Training Calendar**

The Public Water System Switchboard links to a comprehensive training calendar that is populated by trainers with class information as soon as it is available. This calendar provides timely information about training for PWS owners and operators.

### **2.3.3 Autodialer**

DEQ provides automated telephone and email reminders to PWS owners and operators to inform them of upcoming sampling deadlines. This low-cost, high-impact activity has been well received by the operator community, resulting in a significant reduction in monitoring violations. Calls have been expanded to include reminders for the Revised Total Coliform Rule seasonal start-up procedures and lead consumer notifications at homeowner's taps. The autodialer notifies water systems impacted by regional power failures about the need to disinfect and flush the system.

### **2.3.4 Online Operator Search Tool**

The Idaho Division of Occupational and Professional Licenses (IDOPL) oversees operator licensing and makes licensing information available to the public. DEQ developed and maintains a tool to help licensed operators and PWS owners connect with each other. Online tools are available to become an operator for hire and for a PWS in need of an operator to search for a contract operator. Operators can access the online database and list themselves as available for hire. The tool cross-checks IDOPL records and provides operators' names only if they are properly licensed. If a listed operator's license lapses, the database tool automatically drops the operator from the list.

### **2.3.5 Third-Party Service Providers**

Water systems can request free technical assistance from third-party providers using a Preliminary Inspection Findings Form (PIFF) available during the sanitary survey. DEQ provides the PIFF to both IRWA and RCAC after the sanitary survey site visit is complete. The third-party providers then reach out to the PWS to offer their assistance.

### **2.3.6 Outreach and Assistance**

DEQ regional staff provide drinking water workshops for water system owners and operators on an as-needed basis. DEQ staff participate in trainings sponsored by technical assistance providers regarding rule requirements, the Public Water System Switchboard, sanitary survey preparation, and other relevant issues.

## **2.4 How the State Will Establish a Baseline and Measure Improvement—SDWA § 1420(c)(2)(d)**

The capacity development strategy is reviewed and assessed on a regular basis to identify the effectiveness of implementation tools, community needs, and changes in policies and regulations at both the state and federal levels. Improvements are measured through compliance trends, sanitary surveys, ETT and tracking facility plans, and DWSRF loans. The state is accountable for demonstrating that capacity development helps PSWs provide safe water to customers. DEQ's Drinking Water Bureau identifies information to establish a baseline and measure improvements through a system-specific capacity assessment. Information in the

assessment is reviewed on a regular basis to measure progress. Capacity is assessed through the following:

- Sanitary Surveys—Comprehensive sanitary surveys are a fundamental tool for assessing, evaluating, and documenting the TFM capacity of PWSs throughout the state. The surveys assist owners and operators in both short- and long-term planning activities associated with their systems. Systems with capacity deficiencies benefit from third-party technical assistance in addressing the deficiencies.
- Source Water Protection Plans—Source water protection plans prevent contamination of the source water that supplies a PWS. Source water protection is a voluntary effort to minimize problems that can occur from contaminants in the water supply. The Source Water Protection Planning Tool helps PWSs develop source water protection and emergency response plans to assist water systems with TFM capacity requirements.
- Operator Certification—Trained and properly certified operators ensure that water systems are managed in a manner that protects public health and the environment.
- Monitoring Schedules and Results—Monitoring schedules assist PWS owners and operators in maintaining compliance with drinking water requirements. Monitoring results often reflect trends that indicate capacity issues and the need for oversight and assistance.
- Sample Site Plans—Specify where in the water system samples will be collected to ensure they are representative of the water quality in the water system. Sample site plans help determine if a water system is operating properly and the water meets drinking water standards.
- Emergency Response Plans—Emergency response planning is an essential part of managing a water system. This process establishes procedures to follow during an unplanned emergency.
- Asset Management Plans—Help water systems operate more efficiently and gain the maximum value from physical assets. Asset management plans can facilitate more efficient system operations and improve financial management to make the best use of systems limited resources.
- Enforcement Tracking Tool—Unplanned health-based violations place water systems on the ETT list. Technical assistance is provided to water systems including site visits, third-party service provider referrals and reminder calls and emails. The ETT provides a baseline to measure improvement.
- Level 2 Site Assessments—Water systems must conduct assessments according to 40 CFR 141.859. These assessments are conducted following an *Escherichia coli* maximum contaminant level violation. These assessments are used to identify sanitary defects or issues that lead to the violation and recommend corrective actions to resolve the issue.
- DWSRF Loans and Grants—Drinking water planning grants assist water systems with development of planning and environmental documents that identify the most cost-effective, environmentally sound method of upgrading public drinking water systems to achieve and maintain compliance with federal and state standards. Drinking water loans provide PWSs with a cost-effective option of funding facility upgrades necessary to

maintain capacity and compliance with SDWA regulations. Loan and planning grant letters of interest are used to indicate water system capacity needs.

- Facility Plans—Water systems that submit facility plans have evaluated the need for infrastructure improvements to meet the demands of the system. Data tracked through these submittals reflect capacity needs and help measure improvements.

## **2.5 Identification of Interested Persons—SDWA § 1420(c)(2)(e)**

DEQ continues to make information about capacity development efforts available through internet postings, press releases, and public workshops. DEQ works closely with consulting engineers, third-party providers, and financial entities in a collaborative effort to support one another.

The Drinking Water Advisory Committee (DWAC) provides guidance on issues related to safe drinking water policy and programs. The DWAC includes representatives from large and small water systems, the drinking water industry, and elected officials. The committee assists the state in retaining primacy of the drinking water program and provides input regarding technical and financial assistance needs to public drinking water systems.

DEQ involved the DWAC in amending Idaho’s capacity development strategy. The DWAC provides guidance to safe drinking water program policy matters and programs. The DWAC includes representatives from large and small water systems, the drinking water industry, and elected officials. One of their goals is to provide input to DEQ regarding technical assistance needs and programs for public drinking water systems. This stakeholder engagement provided public involvement in developing the capacity development provisions.

## **2.6 How the State Will, as Appropriate, Encourage the Development by PWSs of Asset Management Plans—SDWA § 1420(c)(2)(f)**

DEQ encourages the development of asset management plans to ensure the long-term success of PWSs and to improve service and reliability to the public they serve. By investing in asset management, water systems make operation and management decisions more efficiently reducing costs and improving resiliency. Asset management ensures that PWSs are getting the most value from their assets; planned maintenance can be conducted; and capital assets can be repaired, replaced, or upgraded with available funds.

Technical assistance and training with appropriate PWS staff to implement asset management plans improves the TFM capacity of water systems. DEQ collaborates with the Environmental Finance Center, RCAC, and IRWA to provide asset management, financial training, and technical assistance to PWSs. DEQ continues to build web resources on the Public Water System Switchboard that will assist with maintaining capacity.

The asset management five-core-questions framework provides a basis for the resources that encourage the development of asset management plans and increased compliance with health-based drinking water standards. Asset management planning is encouraged through technical

assistance provided to water systems as part of a sanitary survey, engineering reviews, the Public Water System Switchboard, and the loan and grant application process.

### **2.6.1 Evaluate the Current State of the Utility's Assets**

Idaho evaluates water system asset management based on information collected from:

- Sanitary Surveys—A comprehensive review of a water system's assets. In addition to evaluating the physical components of a water system, questions on the survey address capacity including asset management plans, emergency response plans, and operation and maintenance manuals. A report makes recommendations for improved performance of the system's design, operation, maintenance, or administration.
- Enforcement Targeting Tool—Tracks PWSs that EPA deems significantly out of compliance with the SDWA regulations. Water systems on the ETT list work with regional staff to identify the appropriate steps to return to compliance.
- Smart Management Financial Tool—This tool is available on the Public Water System Switchboard. Water systems can use the tool to assess their financial health; evaluate water system assets, revenues, and liabilities; and satisfy the financial capacity checklist question in the sanitary survey.
- Loans and Grants—During the application process, water systems that focus efforts on extending the life of capital assets and environmentally innovative approaches to infrastructure repair, replacement, and improvement, can be awarded points in a grant or loan rating application. Points are awarded if the water system has already implemented a formal asset management plan or will develop one as part of the proposed planning effort.

DEQ's Drinking Water Bureau is developing a new electronic document management system (EDMS) that will track and report which PWSs are missing one or more of the following documents:

- Consumer Confidence Report (Community water systems)
- Cross Connection Control Program (Community water systems)
- Asset Management Plan (Community & Non-transient non-community)
- Operation and Maintenance Manual (Community & Non-transient non-community)
- Emergency Response Plan (Populations >3,300)

Once this new EDMS is in place, web resources and technical assistance will be provided to complete these documents. The Drinking Water Bureau will work with third-party service providers to assist with gathering the missing information from PWSs.

### **2.6.2 Required Level of Service**

Levels of service goals define what customers can expect from the water system—safe and reliable water. DEQ strives to assist water systems with meeting federal and state drinking water regulations and monitoring and reporting requirements with DEQ's Public Water System Switchboard. The switchboard provides information to assist water systems with monitoring schedules, public notifications, monitoring waivers, and consumer confidence reports. Regional

staff provide direct oversight of water systems, assess problems, deliver technical and compliance assistance, and help PWSs develop a specific course of action for achieving capacity.

### **2.6.3 Assets Critical to Sustained Performance**

Critical assets sustain water system performance. DEQ maintains an inventory of water system assets in the SDWIS database that are critical to the operation of the water system. The asset inventory is verified during the sanitary survey inspection. This information assists in developing PWS monitoring schedules and treatment requirements and allows technical assistance troubleshooting. DEQ encourages PWSs to identify and prioritize critical assets through an asset inventory and capital replacement plan. Third-party providers assist with identifying critical assets and developing asset management plans.

### **2.6.4 Minimum Life-Cycle Costs**

Asset management enables a water system to determine the lowest cost option for providing the highest level of service over time. Operations and maintenance, personnel, and capital budget account for a large share of a system's expenses. Questions during the sanitary survey inspection address operation and maintenance practices. Operation and maintenance protocols are also reviewed for new water systems as part of their initial review and approval process:

- IDAPA 58.01.08.501.12 requires submittal of an operation and maintenance manual for review and approval that addresses all water system facilities prior to start-up of the new or materially modified public water system unless the same system components are already covered in an existing operation and maintenance manual.

For existing systems with continual operational problems, DEQ may require that an operation and maintenance manual be submitted for review and approval. The operator must ensure the system is operated according to the approved operation and maintenance manual. This plan contains a comprehensive description of water sources, treatment processes, storage tank data, and distribution system information. The manual must provide accurate depictions of daily routine operational and maintenance procedures and should include examples of record keeping and emergency response procedures:

- IDAPA 58.01.08.500.01.d requires "A plan exists for replacement or improvement of infrastructure as necessary." Water systems are encouraged to have an asset management plan to maintain system capacity and to protect public health.

Resources to assist water systems with capital improvement planning are available on DEQ's Public Water System Switchboard, on the Environmental Finance Center's asset management switchboard, and through third-party technical assistance providers.

### **2.6.5 Best Long-Term Funding Strategy**

A long-term funding strategy and sound financial decisions are critical to asset management planning. Knowledge of the costs and revenues generated by a water system can assist with a long-term funding strategy and ensure that customers are charged appropriately. A water system must demonstrate the availability of operating funds, revenues for depreciation and

reserves, and the availability to accrue a capital replacement fund. DEQ encourages long-term funding and asset management planning through:

- Drinking Water Letters of Interest (LOI)—Water systems are encouraged to submit a LOI explaining funding needs. To assist with the application, an LOI virtual workshop is available on the DEQ trainings, conferences, and workshop web page.
- State Revolving Fund Priority Points—A water system can receive five points on a drinking water loan and/or planning grant rating if they have implemented, or will implement as part of a proposed project, a formal asset management plan. Priority points can also be awarded when a system evaluates consolidation with another water system, resulting in reduced costs.
- Funding for Asset Management—DWSRF set-asides can be used for asset management planning grants.
- DEQ requires all financed water and wastewater systems to have a risk and resilience assessment and emergency response (RRA/ERP) plan in place. Borrowers with existing systems must provide a certification that an RRA/ERP plan has been completed prior to the final disbursement of funds. Planning for emergencies is part of a long-term funding strategy.
- SMART Management Financial Tool—This tool is available on the Public Water System Switchboard. Water systems can use the tool to assess their overall financial health. Once the water system has logged in, contact information is pulled from the SDWIS database. The tool allows the water system to enter information on revenues, expenses, assets, liabilities, debt, and reserves. The tool can also be used to:
  - Assist DEQ with State Revolving Fund loan underwriting.
  - Demonstrate revenue sufficiency including billing and collections and rate structure.
  - Satisfy the financial capacity checklist questions in the sanitary survey.

Implementation of the America’s Water Infrastructure Act requirements to include asset management in the capacity development strategy will enhance Idaho’s capacity development program by focusing resources on asset management planning. The development of the EDMS system that will track and report which water systems are missing important capacity documents, will assist with identifying the appropriate technical assistance, training, and resources needed to implement asset management plans.

### **3 Capacity Development Program Elements**

#### **3.1 New or Substantially Modified Water Systems**

States must ensure that all new community water systems and nontransient noncommunity water systems demonstrate TFM capacity (SDWA § 1420(a)). The authority or “control point” to regulate public water systems is established in Idaho Code § 39-118 and in the “Idaho Rules for Public Drinking Water Systems” (IDAPA 58.01.08). Idaho Code § 39-118 requires all new or substantially modified PWSs to submit plans and specifications for review and approval prior to beginning construction for new systems or material modifications to existing systems.

Engineering documents include a facility plan, preliminary engineering report, demonstration of TFM capacity, operation and maintenance manual, and plans and specifications. IDAPA 58.01.08.500 provides facility and design standards for demonstrating TFM capacity of public drinking water systems. DEQ coordinates with local management, developers, engineers, and funding representatives to ensure capacity development requirements are met.

Capacity development for new community water systems also addresses water systems that are developed to provide cost-effective solutions to existing public health problems such as unsafe individual wells or surface water sources within a specific geographic area. These water systems can receive DWSRF to assist with construction and are subject to the facility and design standards in IDAPA 58.01.08.

### **3.2 Existing Water Systems**

States must develop and maintain implementation of a strategy to assist PWSs in acquiring and maintaining TFM capacity (SDWA § 1420(c)(1)).

Existing community water systems that use DWSRF planning grants to develop or amend a facility plan must address capacity development topics as identified in the *Applicant's Guide to Idaho Public Drinking Water Facilities Planning Grant Program* provided by DEQ's Grants and Loans Bureau. Grant project-eligible costs include TFM capability analyses. A planning period of 20 years for all facilities is required.

DEQ recommends water systems review and update facility plans every 5 years to ensure they are current. Any new or modified facility plan should have an asset management and capacity overview. Within that review, DEQ encourages systems to review and address all aspects of TFM capacity.

IDAPA 58.01.08.502.04.c requires projects funded by the State Revolving Fund or a state grant to meet the requirements of subsection 502.04.a, minimum requirements for a facility plan for new public water systems and subsection 502.04.b, minimum requirements for a facility plan for existing water systems.

### **3.3 Engineering Reviews**

Engineering reviews for new systems are intended to identify potential TFM issues, prior to a significant investment of time and resources in the proposed water system. Preapplication engineering meetings with the owner, engineer, and any associated funding representatives are held at the early design stage to discuss the benefits and challenges to the proposed project.

After receiving final engineered plans for community and nontransient noncommunity systems, DEQ reviews the plans for the technical ability to meet requirements and to see if the project was identified in an existing facility plan. The existing facility plan should demonstrate the system's ability to finance and manage the project and identify significant obstacles to sustainability based on the proposed system construction costs, operation costs, and the

income and fees that are proposed to support the system. Engineering approval includes these capacity development criteria. The overall focus of the engineering review phase of a water system is to obtain enough information to reasonably determine the sustainability of a new water system or a project to modify an existing water system.

### **3.4 Resources Available for Existing Water Systems to Develop and Maintain Capacity**

A number of resources are available to assist existing water systems with developing or maintaining their capacity.

#### **3.4.1 Grants and Loans**

Information and solicitation for LOIs are sent annually to PWSs and consulting engineers for planning grants or DWSRF loans through DEQ. Systems who submit LOIs are placed on a priority list for the upcoming fiscal year.

##### ***Planning Grants***

These grants provide assistance to eligible PWSs for facility planning projects designed to ensure safe and adequate supplies of drinking water. Grants awarded under this program are used to develop engineering reports identifying the most cost-effective, environmentally sound method of upgrading a public drinking water system to achieve and maintain compliance with state and federal standards. Grants cover up to 50% of eligible costs, with a matching share funded by local sources. These grants continue to be funded with the capacity development set-aside monies to assist PWS owners and operators in preparing the reports and documents necessary to apply for low interest loans from the State Revolving Fund program.

##### ***Drinking Water State Revolving Fund***

The DWSRF provides below-market-rate loans to community and nonprofit noncommunity water systems to help repair or build new drinking water facilities. This funding includes below-market loans, longer loan terms, and may include principal forgiveness for disadvantaged communities under limited circumstances.

The SDWA allows states to establish a DWSRF program to assist public drinking water systems with financing infrastructure upgrades needed to protect public health and achieve and maintain compliance with the SDWA requirements. The DWSRF authorizes grants to states to capitalize revolving loan funds. A revolving loan is a self-replenishing pool of money, using annual federal capitalization grants, investment earnings, and interest and principal payments on old loans to issue new loans. Priority is given to fund projects that address the most serious risk to human health, ensure compliance with the requirements of the SDWA, and assist systems most in need according to state affordability criteria.

### **Source Water Protection Planning Grants**

DEQ's source water protection grants provide funding for projects to protect sources of public drinking water. Eligible activities include those that reduce the risk of contamination of a drinking water source. Projects must contribute to improved protection of one or more public water supply sources.

Grants are available to implement projects to protect sources of public drinking water including:

- Contaminant source identification (research)
- Contaminant pathway removal (closure of abandoned or unused wells)
- Contaminant removal (hazardous waste collection, pollution prevention, and waste reduction)
- Contaminant management (implementation of best management practices and implementation of a Source Water Protection Plan)
- Education and information sharing (brochures, workshops, and media campaigns)

#### **3.4.2 SMART Management Financial Tool**

This financial health tool found on the Public Water System Switchboard assesses a system's revenues, expenses, assets, liabilities, debt, and reserves. The information is used during engineering review of new or significantly modified systems, sanitary surveys, and grant and loan approvals.

#### **3.4.3 Sanitary Surveys**

Sanitary surveys are a fundamental part of assessing, evaluating, and documenting the TFM capacity of PWSs. Sanitary surveys inspect water system infrastructure, operations and maintenance procedures, and policies. The surveys assist owners and operators in both short- and long-term planning activities associated with their systems. DEQ continues to fine tune the sanitary survey inspections by providing training for inspectors, modifying checklists to correlate with the rules, and conducting audits to ensure significant deficiencies are properly identified and documented. These measures are designed to assist water systems with maintaining compliance with the SDWA and protecting public health.

Continuing Education Units (CEUs) are offered to operators of systems classified as "Very Small," "Distribution 1," and "Distribution 2," Water system owners and operators who complete limited pre-inspection homework activities, actively participate in the sanitary survey, and follow up corrective actions of deficiencies are provided CEUs. The opportunity to receive CEUs helps operators maintain their licensure requirements.

The PIFF allows sanitary survey inspectors to provide system operators with a list of identified deficiencies so they can begin to prioritize and correct problem areas immediately. The PIFF is used to coordinate assistance between DEQ and third-party providers. Water systems can request free technical assistance in the following areas:

- Financial—rate reviews, budgeting, finding loans and grants, and capital improvement planning
- Training—for operators, board/council/asset management and developing policies and procedures
- Technical Assistance—leak detection, line location, distribution, and treatment
- System Operation—best practices guidance, emergency response, and vulnerability assessment
- Source Water Protection—planning and implementation

#### **3.4.4 Operator Certification**

DEQ ensures all community and non-transient non-community public drinking water systems as well as transient public water systems using surface water or ground water under the direct influence of surface water have properly licensed operators to meet the classification of the system. The classification of the system is maintained by DEQ. Operator licensure is administered by IDOPL.

#### **3.4.5 Public Water System Switchboard**

Web-based resources and training materials are available to assist PWSs in maintaining compliance and building capacity. The Public Water System Switchboard provides access to state and federal regulation and policies, and instructional aides that can be downloaded. Using information from DEQ's SDWIS database, the switchboard provides PWS owners and operators with links to rules, checklists to assist in preparing plans and specifications, public notification templates, sanitary survey forms, drinking water system classification requirements, and operator training and licensing.

##### ***Operator Training***

- Comprehensive training calendar.
- Cross-Connection Control information.
- Sanitary Survey Form used by DEQ drinking water inspectors is available to system owners and operators for use as a checklist to prepare for the next sanitary survey.
- How to Sample videos—The American Water Works Association water sampling procedure videos demonstrate sampling techniques for various contaminants.
- Operation and maintenance training videos.

##### ***Operator Licensing***

- System owners can search a list for contract operators.
  - Contract operators can list themselves as available for hire.
  - The database tool cross-checks the IDOPL database weekly, then records and posts operator names only if they are properly licensed.
- Operator licensing related to system classification.
  - A system classification worksheet aligns with the Association of Boards of Certification evaluation of treatment processes and potential health risks.

- A system’s population, identified in the SDWIS database, is used to determine its distribution classification.
- The treatment process pairings identified in the SDWIS database are used to determine the system’s treatment classification and identify water system licensure requirements.

### **Compliance Assistance**

- Consumer Confidence Reports (CCR) reporting tool—Community water systems are required to deliver a CCR (i.e., annual drinking water report) to their customers. The reporting tool links owners and operators to water system sample results and a violation history report to assist in preparing the CCR. A link to the CCR iwriter allows the sample results to be imported in the report and provides required report language to meet the CCR requirements.
- Public Notification Templates—Water systems can access EPA’s public notification handbooks, public notification certification forms for submittal to DEQ, and templates for public notification including:
  - Tier 1 and 2 templates for the Revised Total Coliform Rule
  - Tier 1, 2, and 3 templates for non-Revised Total Coliform Rule notification needs
  - Cyanotoxins
  - Loss of pressure
  - Lead and copper
  - Manganese
  - Failure to have a properly licensed operator
  - Sampling Site Plan Templates—Instructions and templates are available to meet the sample site plan requirements for Disinfection By-Products, Lead and Copper, and Revised Total Coliform Rule requirements.
- Lead in Drinking Water—Information, templates, sampling protocol sample, site selection, and consumer notifications for the lead and copper rule.
- Monitoring Schedules—Water systems can review the current and future year monitoring requirements. A report identifies the monitoring requirements that have been satisfied once the sample has been entered into the SDWIS database.
- Lab Forms—This application produces a laboratory sample submittal form using data from the state drinking water database to identify samples that are due during the current year.
- Sample Results—Monitoring results and sample history are available online through DEQ’s SDWIS database.
- Record Retention Schedule—Information is provided on the required retention schedule for all monitoring and reporting records.
- Revised Total Coliform Rule—Access to assessment forms, seasonal start-up procedures, and sample siting plans.
- Emergency Preparedness—Access to the Idaho Water and Wastewater Agency Response Network and emergency response templates from EPA and the Rural Community Assistance Partnership are co-located with resources on risk and resiliency

resources and natural disaster-related resources to provide public water systems with a single location to pool resources for training and development of emergency response plans and risk and resiliency assessments.

### **3.4.6 Technical Assistance**

The Drinking Water Bureau continues to provide technical assistance through drinking water staff in six regional offices and six health districts (under contract with DEQ) to ensure water systems develop and maintain capacity. One-on-one contacts are an effective method of assisting system operators. These contacts include email and phone communications, sanitary surveys, capacity-related visits, and Revised Total Coliform Rule assessments. DEQ staff conduct drinking water workshops on an as-needed basis for system operators and owners and assist with training events conducted by third-party service providers.

## **4 How the State Can Help Water Systems Increase Capacity**

### **4.1 Source Water Protection**

Source protection is the first step in the multiple barrier approach to protecting drinking water. This step includes identifying potential sources of contamination in watersheds and recharge areas, and the conditions under which the risks increase. Source water protection strategies are a more cost-effective approach to protect source water from contamination than to remove contamination during treatment. Source water protection grants can be used for activities that reduce the risk of contamination of a drinking water source. The grant money comes from the State Revolving Fund Wellhead Protection Program. Systems with a certified Source Water Protection and Emergency Response Plan are granted additional points when applying for DEQ-administered drinking water grants and loans.

### **4.2 Online Source Water Protection Tool**

This tool produces a customized Source Water Protection Plan and Emergency Response Plan for water system users. The application pulls potential contaminant data, water system sample history, and inventory data from existing databases and allows users to input system-specific information and narrative to develop an automated Source Water Protection Plan and Emergency Response Plan. The Emergency Response Plan framework meets the requirements for the drinking water and source water protection programs. The Emergency Response Plan connects the water system with people and resources that can be used during an emergency.

### **4.3 Operator Certification Program**

This program ensures an operator is qualified and properly licensed to a water system's classification. IDAPA 58.01.08.553 requires completing a system classification worksheet and submitting it to DEQ every 5 years, or any time a substantive change or upgrade is made to the

treatment or distribution system. DEQ developed an automated System Classification Worksheet application based on the most current water system SDWIS data. IDOPL sets the minimum requirements to obtain a water system operator license and oversees operator licensing as outlined in “Rules of the Board of Drinking Water and Wastewater Professionals” (IDAPA 24.05.01). A properly certified operator understands a system’s technical and operational components and has the skill needed to operate and maintain the system.

To assist water system operators in maintaining their licensure, DEQ provides a training calendar located on the Public Water System Switchboard where operators can find continuing education courses. DEQ also provides CEUs to operators of PWSs classified as Very Small, Distribution 1, or Distribution 2 for completion of limited homework activities, active participation in a sanitary survey, and follow-up corrective action planning associated with a sanitary survey. Operators can receive 0.6 CEUs for completing these tasks.

#### **4.4 Compliance Assistance**

Resources are directed towards rule implementation and monitoring and reporting requirements. Staff provides guidance and fact sheets to assist PWSs in understanding and complying with the requirements impacting their systems. Regional staff assists water systems with public notification and monitoring requirements. Assistance with public notification procedures and forms, monitoring schedules, operator licensing requirements, and CCR tools are available through the Public Water System Switchboard.

### **5 Benefit for Water Systems that Achieve a High Level of Capacity**

PWSs benefit when state DWSRF programs foster cooperation with other funding sources. A coordinated effort among federal financial assistance programs can aid states in addressing the affordability of a project and achieving improved financial outcomes for water systems.

- Regulatory requirements are met and ensure the protection of public health.
- Cost savings associated with prolonging the useful life of infrastructure and running the system competently. The water system is more efficient, effective and provides good service.
- Water system can effectively respond to unexpected events ensuring the safety and security of the system.
- Certified operator who understands the operation and maintenance of the water system to protect public health.
- Reliable and adequate supply of water.
- Ownership accountability and strategic planning to ensure longevity of the PWS.
- Revenue sufficiency including water system charges, revenues, and reserves.

## 6 Reporting

DEQ develops an annual report for EPA on capacity development activities for the state fiscal year, and under federal requirements provides the state's governor with a triannual capacity development report.

- A capacity development report is completed annually as required by SDWA § 1402(b)(2) and describes efforts completed within the state fiscal year (July 1 through June 30).
- The Triannual Governor's Report is completed every 3 years summarizing the capacity development efforts for the 3-year period as required by SDWA § 1420(C)(3).
- DEQ's Drinking Water Bureau staff meet annually with EPA to review the past year's capacity development report and discuss any needed changes.
- Idaho Capacity Development Set-Aside Work Plan is completed annually. The work plan guides work and activities that result in outcomes identified in EPA's Strategic Plan, Goal 2: Clean and Safe Water, Objective 2.1: Protect Human Health, Subobjective 2.1.1, Water Safe to Drink.

## 7 Capacity Development Strategy Improvements

The Drinking Water Bureau continues to enhance capacity development efforts for public drinking water systems. Additional efforts include the following:

- Promote the DWSRF program as a means to provide low-cost financing for infrastructure funding.
- Continue to support the Operator Certification program.
- Prioritize efforts to track capacity development data from PWSs by coordinating internally and externally with engineers, developers and loan and grant entities to identify systems in need.
- Enhance tracking of sanitary survey information and compliance history to identify systems that may be at risk for violations.
- Address capacity issues with new proposed PWSs or substantially modified water systems by coordinating with developers, owners, engineers, and funding representatives.
- Identify compliance trends and address potential causes for noncompliance to reduce the number of historical noncompliers and increase the number of PWSs that achieve and maintain TFM capacity.
- Encourage the development of asset management plans through outreach, education, and technical assistance by adding asset management resources and tools to the PWS Switchboard, participating in trainings and conferences relevant to PWS operators and administrators, and providing and facilitating third-party technical assistance to interested PWSs.
- Increase technical and compliance assistance to new and existing water systems.

## 8 Summary

Idaho's capacity development program focuses resources on the areas of highest public health benefits and promotes voluntary compliance with drinking water standards. The program emphasizes prevention of drinking water contamination by ensuring system owners and operators are equipped with the necessary TFM capabilities to succeed. The program also provides technical assistance to PWS owners and promotes water system operator training and licensing.

The capacity development program, along with other state resources, continues to help PWS owners and operators acquire or maintain the TFM abilities needed to properly design, operate, finance, and manage their systems. DEQ's goal is to continue to improve the ability of Idaho's PWS owners to provide safe and reliable drinking water.

DEQ continues to support and improve the capacity development program to best position public drinking water systems with operating a safe and reliable public drinking water supply. In this effort, the capacity development program will continue to evolve as DEQ evaluates the successes and future challenges small drinking water system owners face complying with existing, revised, and new regulations.

## Web Resources

Applicant's Guide to Idaho's Public Drinking Water Facilities Planning Grant Program

<https://www2.deq.idaho.gov/admin/LEIA/api/document/download/15027>

Drinking Water State Revolving Funds Grants and Loans

<https://www.deq.idaho.gov/water-quality/grants-and-loans/>

Emergency Preparedness

<https://www.deq.idaho.gov/water-quality/drinking-water/public-water-system-switchboard/>

Enforcement Response Tool

<https://www.epa.gov/enforcement/enforcement-response-policy-public-water-system-supervision-pwss-program-under-safe>.

Monitoring Schedules

<https://www2.deq.idaho.gov/water/monitoringschedulereport>.

Operator Certification and Licensing and Training

<https://www.deq.idaho.gov/water-quality/drinking-water/public-water-system-switchboard/drinking-water-operator-resources/>

Operator for Hire

<https://www.deq.idaho.gov/water-quality/drinking-water/public-water-system-switchboard/system-classification-and-supervision-requirements/>.

Public Water System Switchboard

<https://www.deq.idaho.gov/water-quality/drinking-water/public-water-system-switchboard/>

Sample Site Plans

<https://www2.deq.idaho.gov/admin/LEIA/index.html?view=folder&id=2728>

Sanitary Surveys

<https://www.deq.idaho.gov/water-quality/drinking-water/public-water-system-switchboard/sanitary-surveys/>.

SMART Management Financial Tool

<https://www2.deq.idaho.gov/water/SMSWS/Pages/Login.aspx>

Source Water Assessments

<https://www.deq.idaho.gov/water-quality/ground-water/source-water/>

Source Water Protection Planning Tool

<https://www2.deq.idaho.gov/water/swpp>

Training Calendar

<https://www2.deq.idaho.gov/water/TrainingEventCalendar/Events/EventCalendar>.