

# Water System Capacity Development Strategy for Existing Water Systems

July 2000

DOH PUB: 331-277 (Reformatted 11/2004)



A strategy required by the Safe Drinking Water Act to assist water systems in acquiring and maintaining Technical, Managerial, and Financial Capacity



# Water System Capacity Development Strategy for Existing Water Systems

July 2000

DOH PUB: 331-277 (Reformatted 11/2004)



A strategy required by the Safe Drinking Water Act to assist water systems in acquiring and maintaining Technical, Managerial, and Financial Capacity

For more information or additional copies of this report, contact:

Training and Outreach  
Office of Drinking Water  
Department of Health  
PO Box 47828  
Olympia, WA 98504-7828  
Phone: (360) 236-3164

Mary Selecky  
Secretary of Health

Gregg Grunenfelder  
Director, Office of Drinking Water

The Department of Health is an equal opportunity agency. For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388). For additional copies of this publication, call 800-521-0323. This and other publications are available at <http://www.doh.wa.gov/ehp/dw>.



# Contents

<b>Executive Summary .....</b>	<b>1</b>
<b>Mission, Goals and Objectives .....</b>	<b>3</b>
<b>Section 1 .....</b>	<b>5</b>
<b>State Of Washington Capacity Development Strategy for Exiting Water Systems .....</b>	<b>5</b>
1.1 Water System Capacity Components .....	6
1.2 Specifics on the Three Capacity Components .....	7
1.3 A Baseline for Measuring Capacity .....	11
1.4 Prioritization of Water Systems in Need and Capacity Development Assistance .....	12
1.5 Control Points Ensuring Capacity Development.....	14
1.6 Capacity Development Assistance Components .....	16
1.7 The Strategy Process .....	19
1.8 Performance Evaluation and Reporting.....	22
<b>Section 2.....</b>	<b>24</b>
<b>Factors that Encourage and Impair Capacity Development.....</b>	<b>24</b>
2.1 Factors that Encourage Capacity Development.....	24
2.2 Factors that Impair Capacity Development.....	25
<b>Section 3.....</b>	<b>26</b>
<b>Use of Safe Drinking Water Act Authority and Resources .....</b>	<b>26</b>
3.1 Authority and Resources to Assist PWS's in Complying with NPDWS's.....	26
3.2 Development of Partnerships Between Public Water Systems to Enhance the Technical, Managerial and Financial Capacity of Water Systems .....	27
3.3 Assisting Public Water Systems in the Training and Certification of Their Operators .....	27
<b>Section 4.....</b>	<b>28</b>
<b>Documentation of Stakeholder and Public Involvement .....</b>	<b>28</b>
4.1 Identification of Stakeholder Groups .....	28
4.2 Identification of Workshops and Capacity Training .....	29
4.3 Public, Staff and Stakeholder Comment.....	30
<b>Section 5.....</b>	<b>31</b>
<b>Development and Implementation .....</b>	<b>31</b>
5.1 Summary of Continuing Development Activities .....	31
5.2 Summary of Implementation.....	32



## Executive Summary

The Safe Drinking Water Act (SDWA) Amendments of 1996 require states to develop and implement a strategy to ensure all federally regulated water systems acquire and maintain capacity. Water system capacity is the technical, managerial, and financial capacity to achieve and maintain compliance with the applicable local, state and federal drinking water standards. These three areas of capacity are interrelated but are defined separately as:

- **Technical Capacity** is referred to the physical system, including source, treatment, storage and distribution plus the ability of personnel to adequately operate the system.
- **Managerial Capacity** refers to the ability of the systems managers to conduct necessary activities such as staffing, planning, decision-making, maintaining accountability, and interacting with customers and regulatory agencies.
- **Financial Capacity** refers to the ability of the system to generate sufficient revenue, maintain credit worthiness, and manage funds through budgeting, accounting and other methods of fiscal control.

The State of Washington, Department of Health has made it a high priority to develop and implement a water system capacity development strategy as part of its goal to ensure the public is receiving high quality drinking water. Over the years, the State of Washington has enacted various regulatory mechanisms that require water systems to have the technical, managerial and financial capability to ensure a safe and reliable supply of high quality drinking water. Since 1997, the department has been working to develop a comprehensive statewide approach toward assuring all federally regulated water systems have “Capacity” as congress defined it. The department has already developed and implemented a strategy to ensure all newly created water systems demonstrate capacity, and a method to ensure all water systems offered State Revolving Fund Loans have demonstrated capacity. This document defines the department’s long-term strategy to ensure all existing water systems acquire and maintain capacity as congress intended.

In developing a capacity strategy, The SDWA requires States to include as appropriate the following 5 elements:

- A method or criteria to prioritize systems most in need of capacity development assistance,
- Identification of factors that encourage or impair capacity development,
- Description of how the state will use the authority and resources of the SDWA in the capacity strategy,
- A baseline and a method to measure the effectiveness of the strategy,
- Documentation of procedures to allow for public involvement in the development process.

In developing the strategy, the department has determined that a system has capacity if it has **employed a certified operator, has had an assessment of physical, operational and financial capability, and is in compliance with applicable drinking water regulations**. There are three major components within the State’s drinking water regulatory framework that indicate when a system has achieved “Capacity”. Having a Green Operating Permit, a completed planning document and no significant enforcement actions are the indicators of a water system having the technical, managerial, and financial capability to operate in accordance with applicable drinking water regulations. A formula linking the 3 components has been developed to establish a baseline from which to measure the effectiveness of the strategy.

Prioritization of systems in need of capacity development assistance is based on the department's operating permit categories and compliance criteria. Operating permit colors and the department's compliance targeting process is used to group systems without capacity into 5 prioritized categories, which are shown in Table 1.4.2. The prioritization effort is then used to direct internal and external capacity development efforts.

An evaluation of different factors that encourage and impair capacity development efforts was conducted as part of the development process. 31 factors were identified that in some way encourage capacity development. On the other hand, 31 factors were also identified that impair efforts to develop water system capacity. This effort will be used to identify how to resolve impairments to capacity development, direct resources and develop programs that encourage water system capacity development.

The core of the strategy is based on the department's existing regulatory programs, providing technical assistance and training, and enhanced regulatory compliance strategies to assist water systems in complying with drinking water regulations and regulatory programs. The Drinking Water State Revolving Fund provides funding for a loan program to assist water systems in upgrading facilities and provides funding for capacity development efforts. The will allow the department to maintain a balanced effort providing oversight and assistance to all systems but focus on those systems that are most in need. Third Party groups play a critical role in providing technical assistance and training to systems that need help. Partnerships between public water systems, water utilities, and regulatory agencies will continue to be encouraged in order to enhance the ability of water systems to acquire and maintain capacity. An outreach strategy aimed at education and training of operators, owners, association board members, elected officials, lending institutions and other entities linked to public water supply is also meshed into the strategy.

A high level of interest has given the department a variety of avenues from which to solicit input on the development of a strategy. Various stakeholder groups, staff resource groups, state and local agencies, key drinking water individuals and the general public have been included in the development of the strategy.

## **Mission, Goals and Objectives**

### **Mission**

To protect the health of the people of Washington State by assuring safe and reliable drinking Water.

### **Specific goals and objectives of the capacity development strategy for existing systems**

1. Develop a statewide Water System Capacity Program that assists water systems in acquiring and maintaining the technical, managerial, and financial capacity to provide long term safe and reliable supplies of drinking water.
  - Ensure new water systems demonstrate technical, managerial and financial capacity.
  - Establish a long term strategy to assist existing systems in acquiring and maintaining technical, managerial and financial capacity.
  - Ensure all water systems offered SRF funding demonstrate technical, managerial, and financial capacity.
2. Fulfill the State of Washington's Safe Drinking Water Act Capacity requirements.
  - Ensure 100% State Revolving Fund Allocation from the Federal Government.
3. Ensure the State of Washington's drinking water programs effectively build water system capacity so as to ensure long term public health protection.
  - Utilize existing drinking water programs to assist water systems in acquiring and maintaining water system capacity.
  - Develop and prioritize new programs, as necessary, to assist water systems in acquiring and maintaining water system capacity.
  - Periodically evaluate drinking water programs to ensure efficiency in developing water system capacity.
  - Provide State Revolving Fund Loans to those systems with capital improvement projects needed to achieve and likely to maintain capacity.

4. Provide focused and efficient water system capacity development assistance.
  - Provide targeted for capacity development assistance to systems most in need.
  - Identify water systems that are and are not likely to acquire and maintain water system capacity as part of routine evaluations.
  - Develop stronger partnerships with Third Party groups and other agencies, both state and local, to assist in the overall water system capacity development strategy.
  - Prioritize systems based on need and ability to acquire and maintain capacity.
  - Direct technical assistance and funding to those water systems that are most in need and are not otherwise likely to achieve and maintain capacity.
  - Administer operator certification program and provide enhanced training opportunities for system operators.
  - Provide alternatives for water systems that are not likely to acquire capacity.
  - Establish criteria to focus set-aside funding to projects which build water system capacity or reduce the number of systems which are not likely to acquire capacity.
  - Ensure, to the extent feasible, that the use of SRF set-aside funds provide a measurable benefit to the State of Washington's capacity development strategy.
5. Provide education, outreach and awareness of the water system capacity development strategy, including concepts, programs, methods, accomplishments, and benefits to the State of Washington's drinking water community.
  - Develop a "Hands On" water system capacity outreach strategy.
  - Educate the drinking water community (i.e., consumers, utilities, consultants, local jurisdictions, lenders, insurers, etc.) on the concept of water system capacity.
  - Ensure consistent internal message is provided to the drinking water community.
  - Educate policy makers on water system capacity and the needs of water systems.
6. Develop methods to demonstrate the efficiency and effectiveness of State of Washington's Water System Capacity Program.
  - Establish a baseline and measurements to determine capacity of water systems.
  - Develop data reports to evaluate performance of water system capacity strategy.
  - Periodically report the efficiency and effectiveness of the State's water system capacity strategy to the Environmental Protection Agency and the Governor.
  - Periodically evaluate the effectiveness of the reporting methods.

## Section 1

### State Of Washington Capacity Development Strategy for Existing Water Systems

In the 1996 Amendments to the Safe Drinking Water Act (SDWA), Congress required that states develop and implement a strategy to ensure federally regulated water systems acquire and maintain “Capacity”. Capacity is defined as the technical, managerial and financial capability to operate in accordance with applicable local, state, and federal drinking water standards. These three areas of capacity are interrelated and together form water system capacity. Separately they are defined as:

- **Technical Capacity** refers to the physical system, including source, treatment, storage and distribution plus the ability of personnel to adequately operate the system.
- **Managerial Capacity** refers to the ability of the systems managers to conduct necessary activities such as staffing, planning, decision-making, maintaining accountability, and interacting with customers and regulatory agencies.
- **Financial Capacity** refers to the ability of the system to generate sufficient revenue, maintain credit worthiness, and manage funds through budgeting, accounting and other methods of fiscal control.

For at least ten years, the department has made it a high priority to develop and implement various regulatory mechanisms to ensure that water systems have the technical, managerial and financial capacity to ensure a safe and reliable supply of high quality drinking water. Since 1997, the department has been working on a statewide approach to assure federally regulated water systems have capacity, as congress defined it. The strategy is a long-term effort and commitment to assisting system in achieving and maintaining capacity as congress defined it. It will be a dynamic strategy that is changed periodically in as more is learned about assisting systems in this endeavor.

The intent of the water system capacity strategy for existing water systems is to establish a strategy that over time builds the technical, managerial, and financial capacity of federally regulated water systems so that they operate in accordance with applicable drinking water standards. The core of the strategy is based on the department’s existing regulatory programs, improved technical assistance and training, and having other state and local agencies participate in joint strategies to assist water systems in achieving and maintaining capacity. Regulations have been added over the pervious three years to ensure the strategy is focused on capacity development and is consistent with the intent of the SDWA capacity provisions.

The department has determined that a system has capacity if it has **employed a certified operator, has had an assessment of physical, operational and financial capability, and is in compliance with applicable drinking water regulations.** There are 3 major components within the drinking water regulatory framework that indicate when a system has “Capacity”. These include the system having a:

- **Green Operating Permit**
- **Completed Planning Document**
- **No Significant Enforcement Actions**

A formula linking these 3 components has been developed to establish a baseline from which to measure the effectiveness of the strategy.

Many water systems often cannot meet all of the capacity components. Those that do not have all three are considered to be in need of capacity development assistance. The strategy also establishes a method for prioritizing water systems in need of capacity development assistance so that the department can do a better job of focusing where efforts should be placed. Performance of the strategy will be evaluated based on a reporting method that evaluates measurable water system data linked to regulatory requirements and department activities. The strategy has been developed with significant input and effort from a variety of stakeholder groups representing a diversity of interests in the drinking water community. Department staff have also played an integral role in developing a strategy that can be realistically implemented and where goals can be achieved.

## 1.1 Water System Capacity Components

The department has numerous regulatory control points and programs to ensure water systems are working to achieve capacity. Since water system capacity can be defined in many different ways, the department has identified 3 major components within the regulatory framework that indicate when a system has achieved capacity. Ideally, the Green Operating Permit would capture all three components and would be the sole indicator that a water system has capacity. However, the department’s data system does not currently link all the components in such a way that the operating permit colors would change when a system fails to have specific components or comply with regulations. Therefore, having all three components indicates the system has achieved the level of capacity that the department considers necessary to comply with the capacity requirements of the SDWA.

Table 1.1 below defines the 3 components in relationship to the types of capacity defined in the SDWA.

**Table 1.1.1 - Capacity Components**

Component	How this Relates to Capacity	* Type of Capacity Assessed		
		T	M	F
<b>Green Operating Permit</b>	Indicates system is in substantial compliance with all drinking water regulations including: <ul style="list-style-type: none"> <li>Complying with applicable water quality monitoring requirements such as Coliform, Inorganics and volatile organic chemicals.</li> <li>Not being classified as a Significant Non-Complier under federal definition.</li> <li>Having no more than the approved number of service connections.</li> <li>Having a Certified Operator, if required.</li> <li>Having a Water System Plan and Financial Viability Plan.</li> </ul>	X	X	X
<b>Planning Document</b>	Indicates the systems has completed a water system plan or small system management program where an assessment of the water systems capacity needs has been made and a definitive course for acquiring and maintaining capacity has been charted.	X	X	X
<b>No Significant Enforcement</b>	Evaluates whether a system has significant enforcement actions indicating the system has exhausted all reasonable justification for not complying with drinking water regulations and therefore lacks capacity.	X	X	X

## 1.2 Specifics on the Three Capacity Components

Each component has many elements that assess capacity. This section provides specific detail of the Green Operating Permit, planning document, and enforcement actions to show what information is assessed and how it relates to capacity.

### *Green Operating Permit*

Due to the complexity and number of the State of Washington's regulatory programs the department devised a unique permit program to demonstrate water system compliance. This program is known as the operating permit program and is based upon a four color code concept. The four colors of Green, Yellow, Red, and Blue are used to gauge a systems compliance among the rules and regulations set forth by the SDWA and the State.

A Green Operating Permit indicates the system is in substantial compliance with drinking water regulations. If a water system does not acquire and maintain compliance with a particular operating permit provision the color can be changed to either yellow or red depending on the regulation. Systems that have not been assessed or there is no available information for are issued a Blue permit. These colors provide a tool to assist in determining a systems level of capacity. Table 1.2.1 shows the Green Operating Permit provisions, how they relate to capacity, and type of capacity assessed by the provision.

**Table 1.2.1 - Green Operating Permit Provisions**

<b>A = Green Operating Permit</b>		<b>Type of Capacity Assessed</b>		
<b>Operating Permit Provision</b>	<b>How this Relates to Capacity</b>	<b>T</b>	<b>M</b>	<b>F</b>
		Complying with applicable water quality monitoring requirements for coliform, inorganics and volatile organic chemicals	Gauges compliance with primary water quality monitoring requirements and MCL's.	X
Water System Plan	Gauges whether a WSP has been completed, if required. The WSP evaluates important capacity elements. If a WSP has not been completed the permit color would be yellow.	X	X	X
Financial Viability Plan	Gauges whether a FVP has been completed as part of a water system plan.	X	X	X
Certified Operator	Gauges whether a system has a certified operator. If system does not have a certified operator permit changes to yellow.	X	X	
No more than the approved number of service connections	Gauges whether the system has more service connections than it was designed and approved for by the department. This number is based on a engineering assessment of source storage and distribution facilities. If system is over-connected, the operating permit changes to red.	X	X	
Not a Significant Non-complier (Tier 1 SNC's)	Gauges whether the system has been confirmed as an unresolved significant non-complier under federal definition. Operating Permit would change to red if system were an unresolved SNC.	X	X	X
Compliance with a Department Order	Gauges whether the system is complying with a Departmental Order that may have been issued for compliance of any drinking water regulation. Operating Permit would change to red if system is out of compliance.	X	X	X

## ***Planning Document***

The department's drinking water regulations require all federally regulated water systems to complete either a water system plan (WSP) or a small water system management program (SWSMP). These documents are important tools for the capacity development strategy. They are specifically designed to assess a system's level of technical, managerial, and financial capacity and chart a definitive course for acquiring and maintaining capacity.

The planning documents also contain elements that are critical to assessing a systems capacity but are not directly linked to the operating permit. Examples include source protection, water rights, operation and maintenance activities, and future capital improvements. Therefore, it is important that the planning documents be assessed separately from the Green Operating Permit to determine specific capacity deficiencies. Table 1.2.2 and Table 1.2.3 show the capacity related elements that are required to be addressed in each of these documents.

**WSP's** are required for new systems, systems with over 1000 service connections, existing water systems that are expanding and systems that have significant problems. A water system plan must be prepared by a registered professional engineer and is more extensive in analysis than the small water system management program. These documents must also be updated every 6 years and play a significant role in the department's efforts to ensure systems maintain long term capacity.

**Table 1.2.2 – WSP Elements and Capacity Relationship**

<b>Planning Document Element</b>	<b>How this Relates to Capacity</b>	<b>Type of Capacity Assessed</b>		
		<b>T</b>	<b>M</b>	<b>F</b>
Water System Description	Provides basic water system information regarding ownership, management, facilities, service area and conditions of service.	X	X	
Planning Data	Assesses current population, service connections, water use, land use and projections for a 6 and 20 year period.	X	X	
System Analysis	Assess whether systems facilities are adequately designed and are capable of supplying sufficient quality and quantity of water to meet existing and projected demands.	X	X	
Conservation and Source of Supply	Defines a conservation program to ensure efficient water use and that sufficient water rights are secured for projected demands.	X	X	X
Source Water Protection	Defines either a watershed control program for surface water supplies and/or a wellhead protection program for groundwater supplies. Programs are designed to protect source water quality by controlling activity within the zone of contribution.	X	X	X
Operations and Maintenance	Assesses all aspects of competent operation and management of the water system including management and operations staffing, operator certification, facility and treatment operations, water quality monitoring procedures and schedules, emergency response, cross connection control, record keeping and operational improvements.	X	X	X
Design Standards	Defines design standards for new system facilities.	X	X	
Capital Improvement Program	Defines a prioritized list of improvements justified by the analysis in the previous chapters of the WSP. Provides a definitive listing of needed projects and all associated costs.	X	X	X
Financial Program	Defines the total cost of providing reliable water service and capital improvements demonstrating a financial plan to ensure operations and improvements are achieved.	X	X	X

SWSMP's are required for all community and non-community water systems not otherwise required to complete a WSP. These documents assess critical components of system capacity. The department's long term goal is to have SWSMP's for all systems, but due to the extensive number of systems required to complete these documents, the department has taken the approach that the document does not have to be submitted for review and approval until a system hits a specific trigger point. Trigger points include application for a SRF loan, requesting existing system approval, is determined to be a system with problems, and/or is required as a result of sanitary survey. This will allow the department to not be overwhelmed with submittals and will make it easier to focus on those systems that are most in need of assistance. The department will evaluate systems needs and determine if the document has been adequately completed at the time of the systems sanitary survey. Additional assistance may be rendered as a result of the survey and review of the document.

**Table 1.2.3 – SWSMP Elements**

Planning Document Element	How this Relates to Capacity	Type of Capacity Assessed		
		T	M	F
Water Facilities Inventory	Provides information about the water systems source capacity, number of connections and population served.	X	X	
Water Quality Monitoring Program	Identifies the type, frequency and location of water quality monitoring for each source and the distribution system.	X	X	
Consumer Confidence Report	Creates an annual educational water quality report for distribution to the systems customers summarizing monitoring results.	X	X	
Preparing for the sanitary survey	Identifies necessary items a system can perform and prepare for a sanitary survey.	X	X	X
Annual Operating Permit	Provides a compliance status report to correct any identified problems.	X	X	
Cross Connection Control	Documents and establishes a cross connection control program.	X	X	
Emergency Response Plan	Documents and establishes emergency response procedures.	X	X	
Service Area Map and Facility Map	Shows service area boundaries and systems facilities.	X	X	
Operations and Maintenance	Defines system personnel responsibilities and operations maintenance functions and frequency schedules.	X	X	
Wellhead Protection Program	Defines a systems wellhead protection activities.	X	X	
Water Right Documentation	List the systems water rights and analyzes allocations.	X	X	
Record of Source Water Pumped	Documents amount of water pumped from systems sources.	X		
Water Usage	Defines number of system users and the average consumption.	X		
Water Conservation Program	Defines a systems conservation activities that promote efficient use of water.	X	X	X
Component Inventory and Assessment	Inventories system facilities and their approval status. Identifies system improvements anticipated in the next 6 years.	X	X	
List of improvements	Identifies the year, cost, and financing method for anticipated or required improvements.	X	X	X
Budget	Defines require revenues, expenses and capital improvement financing.	X	X	X
System Management	Documents the systems management practices and decision making process.	X	X	

## Enforcement Actions

Evaluating whether the system has active enforcement actions is critical to determining if a system has capacity. Since there are various levels of enforcement actions, it is necessary to gauge the type of enforcement activity to determine if the system has exhausted all reasonable means to comply. Significant enforcement actions are defined as a State Health Order or Departmental Order (Agreed Order not included) and indicate that the water system has failed to willingly comply with drinking water standards. This level of enforcement are an indication the system lacks capacity.

The enforcement action component considers what level of enforcement action, if any, has been initiated and how that impacts capacity. Table 1.2.4 identifies the level of enforcement and describes how it impacts system capacity.

**Table 1.2.4 – Enforcement Actions**

Action	How this Relates to Capacity	Type of Capacity Assessed		
		T	M	F
No Enforcement Actions	Demonstrates the system is generally in good standing from a compliance standpoint. System in this category would get the final component (C) of the capacity formula.	X	X	X
Agreed Order or Bilateral Compliance Agreement in place	Demonstrates the system is willing to comply with drinking water regulations. System is usually considered to have capacity. System in this category would get the final component (C) of the capacity formula.	X	X	X
Significant Enforcement Actions – State Health Order/Departmental Order Issued	Demonstrates the system has failed to comply with a drinking water regulation meaning they have not demonstrated capacity. System in this category would not get the final component (C) of the capacity formula.	X	X	X

### **1.3 A Baseline for Measuring Capacity**

Ideally, the Green Operating Permit would capture all three components and would be the sole indicator that a water system has capacity. However, the department's data system does not currently link all the components in such a way that the operating permit colors would change when a system fails to have specific components or comply with regulations. For this reason, the department will use a simple A+B+C formula to link the Green Operating Permit, the planning document and enforcement activity in order to establish a baseline from which to measure the effectiveness of the department's capacity development efforts. The department will apply the formula at the time a water system applies for, and is issued, its annual Operating Permit. Systems that meet the formula will be considered as having achieved a level of capacity as congress defined it.

$$\mathbf{A+B+C = Capacity}$$

#### **A = Green Operating Permit**

If the system is issued a green operating permit they are granted the first component (A) of the formula.

#### **B = Planning Document**

If the system has been determined to have completed a water system plan or small water system management program as required, the system is granted the second component (B) of the formula.

#### **C = Enforcement Actions**

If it is determined that a system has not been issued a Health Order or Departmental Order the system is granted the third component (C) of the Formula.

Data gathered through application of the formula will be used to assist in the effort to prioritize systems in need of capacity development assistance. The data will also become a part of the department's performance reporting.

## 1.4 Prioritization of Water Systems in Need and Capacity Development Assistance

In establishing a process for prioritizing water systems the department's objective is to reach a variety of systems with various levels of capacity but maintain a focus on those systems most in need. Systems meeting the capacity formula will be monitored and provided technical assistance as is necessary to maintain capacity. Systems that do not meet the capacity formula will be categorized using operating permit colors, public health indicators and capacity deficiencies.

The department has established 5 prioritized categories for water systems that have not demonstrated capacity as the state has defined it. The prioritization of the systems not having demonstrated capacity is based on the color of the systems operating permit and whether it has been assigned to the department's compliance targeting list. Systems within these categories are further prioritized by applying general public health indicators and defining specific capacity deficiencies such as whether they have a certified operator, have a completed planning document, or are out of compliance with regulations. The department uses the categories of water systems to develop staff work-plans, guide day to day staff activities, develop comprehensive compliance action plans, direct third party technical assistance, determine eligibility and rate SRF Loan Applications, and develop capacity focused State Revolving Fund Set-Aside Projects. This allows the department to clearly focus its efforts on those systems that are most in need of capacity development assistance and represent the highest risk to public health.

Table 1.4.1 defines the four different operating permit colors. Table 1.4.2 shows the categories of systems in priority and provides a general description of the type of assistance that will be directed to the system.

**Table 1.4.1 – Operating Permit Categories**

<b>Operating Permit Category</b>	<b>Description</b>
Green	System is in substantial compliance with applicable drinking water regulations.
Yellow	System is substantially in compliance but does not have a current planning document, certified operator, or has not complied with certain water quality monitoring provisions.
Red	System is in substantial non-compliance with applicable drinking water regulations or a Departmental Order.
Blue	System has not yet been evaluated by the department.

**Table 1.4.2 – Prioritized Categories of Water Systems**

<b>Systems with Capacity</b>	
<b>Category of Water Systems</b>	<b>General Capacity Maintenance Strategy</b>
<i>Systems with capacity</i>	Continue with basic implementation of regulations and ensure training opportunities.

<b>Systems in Need of Capacity Development Assistance</b>		
<b>Category of Water Systems</b>	<b>Priority</b>	<b>Strategy for developing capacity</b>
<b>Systems with Red, Yellow, or Blue Operating Permits and on Compliance Targeting List</b>	<b>High</b>	Includes issuance of applicable enforcement orders, comprehensive sanitary surveys, identification of funding alternatives, restructuring and/or consolidation discussions, engineering solutions, water quality monitoring assistance, plan development and follow through to completion.
<b>Systems with a Red Operating Permit</b>	<b>High</b>	The department employs basic functions including sanitary surveys, application of control points, enforcement, technical assistance, etc. *Alternative assistance solutions will be implemented to assist staff in resolving the compliance issues and building system capacity.
<b>Systems with a Blue Operating Permit</b>	<b>High</b>	The department employs basic functions including sanitary surveys, application of control points, enforcement, technical assistance, etc. *Alternative assistance solutions will be implemented to assist staff in resolving the compliance issues and building system capacity.
<b>Systems with a Yellow Operating Permit</b>	<b>Medium</b>	The department employs basic functions including sanitary surveys, application of control points, enforcement, technical assistance, etc. *Alternative assistance solutions will be implemented to assist staff in resolving the compliance issues and building system capacity.
<b>Systems with a Green Operating Permit and a Capacity Deficiency</b>	<b>Low</b>	The department employs basic functions including sanitary surveys, application of control points, enforcement, technical assistance, etc. *Alternative assistance solutions will be implemented to assist staff in resolving the compliance issues and building system capacity.

*\*Alternative Assistance solutions include Third Party Assistance, SRF Loans, Capacity focused Set-Aside Projects, regionalization and consolidation.*

## **1.5 Control Points Ensuring Capacity Development**

The State's authority or "Control Points" to regulate public water systems are established in a variety of Codes. The Revised Code of Washington (RCW) is the general-purpose code enacted by the Legislature. Washington Administrative Codes (WAC) are more specific requirements of the RCW's developed by the Department of Health and Board of Health. All of these requirements are based upon the protection of public health by assuring safe and reliable drinking water. The control points established by these codes provide the department with sufficient authority to ensure water existing systems are working towards acquiring and maintaining technical, managerial and financial capacity.

Due to the complexity of some of the control points, many are often developed into programs that are more easily managed and administered by the department. Implementation of requirements on a program level is necessary in order to accomplish the legislative intent and goals of the department. The programs are developed by defining goals and objectives, exploring alternatives for accomplishing the goals and objectives, evaluate staffing and financial impacts on the department, and then establishing a definitive and reasonable implementation plan. Once the program is developed it moves to implementation including staff training and training and technical assistance for public water systems to educate them on the requirements. Compliance with the requirements is usually achieved over a defined time schedule.

Implementation of these control points is a major component of the capacity strategy for existing water systems. They allow the department the ability to require water systems to work towards achieving capacity and when necessary apply enforcement. Table 1.5.1 summarizes the major control points established by state regulations that assist in the process to ensure systems acquire and maintain capacity.

**Table 1.5.1 Summary of Control Points to Ensure Existing Water System Capacity**

Primary Control Points	Authority	Description	Capacity		
			T	M	F
Water System Plan	WAC 246-290-100	All expanding and or problem public water systems shall submit a water system plan to the department for review and approval. Washington’s water system plan comprehensively addresses all components of T, M, F Capacity.	X	X	X
Small Water System Management Program	WAC 246-290-105	All existing non-expanding public water must develop a small water system management program. A small water system management program evaluates all components of T, M, F Capacity.	X	X	X
Sanitary Survey	WAC 246-290-416	All public water systems shall submit to a sanitary survey conducted by the department or the department’s designee including third party and other qualified individuals. Regulations require purveyor to ensure cooperation in scheduling the survey and ensure unrestricted availability of all facilities and records at the time of the survey.	X	X	X
Construction Document Approval	RCW 43.20.050(2) WAC 246-290-120	A water system must prepare engineered construction documents and must receive approval by the department prior to construction of many new facilities. Systems are required to submit a construction certification report after completion of the project.	X	X	
Operating Permit	RCW 70.119A.100 WAC 246-294-030	All Group A public water systems must obtain an annual Operating Permit from the department.	X	X	X
Source Protection	WAC 246-290-135	All public water systems are required to complete a source protection program as part a water system plan or small water system management program.	X	X	
Existing System As-Built Approval	WAC 246-290-140	Requires existing unapproved water systems to submit information required to obtain approval. At a minimum a system must submit a water system plan or small water system management program, as-built drawings, and water quality analysis. These requirements allow the department to assess capacity.	X	X	X
Operations and Maintenance	WAC 246-290-415	Requires water systems to be operated in accordance with an approved Operations and Maintenance Plan as provided in a water system plan or small water system management program. Sets forth criteria for approval including water system management and personnel, operator certification, comprehensive monitoring plans for all contaminants, emergency response program, and maintenance and reliability standards.	X	X	
Operator Certification Requirements	WAC 246-290	Requires that all community and Non-Transient Non- Community water systems are operated by a certified operator. Sets standards for Certified Operators and continuing education.	X	X	
WSP/Construction Document	RCW 43.20.050 WAC 246-290-100	Construction Documents for expansion of an exiting water system may only be reviewed if there is an approved water system plan.	X	X	

## 1.6 Capacity Development Assistance Components

The Capacity Development Strategy is implemented using a variety of resources and tools including but not limited to department capacity development activities, Third Party Assistance Provider Efforts, State Revolving Fund Loans, and SRF Set-Aside Projects. A description of these components is provided showing specific activities and how they relate to the strategy.

### Department Capacity Development Activities

The department provides direct regulatory oversight and technical assistance to federally regulated water systems to ensure safe and reliable drinking water. Capacity development efforts are established through annual work-plans and implemented in a variety of related functions. The following chart demonstrates major staff functions that are an integral component of the capacity development strategy.

**Table 1.6.1 Department Capacity Development Activities**

Function	How this Relates to Capacity	Type of Capacity Assessed		
		T	M	F
Sanitary Survey's	Department staff conduct sanitary surveys to assess condition of facilities, operations, and general management. Department also contracts with third party's to conduct surveys.	X	X	X
Operator Certification	The department administers a regulatory program for the certification of water system operators.	X	X	
Construction Document Review	The department reviews and approves construction documents for new facilities and treatment to ensure compliance with drinking water regulations and design standards.	X	X	
Water System Plan Review	The department reviews and approves WSP's to assess major components of capacity.	X	X	X
Small Water System Management Program Review	The department reviews, approves and documents completion of SWSMP's to assess major components of capacity.	X	X	X
Satellite Management Agency Plan Reviews (SMP's)	The department reviews, approves and monitors SMP's to assess specific regulatory requirements in order to receive and maintain approval as a satellite management agency.	X	X	X
Data Input and Management	The departments enters and stores water system data system and managed so that performance of the capacity program can be measured.	X	X	X
Communications and Outreach	The department is developing and implementing a communication and outreach strategy to educate the drinking water community on regulations and water system requirements including capacity.	X	X	X
Telephone Technical Assistance	Staff provide technical assistance to water systems and the public on a daily basis by way of telephone.	X	X	X
Enforcement/Compliance	The department applies enforcement in a prioritized and strategic manner to ensure water systems comply with state and federal drinking water regulations.	X	X	X
Performance Reporting	The department generates performance reports for reporting to the governor and EPA.	X	X	X
Set Aside Project Development	The Department continually develops set aside funded projects aimed at capacity development.	X	X	X
SRF Loan Administration	The department administers a SRF Loan Program to enhance the capacity of water systems.	X	X	X
Water Quality Monitoring Oversight and Assistance	The department monitors system water quality monitoring efforts and provides assistance in completing sampling.	X	X	
Training	The department provides training for drinking water regulations and programs.	X	X	X

### **Third Party Technical Assistance Providers**

The State of Washington has a variety of Third Party Assistance Providers that assist in developing water system capacity. These groups are used to provide technical assistance, operator training and education, and other capacity related assistance. The department looks to build stronger partnerships with these groups to provide technical assistance and specialized field work. The department has identified the following Third Party Assistance providers as being an integral part to carrying out the capacity development strategy.

#### ***Evergreen Rural Water of Washington (ERWOW)***

ERW is a non-profit organization currently providing a variety of capacity related training and technical assistance to public water systems in the State of Washington. The department utilizes ERW to assist water systems in operations and management and complying with applicable regulations. The department contracts with ERW to conduct specific capacity related development assistance. The strategy calls for developing a specific Memorandum of Understanding between Evergreen Rural Water and the department on capacity development.

#### ***Rural Community Assistance Corporation (RCAC)***

RCAC is a non-profit organization dedicated to improving the quality of life for rural counties through partnerships, technical assistance, and access to resources. RCAC currently provides a variety of training and technical assistance to public water systems in the State of Washington. The department utilizes RCAC to assist water systems in operations and management and complying with applicable regulations. The strategy calls for developing a specific Memorandum of Understanding between RCAC and the department on capacity development.

#### ***Washington Environmental and Resource Training Center (WETRC)***

WETRC assists in protecting public health in the State of Washington by providing a variety of training for water system personnel. WETRC assists the department directly by contracting to provide certification and professional growth services for water system certified operators and back-flow assembly testers. The department will continue to utilize WETRC to provide these services. The department also looks to increase the role of WETRC in training of water systems in capacity development.

### ***Local Health Jurisdictions (LHJ's)***

There are 34 local health jurisdictions in the State of Washington with the majority of the 34 providing some level of oversight to small public water systems. One of the department's major goals is to develop stronger partnerships with LHJ's relative to providing oversight and education of small community and non-community water systems. LHJ's are often involved in sanitary surveys, construction reviews, well-site inspections and permitting, water system adequacy, and water quality monitoring issues.

### ***Satellite Management Agencies (SMA)***

One of Washington's most unique capacity programs is the Satellite Management Program. For many years the department has developed this program with the goal to ensure long-term capacity of water systems. It includes a concept of approving private and/or public entities as specialized water system ownership and/or operations agencies. The philosophy of the program is that these agencies provide a satisfactory and hopefully higher level of operations and management service to water systems which in return ensures long term capacity of the water system.

The department has officially approved 34 Satellite Management Agencies in the State of Washington. The department views SMA's as partners in developing capacity of water systems because they provide various levels of service to existing water systems. Many existing water systems do not have the technical, managerial and financial capability to adequately operate the water systems in accordance with applicable regulations. In this case, SMA's play a key role in guiding these systems back into compliance and in some case even acquiring ownership of the systems. SMA's in the State of Washington include both private and public entities including PUD's, water districts, counties, cities and private companies.

### ***Water Utilities***

There are many well managed water utilities in the State of Washington that have resources and expertise to assist water systems within their service area or in the near vicinity of their service area. These utilities will play a key role in assisting systems in achieving and maintaining capacity. Many of these utilities will be able to absorb small systems into their larger system as a way consolidate and reduce the number of systems without capacity.

### ***Private Consultants***

The department often utilizes private consultants in providing a variety of services to assist public water systems. Consultants are often hired to develop guidance documents, prepare assessments, and to provide specialized technical assistance and training. Consultants will continue to be used for services and projects that assist water systems in building capacity.

### ***Other Third Party's***

There are a number of other third party groups that play a role in assisting water systems in developing capacity. The department will be working to build a relationship with any third party that demonstrates experience and knowledge in assisting water systems.

### ***State Revolving Fund Loans***

The Drinking Water State Revolving Fund Loan Program is a key component of the strategy. Low interest loans are used to encourage systems to develop capacity. Any water system that applies for a DWSRF loan must demonstrate it has capacity or at a minimum achieve capacity as part of the loan.

In establishing the DWSRF, congress specifically stated that priority for the use of the project fund should be given to projects that:

- 1) Address the most serious risk to public health.
- 2) Are necessary to ensure compliance with SDWA requirements.
- 3) Assist systems most in need on a per household basis consistent with state affordability criteria.

With this directive as the basis, the department developed criteria by which projects are evaluated and prioritized. The criteria are designed to fund water system projects that will solve a problem that is a threat to public health and is capacity related. By design, systems most in need of capacity development rank higher on the priority project funding list. The department uses the loan program to encourage water systems to achieve and maintain capacity. Department staff work directly with water systems to identify deficiencies and then encourage them to apply for a SRF Loan in order to resolve the deficiencies related to capital facilities.

In order to demonstrate capacity and be eligible the water system must complete either a WSP or SWSMP that assesses the proposed project. The document must be reviewed and approved by the department. Construction documents and a project report are also required to be approved by the department. If not already demonstrated, the project must result in the system having capacity as defined herein. The department will continue to use the SRF Loan Program to encourage water systems to resolve system deficiencies and acquire capacity.

### **Set-Aside Projects**

In order to carry out the capacity strategy and enhance capacity development for existing water systems, the department has exercised the privilege granted under the State Revolving Fund to use set-aside funds to fund capacity development projects. The department has already executed several projects aimed at enhancing water system capacity. The department uses set-aside funds to execute projects that build system capacity.

One of the key objectives for using set aside funds is to provide focused assistance to systems that fall short of having demonstrated capacity. The prioritization method is used to develop projects that will provide a measurable benefit to the capacity development strategy. Groups of systems are pulled from one of the 5 categories of systems without capacity described in Table 1.4.2. The groups are based on systems having similar problems or deficiencies. A specific project aimed at resolving the problems are developed. Projects aimed at conducting sanitary surveys and providing assistance to resolve specific deficiencies must be developed to carry out the strategy.

## **1.7 The Strategy Process**

The process to ensure water systems in the State of Washington acquire and maintain capacity is complex. It begins with systems being evaluated under the department's drinking water regulations. This has been done for many years. The department places systems into five categories using operating permit colors and the department's compliance targeting list. The prioritization process described in section 1.4 was developed as a result of the capacity development requirements and is intended to fine-tune the process so that activities are focused on capacity development. Once the systems are categorized the type and level of capacity development assistance is determined. Assistance will be directed at systems that are most in need and pose the highest risk to public health. It will take years and various types of assistance to actually get systems to achieve capacity. Once assistance is rendered systems are monitored

for progress. Once systems have achieved capacity they fall into a maintenance strategy that consists of continued sanitary surveys, planning, compliance tracking and training opportunities.

## **Process Summary**

### **1. Evaluation and classification of water systems based on compliance with drinking water regulations.**

The department applies the drinking water regulations to all systems. Based on that application a system must obtain an annual operating permit. The permit, as described earlier in the document, defines the systems level of compliance with regulations based on the four colors of green, yellow, red and blue. Systems are also assessed during regular sanitary surveys required every 5 years.

### **2. Systems are prioritized by grouping them into 5 categories using the color of the system's operating permit and the department's compliance target list.**

All federally regulated water systems are grouped into 5 categories based on the color of the systems operating permit and whether the systems is on the department's compliance target list. Systems are placed on the target list by recommendation from department staff. The list is prioritized using fundamental public health criteria. Department staff assesses the deficiencies of the systems in each of the categories. Systems with problems that pose the highest risk to public health are rated as most in need of capacity development assistance.

### **3. Type and level of capacity development assistance is determined. *This process is complex in that the department has many different methods to identify systems to consider for capacity development assistance.***

Many systems will remain under the direct oversight of department staff, which will work one on one with them to assess problems and develop a specific course of action for achieving capacity. Enforcement may be applied if the technical assistance methods fail. The department's functions are thoroughly explained in Table 1.6.1.

The department then groups a number of systems with similar capacity deficiencies. A project funded by set-aside funds is then created to assist the systems in resolving the deficiency. For example, the department has a number of water systems that have a blue operating permit (not enough information on the system). The department has contracted with local health jurisdictions to conduct sanitary surveys and gather data on the system so the department can evaluate them and place them into the applicable operating permit category.

The department identifies a number of systems with similar capacity deficiencies and requests Technical Assistance Providers to assist them in addressing deficiencies or may develop a comprehensive joint strategy with partners such as SMA's LHJ's, water utilities, other state agencies, etc.

Systems that are evaluated and determined to not have the ability to ever achieve capacity are targeted for possible restructuring. Restructuring alternatives are explored and to the extent feasible implemented.

**4. Assistance is applied.**

Capacity development assistance is applied to the system in an effort to build capacity. This may include staff assistance, third party assistance, SRF funding, special set-aside project assistance, etc. Data is collected and the systems progress towards achieving capacity is monitored. Based on the assistance, the system either achieves capacity or is directed to another level of assistance and/or enforcement.

**5. Capacity maintenance activities.**

Once a system achieves capacity it moves into a maintenance mode of periodic evaluations. Systems are evaluated annually with the issuance of a required operating permit. Periodic evaluations through sanitary survey's and WSP/SWSMP updates are critical tools to assist systems in maintaining capacity. The department also plans to develop a more proactive outreach and education program to better inform systems on what they need to be doing and how to do it.

**6. Capacity Strategy Monitoring.**

Data is continuously gathered on the components of capacity. This allows the department to periodically evaluate how the strategy is working. The department also continues to make changes to improve the strategy as time and resources permit.

## **1.8 Performance Evaluation and Reporting**

The department has devised a capacity reporting method using a number of different data categories that measure improvements in water system capacity. The data groups are used to report on the efficacy of the capacity development strategy and progress toward improving the technical, managerial, and financial capacity of public water systems in the State of Washington. Reports are required to be submitted to EPA in August 2001 and to the Governor of the State in August 2002 and then every three years thereafter.

Performance of the strategy and being able to show when system achieve capacity must be related to public health protection. The department currently operates a database where performance data is generated. The data categories include those elements directly and indirectly linked to the components that define capacity for water systems. The department is also developing of a new data system that will more effectively manage all the department's water system data, prepare reports, and make data more accurate and accessible. The new data system is funded partially by SDWA resources for capacity development activities.

Table 1.8.1 shows the primary data categories the department tracks to gauge the effectiveness of the strategy. The data is evaluated and developed into reports for EPA and the Governor.

**Table 1.8.1 Reporting Categories**

<b>Capacity Category</b>	<b>Baseline</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Notes</b>
<b>Total Number of Systems</b>									
<b>Systems with Capacity (A+B+C)</b>	1998								
<b>Other Data Categories used to Evaluate Capacity Development Efforts</b>									
Annual New System Approvals	1998								
# Systems with component A Green Operating Permit	1998								
# Systems with component B Planning Document									
# Systems with component C									
Water System Plans Approved	1998								
Small Water System Management Programs Approved	1998								
Existing Unapproved System Approvals	1998								
# Certified Operators	1998								
# Systems with Certified Operator	1998								
# Systems without a Certified Operator									
# Sanitary Survey's	1998								
# Systems with a Sanitary Survey	1998								
# Enforcement Orders	1998								
# SNC's	1998								
# SNC's resolved									
# SRF Loans	1998								
# Systems with Yellow Operating Permits	1998								
# Systems with Red Operating Permits	1998								
# Systems with Blue Operating Permits	1998								
# SMA's	1998								
# Systems under SMA ownership/Operations	1998								
# Coordination Act Areas									
# CCR's completed	1999								
# Water Quality Sampling Violations	1998								

**Note: A small group will be formed to develop the final report format and discuss how to break down the categories by system type and percentage figures.**

## Section 2

### Factors that Encourage and Impair Capacity Development

Section 1420 (c)(2)(B) of the SDWA requires the State of Washington to describe the institutional, regulatory, financial, tax, or legal factors at the federal, state, or local level that encourage or impair capacity development. Through the development of the strategy, the department has solicited input from a variety of stakeholders groups and staff on these factors.

#### 2.1 Factors that Encourage Capacity Development

Thirty-one (31) factors were identified that are considered to encourage capacity development. These factors have been categorized and provided in Table 2.1.1.

**Table 2.1.1 Factors that Encourage Capacity Development**

Category	Factors that Encourage Capacity Development	Level		
		Local	Fed	State
<b>Institutional</b>	SDWA and State Drinking Water Regulatory Authority		X	X
	SRF Program and Funding Allocation		X	X
	Washington Public Health Improvement Plan	X		X
	Washington State Drinking Water Program			X
	Public Water System Coordination Act	X		X
	Department of Health/UTC MOU			
	Department of Ecology/Health MOU's			
	Joint plans of operation between local health jurisdictions and State Health			
	Drinking Water/Water System Guidance Materials			X
	State Training and Technical Assistance Programs			X
	Third Party Technical Assistance Providers		X	X
	Washington Water Supply Advisory Committee Effort			X
	Operator Certification Program	X		X
	Satellite Management Program	X		X
	Growth Management Act	X		
Endangered Species Act - Salmon Recovery	X	X	X	
<b>Financial</b>	USDA Rural Loan and Grant Program		X	X
	Washington State Revolving Fund Loan Program		X	X
	Community Development Block Grant Program			X
	Public Works Trust Fund Loan Program			X
	Department of Health Financial Viability Manual			
	Utilities and Transportation Commission Rate Review			X
	Lending Institutions use of Operating Permit Info.			
<b>Regulatory</b>	Sufficient Drinking Water Regulations	X		X
	Receivership Authority	X		X
	Operator Certification Requirements	X		X
	Satellite Management Requirements	X		X
	New System Requirements	X		X
	Water System Adequacy Requirements	X		X
	Department of Health Drinking Water Programs			
<b>Tax</b>				
<b>Legal</b>	Receivership Law – Takeover of Systems	X		X

## 2.2 Factors that Impair Capacity Development

Thirty-one (31) factors were identified that are considered to impair capacity development. These factors have been categorized and provided in Table 2.2.2.

**Table 2.2.2 – Factors that Impair Capacity Development**

Category	Factors that impair capacity development	Level		
		Local	Fed	State
<b>Institutional</b>	Complexity of the SDWA		X	
	Complexity of USEPA Processes and Organization		X	
	Complexity of Washington’s Drinking Water Programs			X
	Complexity of State Legislative Process	X		X
	Lack of Resources	X	X	X
	Lack of Staff	X		X
	Water Right Allocations			X
	Turn Over in Elected Officials			
	Decisions Politically Influenced	X	X	X
	Inconsistent Application of Rules	X	X	X
	Conflicting State Policy	X		X
	Rural nature of the state	X	X	X
	Depressed economy in small counties and communities	X	X	X
	Large # of small water systems	X	X	X
<b>Financial</b>	Lack of Funding for Grants and Loan Programs	X	X	X
	Funding Requirements are Politically Influenced	X	X	X
	Small Systems Lack Financial Viability	X	X	X
	Philosophical Attitude that water is cheap and plentiful	X	X	X
	Lack of Consumer Education	X	X	X
	Complexity of Funding Requirements		X	X
	Cost of Physical and Managerial Improvements	X	X	X
	Cost of achieving and maintaining capacity to high	X	X	X
<b>Regulatory</b>	Complexity of Regulations	X	X	X
	Compliance Authority	X		X
	Existing system satellite management requirements	X		X
	Incentives for compliance	X	X	X
	Water Right Permitting			X
	Lack of authority to require consolidation	X	X	X
<b>Tax</b>	State Utility Tax goes to General Fund			
<b>Legal</b>	Water Right Law			
	Receivership Law to complex and expensive			

### **Section 3**

#### **Use of Safe Drinking Water Act Authority and Resources**

Under Section 1420(C)(2)(C), States must describe how the authority and resources of the SDWA will be used to improve water system capacity. Specifically, the State is requested to describe how the strategy will:

- 1) Assist Public Water Systems in complying with National Public Drinking Water Regulations.
- 2) Encourage the development of partnerships between public water systems to enhance the technical, managerial and financial capacity of water systems.
- 3) Assist PWS's in the training and certification of operators.

Although meshed into the strategy in Section 1, key elements are articulated below to demonstrate the strategy is consistent with the SDWA.

#### **3.1 Authority and Resources to Assist PWS's in Complying with NPDWS's**

*The department uses the authority and resources of the SDWA to assist public water systems in complying with national public drinking water standards by:*

- 1) Funding staff to implement a prescriptive set of state drinking water regulations framed from the SDWA.
- 2) Administering a State Revolving Fund Loan Program funded by the SDWA.
- 3) Implementing requirements for new water systems using the SDWA authority.
- 4) Developing and implementing requirements for existing public water systems using the SDWA capacity requirements and funding.
- 5) Developing a Small Water System Management Program Document and providing training and assistance to complete the documents with SDWA Funding.
- 6) Developing a new data system to effectively manage water system capacity data with SDWA Funds.
- 7) Using SDWA funds to contract with Third Party Technical assistance providers to assist water systems.
- 8) Using SDWA set-aside funds to contract with local health jurisdictions to conduct sanitary surveys and evaluate systems with blue operating permits.
- 9) Using SDWA set-aside funds for projects that assist water systems in developing capacity. (See list in Appendix C).

### **3.2 Development of Partnerships Between Public Water Systems to Enhance the Technical, Managerial and Financial Capacity of Water Systems**

*The department encourages the development of partnerships between public water systems to enhance the technical, managerial, and financial capacity of water systems by:*

- 1) Continuing to develop and implement the Public Water System Coordination Act and ensuring development and implementation of Regional Coordinated Water System Plans.
- 2) Continuing DOH Drinking Water Training and Outreach Efforts.
- 3) Continue to develop and implement a Third Party Sanitary Survey Program using local health jurisdictions, satellite management agencies and other qualified individuals.
- 4) Using set-aside funds to train operators and water system personnel in working together to solve capacity problems.
- 5) Continuing to require systems to develop water system plans identifying service areas, joint supply facilities and regional supply opportunities.
- 6) Using set-aside funds to fund projects focused on regionalization and consolidation.
- 7) Provide incentives to water utilities that partner to assist small utilities in achieving and maintaining capacity.
- 8) Develop methods to encourage well operated utilities to assist systems without capacity. Find ways to acknowledge those systems, which go beyond the call to assist systems in need.

### **3.3 Assisting Public Water Systems in the Training and Certification of Their Operators**

*The department assists public water systems in the training and certification of their operators by:*

- 1) Administering an Operator Certification Program including providing training, guidance materials, testing, and certifications to all certified operators in the state.
- 2) Using set-aside funds to conduct 17 need to know workshops for over 700 water system operators.
- 3) Using set-aside funds to contract with consultants to provide technical assistance to surface water treatment plant operators.
- 4) Using set-aside funds with Third Party Technical Assistance providers to provide training and assistance to operators across the State.
- 5) Providing training and assistance during on-site sanitary surveys for all federally regulated water systems.
- 6) Reviewing and approving required WSP's and SWSMP's that include an operations and maintenance program.

## **Section 4**

### **Documentation of Stakeholder and Public Involvement**

For many years there has been a high degree of interest from the State of Washington's Drinking Water Community in assuring safe and reliable drinking water to consumers. This degree of interest has led to creation of various stakeholder groups within the drinking water community. Many of these groups are directly involved in the development of the drinking water regulatory structure in the State of Washington. This has given the department a variety of avenues in which to solicit involvement in the development of a water system capacity strategy.

Since 1997, the department has engaged various stakeholder groups, staff resource groups, state and local agencies, key drinking water individuals and the general public in the development of the strategy. The department also provides numerous workshops and training sessions on capacity development issues. Guidance and recommendations received from these efforts provide direction to the capacity development strategy.

#### **4.1 Identification of Stakeholder Groups**

The department has created and engaged various stakeholder groups that are directly involved in the development of the capacity development strategy. These groups are identified and discussed below.

##### ***Washington Water Supply Advisory Committee***

The Water Supply Advisory Committee (WSAC) was established by the Washington State Legislature in 1995 and has since been actively advising the department on drinking water issues. The SDWA of 1996 triggered a major effort by the WSAC to provide direction to the drinking water program to focus on taking advantage of the resources in that act, including access to SRF funding and capacity development.

The WSAC is comprised of a variety of members representing a wide spectrum of interests in the drinking water community. In November of 1996, the WSAC issued a legislative report setting the Drinking Water Program in motion to develop programs in accordance with the SDWA amendments. The report also provided a set of drinking water principles to guide the drinking water program in its mission.

The department has been working with the WSAC on a variety of capacity development issues. Since 1998 sixteen (16) meetings have been held with the WSAC where various aspects of capacity have been evaluated and direction provided. The Small Water System Advisory Committee findings and recommendations have been presented to the WSAC and direction has been given. A summary of meeting dates, topics and capacity strategy components is provided in Appendix B.

##### ***Small Water System Advisory Committee***

The Small Water System Advisory Committee (SWSAC) was formed in 1997 to encourage and support a diverse representation of stakeholder participation in developing system capacity and regulatory compliance strategies. The primary committee focus is to identify small water system issues and needs, provide policy and program activity recommendations, and review and comment on documents.

The SWSAC began with a brainstorming session meeting in February of 1998. Since then the SWSAC has held 5 meetings to discuss various issues surrounding small system capacity development and regulatory compliance. Guidance and recommendations from this group have been meshed into the strategy. A summary of meeting dates, topics and capacity strategy components is provided in Appendix B.

#### ***Satellite Management Agency Brainstorming Committee***

The department with the support of the Public Utility District Association and the Water Supply Advisory Committee convened a 32 member brainstorming committee to identify and propose solutions to barriers that impair efforts to acquire ownership and operate and maintain water systems in compliance with drinking water regulations. The committee was comprised of a variety of members representing Satellite Management Agencies, Public Utility Districts, State Agencies, public water systems, and the private sector. This effort was a direct link to identifying factors that encourage and impair capacity development. The primary goal of these representatives is to build and/or maintain capacity of water systems. Therefore, the department decided to use this group to identify relevant barriers for capacity development.

The Committee identified, categorized and prioritized 30 specific barriers that impact the ability of SMA's and water systems to operate as expected. The Committee then developed a set of recommendations for the department and the WSAC to consider in developing drinking water programs. This effort has provided very specific direction in to the development of the capacity strategy. Date, topics, and components for the capacity strategy are provided in Appendix B.

#### **4.2 Identification of Workshops and Capacity Training**

The department has conducted a number of workshops and training directed at capacity development. Through these efforts the department was able to solicit valuable input on the direction the capacity development strategy.

#### ***State Revolving Fund Loan Program Workshops***

The department has held 14 workshops in 4 years for the purpose of providing assistance and gather input from potential State Revolving Fund Loan applicants. A significant amount of input has been gathered at these workshops in regard to capacity requirements. This has proven to be a valuable process in gathering input because all SRF applicants must demonstrate capacity and this process is on the ground implementation. During the workshops specific elements of capacity development have been presented coupled with actual assistance. Instead of only gathering comments based on words on paper the department was able to experience capacity development before drafting the capacity development strategy. Concerns and experience gathered at the workshops have been incorporated into the capacity development strategy and implemented into the SRF Loan Application process. A summary of dates, topic and capacity components is provided in Appendix B.

### ***Need to Know Training Workshops***

The Need to Know Workshops were developed by the department as a recommendation from the Small Water System Advisory Committee. This is another capacity development effort where on the ground experience and knowledge has been integrated in the capacity development strategy. The workshops were aimed at operators of small systems and were for the purpose of educating operators on the various components of system operations and acquiring and maintaining capacity. The department held 17 workshops across the state with over 700 small system operators attending. The department was able to solicit input directly from attendees on specific components of the capacity strategy as well as operator and system needs for assistance.

### ***Small Water System Management Program Development Process and Workshops***

A major component of the Capacity Development Strategy is the requirement for all existing water system not otherwise required to complete a water system plan to develop a small water system management program. As discussed in previous sections, the small water system management program assesses a water systems technical, managerial, and financial capacity. Development of the small water system management program included solicitation of comment from the drinking water community and public. Comments were received, evaluated and addressed in the current version of the document. The department also pilot tested the document by contracting with third party technical assistance providers to provide training and work one on one with water systems to complete the document. As a part of the pilot test contract, the technical assistance providers were to gather input and provide comments. The comments provided have been evaluated and addressed in the current version of the document and in the capacity development strategy.

## **4.3 Public, Staff and Stakeholder Comment**

The department presented the strategy to the public, staff, and stakeholders beginning on June 15 by posting an overview of the strategy on the department's website. This overview specifically requested comments and explained the complete strategy would be available for comment by June 30. Then strategy was also presented directly to staff on June 5, 7, and 14 to solicit concerns and comments on the strategy. Comments gathered during these efforts lead to a realistic and understandable strategy.

The strategy was made available to the public, staff and stakeholder groups on June 30, 2000 with an initial comment period extending to July 14, 2000. The process also allows for comments to be received after July 14, 2000 which will be used to improve the strategy at a later date. Comments were evaluated and addressed in the final document.

As part of the commenting process, the department sent the document directly to Water Supply Advisory Committee members on June 28, 2000 and followed with a formal presentation on July 6, 2000. Comments from this committee were received until July 14, 2000. A summary of comments and general responses is provided in Appendix A.

## **Section 5**

### **Development and Implementation**

This section outlines continuing development activities and highlights implementation activities to demonstrate the department is developing and implementing the strategy as required by the SDWA. The department is confident that the capacity development strategy has been developed and is being implemented as required by the act. Future efforts will fine tune the strategy and make it more effective.

#### **5.1 Summary of Continuing Development Activities**

- Develop a Capacity Communication and Outreach Strategy that provides education, outreach and awareness of the water system capacity development strategy, including concepts, programs, methods, accomplishments, and benefits to the State of Washington's drinking water community.
- Develop a specific strategy and memorandum of understanding with Third Party Technical Assistance providers to work with systems most in need of capacity development, building a stronger partnership and carrying a united message.
- Develop a specific strategy to utilize Third Party's Groups or contract staff to assist water systems in preparing SWSMP's or other required approval documents.
- Development of a new Data System that effectively manages public water system data..
- Develop new set-aside funded projects to assist water systems in acquiring and maintaining capacity.
- Development of a detailed implementation plan that defines specifically how the strategy will be carried out, monitored and revisited.

The Division of Drinking Water Management Team meets periodically to discuss programs that develop water system capacity. It is likely that new programs and projects in addition to the ones describes above will be added to the effort in the future.

## 5.2 Summary of Implementation

The department has implemented many programs linked to the capacity development strategy. Table 5.2.1 shows various capacity development programs and activities the department has implemented to date. Implementation of these programs and activities demonstrate the department has developed and is implementing the Strategy as required by the SDWA.

**Table 5.2.1 Implementation and Highlights**

<b>Implementation</b>	<b>Highlight</b>
Control Points described in Table 1.4.1 are fully implemented.	Complex regulatory structure to ensure systems are working to acquire and maintain capacity.
SRF Loan Program	To date 61 loans have been executed allocating 33 million to water systems in the State. The majority of these loans result in enhancing the capacity of the water system.
Sanitary Survey Program	Since 1995, department staff have completed over 2000 surveys as of June 2000.
Third Party Sanitary Survey Program	Contracts with 16 LHJ's to perform sanitary surveys and make recommendations on system issues. 400 sanitary surveys in 8 counties and approval of many NCWS's.
Operating Permit Program	All federally regulated water systems are required to obtain an annual operating permit.
Set-Aside Projects Specifically to Build System Capacity	Work Plan 46: Completed 17 operator training workshops for over 700 individual small system operators. The department has numerous other capacity development set aside projects.
Water System Plans	Over 700 water systems are covered by a department approved water system plan that has assessed capacity.
Technical Assistance Provider Agreements	Contract with Evergreen Rural Water to act as a circuit rider working with communities to develop source protection programs. Goal 12 – 15 systems annually.
New Data System	New data system has been designed and is nearing construction. This system will enhance the ability to access and manage water system capacity data.
Small Water System Management Program Requirement	Established in Washington Administrative Code requirement that all existing water systems not otherwise required to complete a WSP must complete a SWSMP.
Small Water System Management Program and Training	The department has developed a Small Water System Management Program document and provided 2 workshops out of 5 planned for training on how to complete the document.
Certified Operator Program	The department administers an Operator Certification Program that examines and certifies the competence of water system operators. There are currently over 2,800 certified operators in the State. This program is currently being enhanced with development of new rules.
Satellite Management Program	The department has officially approved 34 Satellite Management Agencies that offer ownership, operations and management, and technical assistance to existing water systems. Many systems that lack capacity are now either being acquired or operated by SMA's.
Public Water Supply Coordination Act (PWSCA)	21 areas have implemented the PWSCA establishing regional water supply plans that assist existing water systems in acquiring and maintaining capacity by consolidation and regionalization of water systems.