Commonwealth of Virginia

CAPACITY DEVELOPMENT STRATEGY

Scottsville Water Treatment Plant Circa 1963

Office of Drinking Water
Virginia Department of Health
109 Governor Street, 6th Floor
Richmond, VA 23219

May 12, 2014

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment
www.vdh.virginia.gov

Office of Drinking Water
Safe Drinking Water for a Healthy Virginia

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

MAY 29 2014

Steven D. Pellei, PE, Director
Construction Assistance, Planning and Policy
Virginia Department of Health
Madison Building, 6th Floor, Room 632
109 Governor Street
Richmond, Virginia 23219

Dear Mr. Pellei:

This letter is to inform you of the results of the U.S. Environmental Protection Agency's (EPA) review of Virginia's Revised Capacity Development Strategy dated February 7, 2014 submitted by the Virginia Department of Health (VDH), which was later revised via an email from Barry Matthews on May 12, 2014. We have reviewed the revised strategy and the revised pages and have concluded that Virginia's program meets the EPA guidance and statutory requirements.

I want to thank VDH for its efforts in developing and implementing its Capacity Development Strategy and look forward to continuing cooperative efforts with your Department.

If you have any questions, please do not hesitate to contact me at 215-814-3367.

Sincerely,

William Arguto, Chief
Drinking Water Branch

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Safe, reliable, affordable drinking water is foundational to the protection of public health for all Virginians. The Commonwealth's drinking water systems face an array of challenges in meeting public health protection standards aimed at ensuring safe drinking water. The Virginia Capacity Development Program is designed to focus available resources toward assisting public drinking water systems (PWSs) in obtaining and maintaining the technical, managerial, and financial (TMF) capacity to meet these challenges.

The *Safe Drinking Water Act* (*SDWA*) includes requirements for states to obtain authority to: prevent the creation of new nonviable community and nontransient noncommunity waterworks; develop a strategy to address the capacity of all existing waterworks; and, ensure that potential State Revolving Fund (SRF) recipients have sufficient TMF capacity prior to receiving funds (or that proffered funds allow capacity attainment).

In its Strategic Plan for 2011–2015, the U.S. Environmental Protection Agency (EPA) identified *Water Safe to Drink* as a key sub-objective. The Fiscal Year 2014 National Water Program Guidance further defines the goals of EPA for ensuring a safe drinking water supply. In response, the Virginia Capacity Development Strategy has been revised to further identify how the Capacity Development Program will support the Office of Drinking Water's goal to improve PWS performance. Furthermore, this strategy explains how the Program provides, promotes, and protects public health through safe drinking water. Through proactive communication and outreach, in collaboration with municipalities, communities, water systems, partners, and other stakeholders, the Virginia Department of Health (VDH) Office of Drinking Water (ODW) will seek innovative approaches and new technologies to ensure Virginia's water systems have the TMF capacity to demonstrate long-term sustainability.

The EPA's National Capacity Development Program consists of three goals:

1. *Maintain Effective Oversight of State Capacity Development Programs*
2. *Assist Public Drinking Water Systems with Acquiring and Maintaining Technical, Managerial, and Financial Capacity*
3. *Elevate Awareness of Capacity Development Activities within EPA's Sustainable Infrastructure Initiative*

The Virginia Capacity Development Program will support and assist EPA's goals by:

1. *Operating an effective Capacity Development Program in Virginia*
2. *Providing technical assistance through the use of State Revolving Loan Fund set-asides*
3. *Communicate and educate continually and proactively the Commonwealth and its citizens as to the importance and need for sustainable water systems infrastructure.*

VDH-ODW, as the *SDWA* Primacy Agency in the Commonwealth of Virginia, developed a comprehensive Capacity Development Strategy that includes all of the *SDWA* required elements. The VDH-ODW program or activity related to each element is discussed in detail. The Virginia Board of Health, VDH-ODW have sufficient authority via the *Code of Virginia* §§ 32.1-169 and 32.1-172 B, which deals with VDH-ODW's control over waterworks' related to TMF capacity. Financial capacity is known specifically for individual waterworks as a Waterworks Business Operations Plan (WBOP); and formally called a Comprehensive Business Plan. The pertinent *Code* sections and the Virginia *Waterworks Regulations* adopted under the *Code* are further discussed in this Strategy.

SECTION 1
Introduction

The *SDWA* includes requirements for states to:

1. obtain authority to prevent the creation of new nonviable community and non-transient noncommunity waterworks;
2. develop a strategy to address the capacity of all existing waterworks; and,
3. ensure that potential SRF recipients have sufficient TMF capacity prior to receiving funds (or that the funds will allow them to receive the capacity they require).

The VDH-ODW**,** the Commonwealth of Virginia's state primacy agency, developed a comprehensive Capacity Development Strategy that includes all of the *SDWA* required elements listed below.

1. Methods or criteria to prioritize systems. [§1420(c)(2)(A)] These include methods or criteria that could be used to identify and prioritize PWSs most in need of improving TMF capacity.

2. Factors that encourage or impair capacity development. [§1420(c)(2)(B)] These include the "institutional, regulatory, financial, tax, or legal factors" that exist at the Federal, State, or Local level that encourage or impair capacity development.

3. How the State will use the authority and resources of the *Safe Drinking Water Act*.
[§1420(c)(2)(C)] States should describe how they will use the authority and resources of the *SDWA* or other means to:

a. Assist PWSs in complying with *National Primary Drinking Water Regulations*. Create method and criteria for prioritizing systems §1420(c)(2)(A).
   - Collect and evaluate information on factors that encourage or impair capacity development §1420(c)(2)(B).
   - Determine how State will use the authority and resources of the *SDWA* §1420(c)(2)(C).
   - Establish a baseline for measuring improvements §1420(c)(2)(D).
   - Plan and implement actions designed to build capacity §1420(c)(2)(C).
   - Compare results against baseline and measure progress §1420(c)(2)(D).
b. Enhance TMF capacity by encouraging the development of partnerships between PWSs.
c. Assist PWSs in the training and certification of their operators.

4. How the State will establish the baseline and measure improvements.

[§1420(c)(2)(D)] States should describe how they will establish a baseline and measure improvements in the capacity of PWSs under their jurisdiction. This potential programmatic element provides the tools that State primacy agencies must have to produce and submit a report to their Governors on the efficacy of their capacity development strategy and progress made toward improving the TMF capacity of PWSs in their State.

5. Procedures to identify interested persons. [§1420(c)(2)(E)] States should identify and involve stakeholders in the creation and implementation of their capacity development strategy.

This section highlights the overall VDH-ODW program or activity related to the stated element. Detailed program activities are found in Sections 2 through 8.

1.1 STATE AUTHORITY FOR NEW WATERWORKS [SDWA §1420(a)]

The Commonwealth of Virginia's Board of Health, and VDH-ODW have sufficient authority via the *Code of Virginia* §§ 32.1-169 and 32.1-172 B to control waterworks' activity specifically related to TMF and operational capacity, which is codified into a comprehensive business plan for each waterworks in the Commonwealth. Pertinent Commonwealth of Virginia *Code* sections are attached in Appendix A. The Virginia *Waterworks Regulations* were adopted under this *Code*.

The VDH-ODW Waterworks Permit Application Process is attached in Appendix B.

1.2 METHODS TO IDENTIFY/PRIORITIZE WATERWORKS CAPACITY [SDWA §1420(c)(2)(A)]

VDH-ODW has established two methods for waterworks to be prioritized for and receive assistance. Assistance will be provided by VDH-ODW staff or by referral to technical assistance contractors. First, all waterworks targeted to receive SRF funding will be assessed by VDH-ODW SRF staff to determine if the waterworks has sufficient TMF capacity. Waterworks that do not appear to have sufficient TMF capacity will be requested to prepare a WBOP. Secondly, existing community, and non-transient noncommunity waterworks will be routinely assessed for TMF capacity. Waterworks needing assistance will be identified, prioritized and referred to the technical assistance providers.

The process for identification and prioritization of waterworks is described in Section 4.3

1.3 SDWA §1420(c)(2)(B): FACTORS THAT ENCOURAGE OR IMPAIR CAPACITY

VDH-ODW has many programs already in place that enhance system capacity. There will be additional programs added as part of the Capacity Development Strategy that will also enhance capacity. The existing programs that enhance capacity are identified on Table 4-1.

Impediments to capacity development may be classified as structural, legal and regulatory, and economic and demographic. There are specific impediments to capacity under each of these categories. Impediments and possible mitigation strategies are addressed in Section 6.

1.4 *SDWA* §1420(c)(2)(C): DESCRIPTION OF HOW THE STATE WILL USE ITS AUTHORITIES AND RESOURCES

1.4.1 To Assist Public Waterworks in Complying with Regulations

VDH-ODW has many existing programs and activities that are designed to assist waterworks in complying with regulations. A list of the existing programs and activities are contained in Table 4-1. Through the use of SRF set-aside funds, VDH-ODW will be expanding its programs to provide more assistance. Types of assistance are described in Section 4.4.

1.4.2 To Encourage the Development of Partnerships

VDH-ODW uses SRF set-aside funds to develop and implement various programs that establish partnerships within the waterworks industry. These programs include:

- Leak Detection (Virginia Rural Water Association),
- Management, Methods, and Money – Understanding Concepts in Capacity Development (Training through Virginia Tech),
- Source Water Protection (Interstate Commission on the Potomac River Basin),

Other programs are available as needs and opportunities arise.

1.4.3 To Assist Public Waterworks in the Training and Certification of Operators

The VDH-ODW programs that address the assistance with training and certification are described on Table 4-1.

1.5 *SDWA* §1420(c)(2)(D): DESCRIPTION OF HOW THE STATE WILL ESTABLISH A BASELINE & MEASURE IMPROVEMENTS IN CAPACITY

VDH-ODW will use compliance data, sanitary survey data, and managerial and financial capacity data to assess the overall TMF capabilities of community and non-transient noncommunity waterworks. Indicators of TMF capacity have been selected and criteria established. The waterworks will be assessed every three (3) years to measure improvement over time. Section 4 describes the measurement of the baseline and improvement.

1.6 *SDWA* §1420(c)(2)(E): IDENTIFICATION OF PERSONS WHO HAVE AN INTEREST IN OR ARE INVOLVED IN DEVELOPMENT AND IMPLEMENTATION OF THE STRATEGY

Virginia has an ongoing, active Waterworks Advisory Committee (WAC) that consists of a diverse group of waterworks stakeholders. This group had representation on a Capacity Development Strategy committee that included other individuals interested in the Capacity Development Strategy or its implementation. The Committee membership is shown in Appendix C. They are given opportunities to provide input on the capacity development process and may be consulted regarding the strategy implementation.

Stakeholder involvement is discussed in Section 5.

SECTION 2
Elements for New Waterworks

The 1996 amendments to the *SDWA* adopted significant changes to the *SDWA*. Of particular importance, the amendments required States to adopt and implement programs to ensure that waterworks have the capability to comply with existing and anticipated drinking water regulations. These new provisions, known as "capacity development," mark the first time that the federal government has explicitly required States to take actions to ensure that waterworks will have the resources that are required to provide safe and reliable water service to the public.

Section 1420(a) of the *SDWA*, requires each State to obtain "the legal authority or other means to ensure that all new community waterworks and new non-transient non-community waterworks commencing operation after October 1, 1999, demonstrate TMF capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, on the date of commencement of operations". In other words, this Section of the *SDWA* requires Virginia to have the ability to prevent a new waterworks from beginning operation unless the waterworks has the TMF capacity to provide safe and reliable service, both at present and in the future. This provision applies to both COMMUNITY WATERWORKS and NONTRANSIENT NONCOMMUNITY WATERWORKS.

In Virginia, all proposals to create a new waterworks (including community waterworks, nontransient noncommunity waterworks, and transient noncommunity waterworks) must meet certain statutory and regulatory requirements.

Section 32.1-172 of the *Code of Virginia* states that "No owner shall establish, conduct or operate any waterworks … without a written permit …" and that "an application for a permit shall include a comprehensive business plan detailing the TMF commitments to be made by the owner in order to assure that the waterworks' performance requirements for providing the water supply will be met over the long term."

The VDH-ODW requires a WBOP associated with the development of a new waterworks, or the purchase or transfer of an existing waterworks by a potential first-time owner of a Virginia waterworks, or for an owner that has a poor compliance history with the *Waterworks Regulations*.

Details of this process are attached in Appendix B.

In addition, prior to receiving a permit to construct, the plans and specifications must meet VDH-ODW's existing *Waterworks Regulations* to ensure that new waterworks are properly designed and that the physical facilities will be operated in a safe and appropriate manner.

SECTION 3
Elements for Waterworks Seeking State Revolving Funds Assistance

3.1 *SDWA* REQUIREMENTS FOR SRF APPLICANTS

The *SDWA* includes a provision for the federal government to provide capitalization grants to each state to initiate a SRF dedicated to funding drinking water projects. The Drinking Water SRF has the requirement to ensure that waterworks receiving SRF funds have sufficient TMF capacity.

- *SDWA* in §1452 states " … no assistance shall be provided to a public water system that: (*i*) does not have the TMF capacity to ensure compliance with the requirements of this title or (*ii*) is in significant noncompliance with any requirement of the national primary drinking water regulations or variance." However, a waterworks owner may receive assistance if use of the funds will ensure compliance or if the waterworks owner agrees to undertake appropriate changes in operations (including ownership, management, accounting, rates, maintenance, consolidation, alternative water supply, or other procedures) to assure compliance.

- Waterworks that are targeted to receive SRF funding will be assessed by VDH-ODW staff to determine if the waterworks has sufficient TMF capacity. Waterworks that do not appear to have sufficient TMF capacity will be required by the Field Office staff to complete a WBOP and obtain approval prior to funding. The requirements of the WBOP shall include such information as is necessary to insure that the waterworks owner analyze the critical components of their operations. To further the initiative of having waterworks owners analyze their systems for weaknesses, the SRF Application scoring has been modified in the past few years to award points for engineering planning, distribution system leakage reporting, and asset management.

- Owners that require assistance in developing a plan may be referred to the Field Office for technical assistance. If additional assistance is required, the waterworks may be referred to the Capacity Development Manager. In certain conditions (*e.g.*, SRF funding, significant financial stress, approved set-aside suggestions) an assistance contractor may be provided.

SECTION 4
Elements for Existing Waterworks

4.1 EXISTING VDH-ODW ACTIVITIES THAT ADDRESS CAPACITY DEVELOPMENT

Prior to the 1996 *SDWA* amendments, VDH-ODW already conducted many activities that relate to waterworks capacity development. These were not typically considered "capacity building" activities and were not packaged as part of an overall capacity development program. During preparation and revision of the Capacity Development Strategy, it is important to determine the current capacity development activities, how those activities impact TMF capacity, and how VDH-ODW coordinates those activities.

Table 4-1 presents activities that deal with waterworks capacity development and how those activities relate to *SDWA* capacity development requirements. This table identifies existing activities that apply to community, nontransient noncommunity and transient noncommunity waterworks. This is not meant as an exhaustive list of all of the activities within VDH-ODW, but rather those activities that relate in some manner to capacity development. These activities assist in the establishment of a baseline and continued measurement of progress.

4.2 CAPACITY ASSESSMENT PROCESS

4.2.1 Introduction

As part of the process of determining basic TMF capacity needs, prioritizing technical assistance, and measuring improvement over time, an assessment baseline must be established. This baseline is established based on an assessment that includes current and new information obtained as a part of the capacity development process. This assessment establishes the baseline for TMF indicators. A baseline assessment will be set and re-set every three assessment cycles, or once every nine years.

4.2.2 Baseline Assessment Using Existing and New Information

The baseline assessment will be used to obtain baseline data and updates on community (C) and nontransient noncommunity (NTNC) waterworks. It is an approach that links compliance monitoring data, sanitary survey data, and capacity assessment data to determine the general TMF capacity. The information obtained from this type of comprehensive assessment is multi-purposed. The intent is to: 1) establish a baseline; 2) provide a means of monitoring improvement over time; 3) establish a prioritization list of waterworks for TMF capacity assistance; and, 4) assist VDH-ODW's allocation of personnel and finances effectively.

This assessment approach takes into account three factors: (1) technical factor; (2) managerial factor; and, (3) financial factor, and it is described by the following equation and illustrated on Figure 4-1 on page 4-8.

T + M + F = Overall Capacity Assessment

Where: T = technical factor
M = managerial factor
F = financial factor

The sum of the factors' scores represents the overall waterworks capacity assessment. The basic type of information and the source of information for each factor are described below. Figure 4-2 illustrates the general process and use of the waterworks capacity assessment. Transient noncommunity waterworks (TNC) are not assessed due to the relatively low public health impact associated with their lack of capacity. TNCs requiring technical assistance will be referred to a service provider through VDH-ODW's routine surveillance program (see 4.4.1).

4.2.2.1 Technical Factor ("T")

This factor evaluates a waterworks' ability to meet current construction criteria for source, treatment, distribution, and storage. Further, this factor measures the waterworks ability to stay within its permitted capacity and provide drinking water that meets the customers' level of service (few customer complaints). This measurement quantifies the waterworks' ability to design, construct and produce drinking water which consistently protects public health and achieves not only compliance, but the level of service expected by its customers.

Data for this component of the assessment will come from the existing State Drinking Water Information System (SDWIS) database and other existing reporting systems that VDH-ODW utilizes to track waterworks performance. These databases contain basic waterworks information and are available to all waterworks. The technical factor inherently addresses components of technical and operational capacity.

4.2.2.2 Managerial Factor ("M")

The SDWIS database contains basic waterworks information as well as the compliance history of the waterworks. This data is used to support the scoring for this factor. VDH-ODW conducts sanitary surveys of waterworks periodically. The surveys contain basic information regarding the system condition, including operation and maintenance data. The waterworks' response to sanitary survey recommendations is a measure of management capacity. Sanitary survey data inherently addresses managerial and technical capacity. Other managerial measures include *SDWA* violations, such as treatment technique, monitoring and reporting, Consumer Confidence Report, and Cross Connection Control. Additionally, this factor measures a waterworks understanding of current and future *SDWA* regulations and rules.

4.2.2.3 Financial Factor ("F")

This factor evaluates a waterworks' financial capacity. Currently, data is collected by VDH-ODW for this type of information. However, in order to evaluate a waterworks adequately for financial capacity, additional information may need to be obtained through the WBOP. Similar to the managerial factor, the financial factor measures the waterworks' ability to plan and budget for financial impacts resulting from new regulatory and rule changes.

4.3 PRIORITIZATION OF WATERWORKS TO RECEIVE TECHNICAL ASSISTANCE

Waterworks are prioritized for targeted on-site assistance using a two-component approach of SRF prioritization and waterworks referred by the Capacity Assessment Process. These components will yield a prioritized list of waterworks requiring assistance. The list will funnel to the Capacity Development Manager, who will determine the need for and type of assistance. A diagram illustrating the flow of prioritization is contained on Figure 4-3, Process for Referral for Assistance. Below is a description of each component.

4.3.1 State Revolving Fund Priority Waterworks

Prior to SRF loan closing, the waterworks must demonstrate that it has sufficient TMF capacity or it must demonstrate that the SRF loan will result in improvement in one or more of the TMF capacity categories. The process of assessing whether or not these waterworks have sufficient capacity was described previously in Section 3. The waterworks prioritized for SRF loans in the Annual Intended Use Plan are assessed by SRF staff.

Based on the SRF targeted waterworks assessment, waterworks with assistance needs will be referred to the Capacity Development Manager. The waterworks will be added to the assistance list. This list is prioritized to include the order of waterworks ranked on the SRF priority list. The Capacity Development Manager has the discretion of altering the order, as circumstances dictate.

4.3.2 Referrals from Capacity Assessment Process

Based on the process described in Section 4.2, systems will be assessed for TMF capacity. A list of waterworks with TMF assistance needs will be prepared and prioritized. Assistance may be related to TMF or a combination of capacity deficiencies. The waterworks will be referred to the Capacity Development Manager to add to the assistance list. The Capacity Development Manager will then have the discretion of altering the order, if there are circumstances or issues of acute public health consequence that justify the alteration.

Other sources of information utilized to prioritize waterworks for technical assistance are:

- Enforcement Targeting Tool,
- Virginia *Waterworks Regulations* significant deficiencies, and
- concurrence from Field Office staff.

4.4 TECHNICAL ASSISTANCE

Technical assistance may be provided to the waterworks by VDH-ODW staff or contractor. VDH-ODW assistance is a continuation of any existing assistance provided through routine contact with the waterworks. Contractor assistance may include VDH-ODW contract agreements which provide more resources for a greater number of visits and more services, or may include specific assistance from contractors retained as part of a specifically requested set-aside or as part of a planning grant. Waterworks which receive assistance from a contractor will be determined by the Capacity Development Manager from the prioritized assistance list as described above. A distinction exists between technical assistance (which may include TMF aspects) that is often provided without visiting the waterworks and an on-site assistance visit where the service provider physically visits the waterworks to provide assistance.

4.4.1 VDH-ODW

Currently, VDH-ODW provides technical assistance in many ways. Assistance may come from Field Office or Central Office personnel. The assistance may be very simple, such as answering a question via telephone or e-mail, to very involved assistance such as providing information to complete a WBOP. Assistance includes all factors: technical, managerial, and financial. VDH-ODW becomes aware of the need for assistance through a waterworks owner's request for assistance, data gathering efforts, customer complaints, and other means. VDH-ODW will maintain its assistance activities as part of the Capacity Development Strategy. VDH-ODW's on-site assistance is primarily provided through the Sanitary Survey program. Waterworks receive

an on-site visit at established frequencies. VDH-ODW on-site visits allow opportunities for technical assistance to owners/operators.

4.4.2 Technical Assistance Providers

The *SDWA* allow states to use funds from the SRF 15% set-aside for various program activities, including technical assistance under the Capacity Development Program. VDH-ODW may choose to utilize funds to contract with technical assistance providers.

One such provider is the Virginia Resources Authority (VRA). The VRA can provide technical assistance to waterworks who apply for SRF funds. They spend time with waterworks on unique financial capacity problems related to obtaining, or fulfilling, an SRF Loan. VRA has conducted annual loan monitoring reporting for VDH-ODW since 2009. The VRA can leverage Technical Defaults on the terms of its SRF loans to waterworks to require capacity buidling activities at waterowrks with SRF loans.

Other technical assistance providers may perform on-site activities for waterworks. While still other technical assistance providers may assistance waterworks with developing WBOPs.

4.4.3 Mentoring Program

The Drinking Water Mentoring Program is a volunteer program designed primarily to provide technical expertise to waterworks in participating communities throughout the state. This program is geared to small and rural communities, but not limited by size or function. This approach can address environmental performance, system capacity, and the management of drinking water facilities utilizing the expertise of the volunteers associated with the program.

4.5 MEASUREMENT OF PROGRESS AND IMPROVEMENT IN WATERWORKS CAPACITY

After the baseline assessment, updated data for the assessments will be collected in subsequent years at an interval of three years for community and nontransient noncommunity waterworks. Three years is chosen so that improvements from assistance and other VDH-ODW programs related to Capacity Development have a chance to beneficially impact waterworks. Analysis will indicate whether significant improvements are achieved. In this manner, VDH-ODW will be able to target additional assistance in areas which have not improved.

In addition to measuring improvement by analyzing overall waterworks assessment data, VDH-ODW will be able to measure improvement by examining the results of its assistance programs. VDH-ODW will have data regarding the number of waterworks that were helped and the progress that was made in improving the capacity of those waterworks.

Table 4-1
Existing VDH-ODW Activity and the Relationship to 1996 SDWA Amendments

Existing VDH-ODW Activity	Requirements in 1996 SDWA Amendments								
	State Authority for New Systems	Identifying and Prioritizing Systems in Need of T, M & F Assistance	Factors That Encourage Capacity	How the State Will Use Its Resources to:			Establish Baseline and Measure Improvement	Identify Persons who are interested in Developing Capacity Development Strategy	Methods to Ensure Systems Eligible to Receive SRF Funding Have Sufficient T, M & F Capacity
				Assist Waterworks in Complying w/Regulations	Encourage the Development of Waterworks Partnerships	Assist Systems in Training and Certification of Operators			
Sanitary Survey Program (C, NTNC, TNC)		√	√	√		√	√		
Plan Reviews/Permits (C, NTNC, TNC)	√	√	√	√	√				√
Compliance Monitoring (Water Quality) (C, NTNC, TNC)		√	√	√			√		√
Phase II/V Vulnerability Assessments (C, NTNC)		√	√	√			√		
Compliance/ Enforcement Program (C, NTNC, TNC)		√			√		√		

Table 4-1 (continued)

Existing VDH-ODW Activity	Requirements in 1996 SDWA Amendments								
	State Authority for New Systems	Identifying and Prioritizing Systems in Need of T, M & F Assistance	Factors That Encourage Capacity	How the State Will Use Its Resources to:			Establish Baseline and Measure Improvement	Identify Persons who are interested in Developing Capacity Development Strategy	Methods to Ensure Systems Eligible to Receive SRF Funding Have Sufficient T, M & F Capacity
				Assist Waterworks in Complying w/Regulations	Encourage the Development of Waterworks Partnerships	Assist Systems in Training and Certification of Operators			
Public Waterworks Database (C, NTNC, TNC)		√					√		
Waterworks Advisory Committee (C, NTNC, TNC)								√	
Technical Assistance Related to Circuit Rider Contract (C, NTNC)		√	√	√	√				
Technical Assistance Related to Comprehensive Business Plan Contract (C, NTNC)		√	√						√
Technical Assistance Related to Compliance Issues Contract (C, NTNC)		√	√	√	√		√		√

Table 4-1 (continued)

Existing VDH-ODW Activity	Requirements in 1996 SDWA Amendments								
	State Authority for New Systems	Identifying and Prioritizing Systems in Need of T, M & F Assistance	Factors That Encourage Capacity	How the State Will Use Its Resources to:			Establish Baseline and Measure Improvement	Identify Persons who are interested in Developing Capacity Development Strategy	Methods to Ensure Systems Eligible to Receive SRF Funding Have Sufficient T, M & F Capacity
				Assist Waterworks in Complying w/Regulations	Encourage the Development of Waterworks Partnerships	Assist Systems in Training and Certification of Operators			
Operator Certification (C, NTNC)		√				√			√
Operator Training By Contract (C, NTNC, TNC)			√	√		√			
Source Water Protection Contract (C, NTNC)			√	√		√			
Source Water Assessment Program (C, NTNC, TNC)			√ (completed by VDH-ODW)	√	√ (Joint SWAs)				

(C): Community
(NTNC): Nontransient Noncommunity
(TNC): Transient Noncommunity

Figure 4-1

Waterworks Capacity Development Baseline Assessment

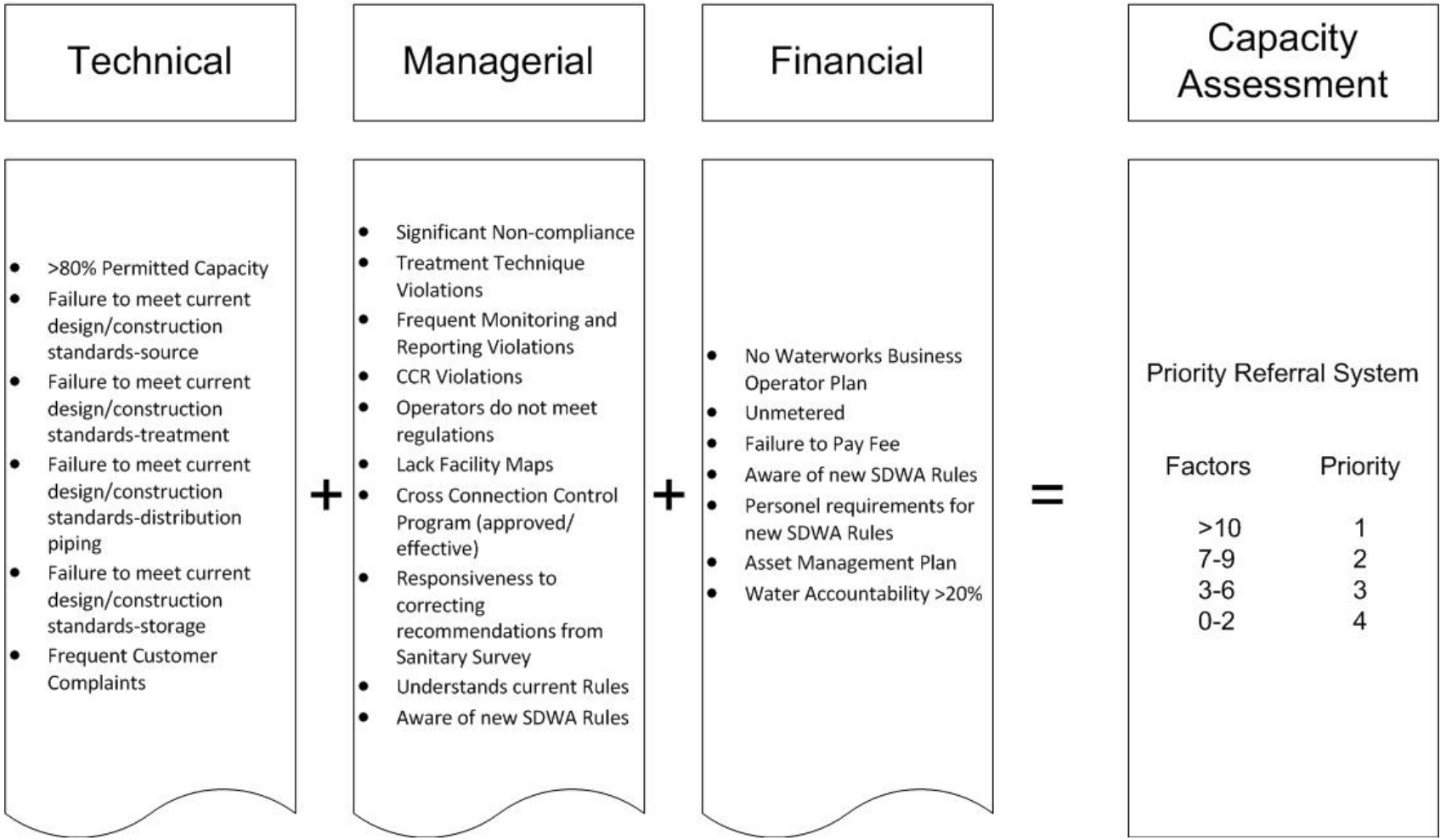


Figure 4-2

General Process and Use of Waterworks Assessment Information

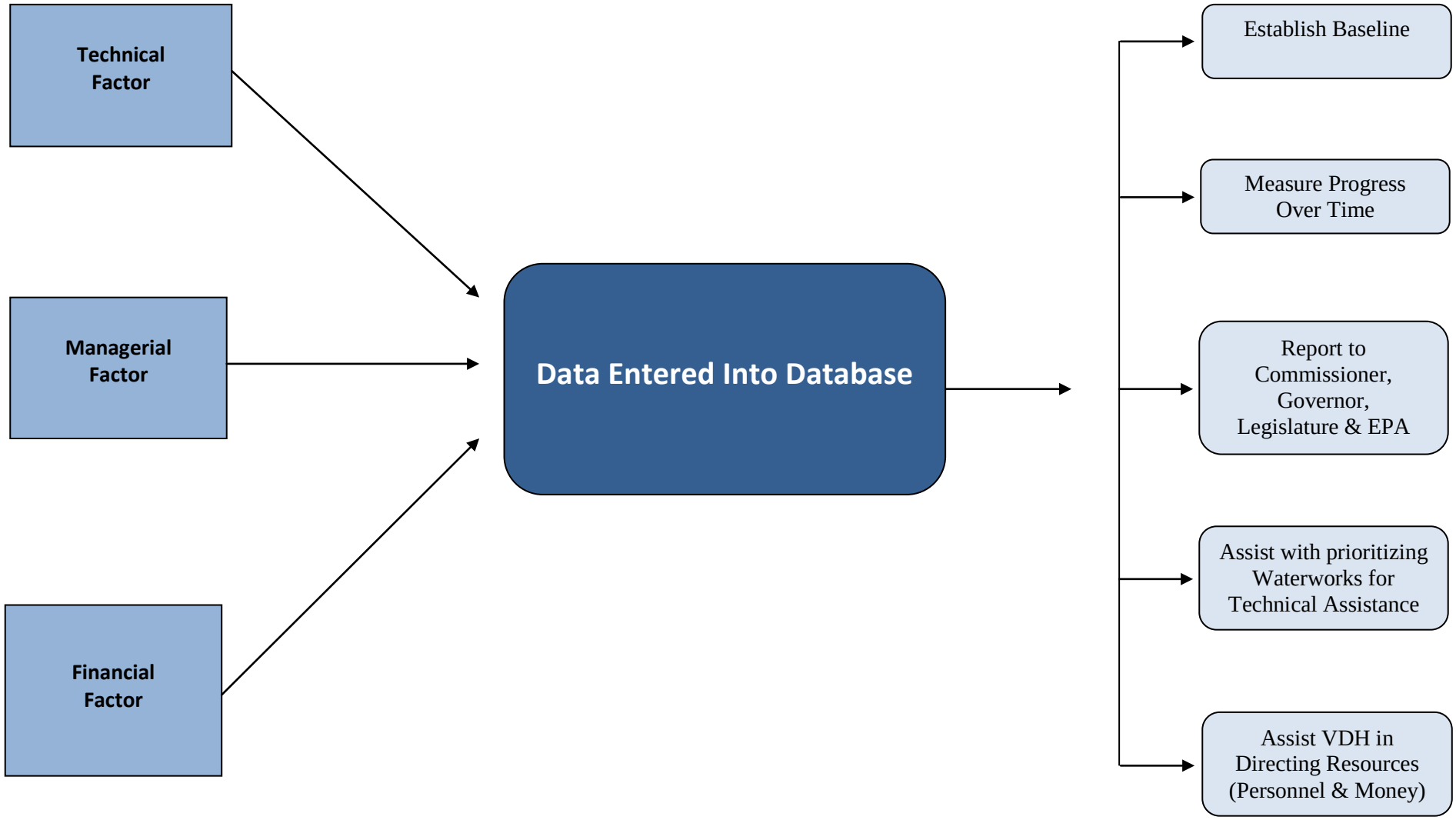
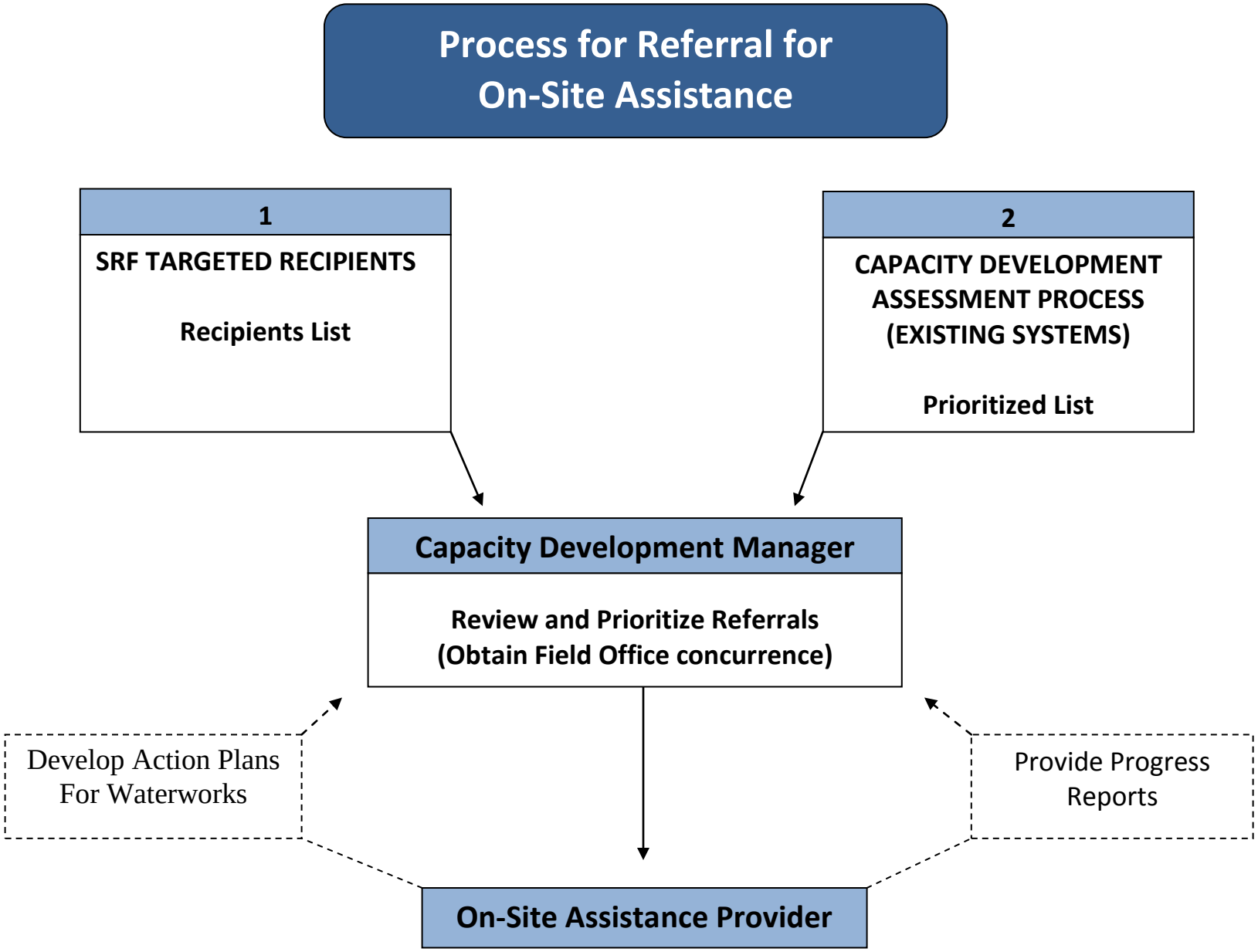


Figure 4-3


Process for Referral for On-Site Assistance
1
SRF TARGETED RECIPIENTS
Recipients List
2
CAPACITY DEVELOPMENT ASSESSMENT PROCESS (EXISTING SYSTEMS)
Prioritized List
Capacity Development Manager
Review and Prioritize Referrals (Obtain Field Office concurrence)
Develop Action Plans For Waterworks
Provide Progress Reports
On-Site Assistance Provider

SECTION 5
Stakeholder Involvement in the Development of the Strategy

5.1 THE STAKEHOLDER PROCESS

Stakeholder involvement is important for several reasons. Participation in the strategy development process, by groups and individuals who own, manage, operate, design, or finance waterworks can improve the quality of the Capacity Development Strategy. Decision-making improves through utilizing additional information and diverse perspectives, as well as understanding sensitive key issues. As a group, the stakeholders can assist in identifying common goals and developing strategies to meet those goals. Equally important to implementation is stakeholder "buy-in." A successful strategy has to be supported to work over time. A strategy developed through consensus can mitigate problems.

A vested stakeholder group improves communication between different organizations. They can also improve communications within the organizations. The Capacity Development Program will include educating waterworks management, operators, engineering consultants, state agencies, and consumers. A stakeholder group that has access to these people through their membership newsletters and other marketing approaches can enhance the success of the program. A continuous dialogue between stakeholders, funding agencies, and regulators is important to understand which Capacity Development elements are working and which are not. A stakeholder group can work collaboratively to meet the common goal of increasing capacity to provide safe drinking water for all Virginia residents.

5.2 IDENTIFICATION OF STAKEHOLDER GROUP

The WAC formed the core for the first stakeholder group. The WAC is well-established and has been meeting regularly since 1974. At the WAC's March 18, 1999 meeting, VDH-ODW presented the framework for the development of the original Capacity Development Strategy.

The current WAC membership includes: Virginia Section of AWWA, Southeast Rural Community Assistance Project, Virginia Manufacturers Association, Virginia Water Well Association, Virginia Association of Counties, Virginia Society of Professional Engineers, Virginia Tech, American Council of Engineering Companies of Virginia, Waterworks Operator - Class 1, Waterworks Owner – Community (Class 5 & 6), Virginia Rural Water Association, Virginia Municipal League, Virginia Division of Consolidated Laboratory Services, Virginia Department of Environmental Quality, Virginia Department of Housing and Community Development, Virginia State Corporation Commission, and Virginia Water Environment Association. The Department of Environmental Quality (DEQ) and the State Corporation Commission (SCC) are involved in aspects of the Capacity Development Program; these agencies attend the WAC meetings, but are not authorized by *Regulations*.

For the current revision of the Strategy, specific members from interested industry organizations were appointed to participate on the Capacity Development Strategy Focus Group. The members of the Focus Group are shown in Appendix C. This Focus Group met in November, 2013 to review and comment on the revisions to this Strategy. With the Focus Group's concurrence, they will segue into a Technical Advisory Committee (TAC) for the purpose of annual reviews of the efficacy of this strategy.

SECTION 6
Factors that Encourage or Impair Capacity Development

6.1 FACTORS THAT ENCOURAGE CAPACITY DEVELOPMENT

There are several positive factors in Virginia that help to increase the likelihood that waterworks will have the capacity to provide safe and reliable service to the public. An important factor of capacity success is the consolidation of regulatory functions regarding waterworks within VDH-ODW, coupled with adequate legal authority for VDH-ODW to perform those functions.

VDH-ODW has the ability to restrict the formation of new waterworks that cannot demonstrate the capability to provide safe and reliable drinking water. The effective use of this authority can prevent the establishment of waterworks that do not demonstrate a long-term commitment to providing safe, pure, affordable drinking water to its customers.

In addition, VDH-ODW has a comprehensive program for providing technical assistance to existing waterworks. The technical assistance program is used to help waterworks develop the capabilities which are lacking. As detailed in an earlier section of the strategy, VDH-ODW developed ways to better target the provision of technical assistance and identify waterworks that are in need of assistance. This technical assistance program, coupled with VDH-ODW's goal of conducting sanitary surveys annually at surface water source waterworks, and every two years for groundwater source waterworks (without treatment)**,** provides a high level of oversight of Virginia's waterworks.

Another positive factor in Virginia is that a high percentage of the populace are connected to a drinking water systems owned by local government agencies. This virtually insures that a minimum level of planning, management, and financial viability exists. Elected/Appointed officials may be replaced through the electoral process if customers do not like the service provided.

Additionally, regulatory authority over land use rests with local government. Comprehensive Plans, Master Plans, Zoning Restrictions, and other local ordinance serve to insure that only viable waterworks owners are successful through the process.

New privately owned noncommunity and nontransient noncommunity waterworks are most often associated with a larger commercial enterprise. These are often realized by financing through lending institutions which help ensure that the waterworks portion is adequately financed and managed.

Virginia is fortunate to have an abundant supply of water that is readily available and appropriate for drinking water use with appropriate treatment. A regulatory structure is in place, and continues to be improved, to protect these resources.

Additionally, private waterworks serving (or proposing to serve) fifty or more connections also falls under the regulatory jurisdiction of the SCC. SCC regulations serve to insure that private waterworks provide adequate and reliable drinking water at reasonable rates. Responsibilities of the SCC include making administrative interpretations and rulings relating to waterworks rates and regulations, investigating customer complaints regarding both rates and quality of service, maintaining service territory maps, and conducting formal rate increase and quality of service proceedings. The SCC may require revision of a waterworks' rates and regulations and service improvements if such changes are necessary to protect the public interest.

Through SRF funding, VDH-ODW has developed technical assistance for the following services to be performed annually:

- Assistance Providers – VDH-ODW plans on hiring two Capacity Development coordinators, one for eastern Virginia and one for western Virginia, to conduct on-site operational assistance to waterworks with populations less than 10,001 persons. This will supplement the Field Office staff that currently provides technical assistance to all waterworks. Additionally, VDH-ODW plans to work more closely with Southeast Rural Community Assistance Project and Virginia Rural Water Association regarding technical assistance, including water accountability and asset management.
- Source Water Assessment – Through the use of Geographical Information Systems (GIS), VDH-ODW plans on assessing all new public water systems sources. The Source Water Assessment Program will be used as the basis for Source Water Protection Plans, and can be utilized as supplemental information during sanitary surveys to make Synthetic Organic Compound Waiver determinations.
- Source Water Protection – Independent contractors continue provide guidance to waterworks in developing and implementing Source Water Protection Programs. This assistance will be provided to ground and surface water based community systems with populations of less than 10,001 persons.
- Waterworks Business Operations Plan – Service providers may be utilized to provide hands-on guidance and assistance to waterworks in developing a WBOP which conforms to VDH-ODW guidelines.

Other SRF funded activities that will enhance capacity include:

- Security Technical Assistance to Waterworks – On an as requested basis, the security officer will conduct on-site security assessments. These assessments will increase Technical and Managerial capacity through recommending process and infrastructure improvements. Further, the security officer will develop and provide training on security and emergency preparedness, and all hazards (including terrorist threats). The security officer will also provide technical assistance for developing Emergency Response Plans and other security related plans/programs. This has included Cyber-security workshops and training made available to waterworks through EPA contractors.
- Energy Audits – With the assistance of the Department of Mines, Minerals and Energy, VDH-ODW plans to promote Energy Audits at waterworks throughout the Commonwealth in conjunction with applications to the SRF.
- Establishing a Successful and Sustainable Waterworks: Revenues, Rates and Funding – A four-day educational program to provide waterworks owners and supervisors intensive training in revenues, rates and funding.
- Specialty Seminars and Training Events – Training developed as needed for waterworks staff to include such topics as emerging technology, regulatory compliance, new rules implementation and compliance and business plan development.
- Training Scholarships – Awarded to waterworks operators to attend the *Waterworks Operators Short Course*, and the *AWWA Water Utility Management Institute* at Virginia Tech.
- Operator Certification and Training – A “Distance Education” program using video tele-courses to be available to assist operators in obtaining certification.
- Operator Scholarships – for Distance Learning.
- Innovative Technology Study – Pilot study of new and innovative water treatment equipment and/or processes used at small waterworks.

6.2 FACTORS THAT IMPAIR CAPACITY DEVELOPMENT

There are several factors that work against VDH-ODW's goal of insuring that every waterworks has the TMF capacity to provide safe and reliable drinking water, now and into the future. Issues which impair a waterworks capacity will arise regardless of the effort made to insure capacity. Presented below are a few factors that can impair a waterworks' capacity to provide quality drinking water. This is not meant to be an all inclusive list of factors.

The following excerpts are presented from the draft report "Developing Guidelines for Sustainable Small Drinking Water Systems in Virginia" Study.

"In February 1999 an 8 page, 85-question survey was mailed to each of the 3781 small water system permit holders in Virginia. A total of 542 surveys were returned." Selected "Findings of Interest" are noted which illustrate a lack of understanding regarding capacity issues.

"Only 17.6% of the respondents knew the boundary of their well recharge area."

"Central to the process of future planning is that of being prepared for the replacement of existing facilities. Most of the water systems (85.2%) surveyed were unable to state the life expectancy of their system. Without this knowledge, financial and physical planning for replacement of the facilities is almost impossible. Additionally, some systems may require expansion before they require replacement. Again, a large percentage (52.9%) of systems are unable to project what their service population will be in 10 years. 27.9% stated that they did not know if they could meet water demand in 10 years with their present system. Preparing for expansion is difficult if these are not known."

"Only 28.3% of the systems surveyed include depreciation of existing facilities in their budget. Thus, they are not likely setting aside the appropriate funds to upgrade or replace their system when its life cycle is complete. 52.5% confirm that they are not putting aside money for capital improvements. 48.9% have no operating cash or reserve fund."

"Respondents to the survey indicated that 62.7% did not receive training to update their knowledge at least annually. Additionally, 37.7% stated that they did not receive outside technical assistance."

"87.4% of all systems report having a storage tank. Of these, however, 44.3% are insufficient to provide even a single day worth of water demand. Additionally, only 19.8% of all water systems surveyed had an emergency power supply."

"The results of this survey indicate that small public water systems are hesitant to relinquish control over their resources. 48.7% of the respondents answered that they would not be interested in consolidating physical facilities with another system, while 27.7% indicated they would be interested. 50.4% of the respondents indicated that they would not consolidate management with other systems, while 22.0% indicated that they would be interested. The survey results indicate that small public water systems are hesitant to enter into consolidation."

6.2.1 Structural Factors

There are a large number of independently owned and operated waterworks within the Commonwealth of Virginia. These waterworks are often very small, serving fewer than 100 homes, and are not actively operated or managed. These very small waterworks often do not have full-time employees (*i.e.*, professional staff or skilled operators), emergency response plans, or capital reserves. Their access to engineering, accounting, and legal expertise is also

limited. Under normal conditions, many of these very small waterworks are able to provide safe water to their customers. But under stress (*e.g.,* equipment failures, main breaks, extreme weather conditions), it is unlikely that these waterworks can respond appropriately, potentially resulting in serious public health threats.

Another factor that makes it difficult to improve the capacity of waterworks is the lack of profit motive in the operation of most waterworks. Many waterworks in Virginia are owned and operated by municipal systems, water authorities, schools, homeowners associations, and others who do not expect the systems to be profit centers. While these owners are concerned about public service, protection of the public health and welfare, often their financial needs are in competition with other public services. When a waterworks is established as nonprofit, volunteers can perform key functions ranging from serving on Board of Directors to assisting in the operations and maintenance of the waterworks. In addition, some nonprofit waterworks have little incentive for the owners to authorize new investments, improve the level of service, or otherwise provide a high quality product.

Finally, the location of a waterworks can compromise its ability to develop the required capacity. Waterworks located in sparsely populated areas are less likely to rely on a regional water provider or service company. Similarly, waterworks without access to high quality raw water will have higher costs and more technical challenges.

6.2.2 Legal and Regulatory Factors

Waterworks in Virginia are adequately regulated through a permitting system that ensures that they meet minimum standards for design, construction and operation. However; there is no legal mechanism to require consolidation of waterworks. Prospective new or non-complying waterworks owners are free to choose any ownership option to assure compliance with the *Waterworks Regulations* and the *Code of Virginia*.

Current Virginia legal and regulatory framework does not discourage establishment of small, stand-alone waterworks**.** Such waterworks are not likely to generate substantial capital reserves, aggressively invest in new equipment or technology, or engage the services of professionals.

Non-municipal waterworks do not have the legal or regulatory authority for zoning or land use controls (source water protection), nor condemnation powers (land for facilities). Without these tools, a waterworks' ability to control the quality of resources and the extent of services is limited.

6.2.3 Economic and Demographic Factors

Any discussion of factors that can impair a waterworks' capacity must recognize the economic and demographic factors that affect a waterworks ability to provide safe and reliable drinking water. With unlimited funding, there would be fewer impediments to a high level of service by any waterworks. However; there are limits to a waterworks ability to raise rates to generate adequate funding. The majority of low interest government funding programs available for waterworks improvements remains unavailable to private owners; however, SRF loans are made available to eligible waterworks which are privately owned.

Waterworks with challenges related to demographics (small population, low income, high percentage of incomes below the poverty level, high unemployment, and high percentage of elderly) are likely to face capacity development challenges. The root cause of some community waterworks' problems lies within these demographic considerations, and are therefore outside of the intent, purpose and scope of this strategy.

6.3 MECHANISMS TO ADDRESS CAPACITY IMPAIRMENT

Some methods to address barriers to capacity development are listed below.

Methods to Eliminate Structural Impairment

- The VDH-ODW, through the SRF Program, provides loans and principal forgiveness funding which enables waterworks to improve their infrastructure.
- The SRF application criterion provides enhanced scoring for projects which incorporates the creation or expansion of regional water suppliers.

Methods to Eliminate Legal and Regulatory Impairment

- Require waterworks submitting an SRF application to develop financial capacity by preparing a WBOP.
- Encourage waterworks consolidation through compliance actions.
- Develop a Receivership program as outlined in Section 6.3.1, below.

Methods to Eliminate Economic and Demographic Impairment

- Develop incentives for regionalization in areas that face economic and demographic challenges.
- Develop training and education programs to assist waterworks that are economically stressed.

6.3.1 Receivership of Significantly Non-complying Waterworks

There are situations where, after the best efforts are made utilizing all the Capacity Development tools described within this strategy, systems and owners cannot provide safe drinking water to their customers. In these situations; there is a dire lack of capacity that creates an urgent condition. One tool that § 32.1-174.3 of the *Code of Virginia* authorizes is Receivership. Although the *Code* authorizes the process, there are currently no existing state funds for this program. VDH-ODW's intent is to utilize SRF 15% set-aside funds to meet the needs of the Receivership Program. Funds will be requested to pay third-party service providers to manage the receivership of the waterworks as ordered by the Court system. This management will constitute direct technical assistance under the 15% set-aside provisions of the SRF. This assistance will be limited to a specified period of time, not to exceed 24 months. The technical assistance will address TMF factors throughout the waterworks organization. These funds will not be utilized for the renovation, expansion or maintenance of the waterworks. VDH-ODW anticipates conducting emergency procurements for technical assistance to specific waterworks.

6.4 ONGOING DETERMINATION OF FACTORS THAT IMPAIR AND ENHANCE CAPACITY

Part of the technical assistance provider's responsibilities is to communicate a description of their activities. Newly identified factors that enhance or impair the waterworks ability to attain capacity are added to those already listed. VDH-ODW thereby has an ongoing mechanism to identify multiple factors that impair or enhance capacity.

SECTION 7
Implementation Plan

7.1 IMPLEMENTATION WITHIN THE AGENCY

VDH-ODW has formed a Capacity Development Strategy Focus Group, comprised of interested industry representatives, Not for Profit Organization representatives and VDH-ODW staff. The Focus Group roster is shown in Appendix C. The Focus Group was formed to review and revise Virginia's original Capacity Development Strategy dated May 2000. The resulting Strategy is this document with all the goals, objectives, and procedures necessary to achieve the implementation of this newly revised and updated Strategy.

This Focus Group will be requested to transform into a Technical Advisory Committee that can be utilized to communicate the Capacity Development Strategy to all interested parties across the Commonwealth.

7.2 REPORTING REQUIREMENTS

The reporting requirements related to the Capacity Development portion of the 1996 SDWA Amendments are shown on Table 7-1.

7.3 ACTION PLAN

7.3.1 Action Plan for Evaluating New Waterworks

The federal deadline for having a comprehensive program ensuring new waterworks have the requisite TMF capacity was October 1, 1999. By letter dated May 5, 1999, EPA determined that VDH-ODW met the EPA guidance and statutory requirements.

This action plan was formally established by VDH-ODW Working Memo 784 dated February 10, 1997; revised April 26, 2012. The current strategy document is the result of the latest revision of the Capacity Development Strategy, originally issued in May 2000.

7.3.2 Action Plan for Evaluating SRF Applications

Section 3 describes this established procedure. Additional information can be found at:
http://www.vdh.virginia.gov/odw/financial/dwfundingprogramdetails.htm

7.3.3 Action Plan for Evaluating Existing Waterworks

As previously stated, Virginia had a capacity development strategy for existing waterworks that were not SRF applicants prior to the October 1, 2000 deadline.

The baseline assessment described in Section 4.2.2 was implemented prior to July 1, 2001. An update of the baseline assessment has been done on a three year cycle since 2001 to measure system improvements over time. See Table 7-2.

Table 7-1
1996 SDWA Capacity Development Reporting Requirements

Section	When	To Whom	By Whom	Description
1420(c)(3)	Not later than 2 years after the date on which a State adopts a capacity development strategy and every 3 years thereafter.	Governor of the Commonwealth of Virginia; also available to the public.	Agency Head; VDH-ODW is the state agency.	Report shall be on the efficacy of the strategy and progress made toward improving the TMF capacity of public water systems in the Commonwealth. Reports have been filed every three years, with the last being submitted in 2011.
1420(b)(2)	Not later than 5 years after the date of enactment of this section and as part of the capacity development strategy of the State.	The EPA Administrator.	State Agency; VDH-ODW.	Each State shall report on the success of enforcement mechanisms and initial capacity development efforts in assisting the public water systems listed under paragraph (1) to improve TMF capacity. Annual reports have been provided to EPA, next report due November 30, 2013
1420(b) (relates to above 1420(b)(2)).	August 6, 1997 (and periodically update)—or—Beginning not later than 1 year after the date of enactment of this section.	The EPA Administrator.	State Agency; VDH-ODW	List of community water systems and non-transient noncommunity water systems that have a history of significant noncompliance, and the reasons for their noncompliance. Included in the annual report to EPA, above.

Table 7-2
Capacity Development Strategy – Timeline for Action

Action	Date
Baseline Assessment	Completed 2001
Adopt Strategy to prevent losing 10% SRF grant	Completed 2000
1420(b) Last report to EPA	October 2011
1420(c) Last report to Governor/Public	November 2011
Last Reassessment	July 2013
1420(c) Next report to Governor/Public	November 2014

SECTION 8
Communication Strategy

8.1 GOVERNMENTAL AGENCY COMMUNICATION

Implementation of the Capacity Development Strategy requires VDH-ODW to communicate with other governmental agencies. This includes annual reporting to EPA and triennial reporting the Governor. These reports provide information regarding the success of the strategy and the overall improvement to the waterworks in the Commonwealth. VDH-ODW staff will communicate regularly on SRF application reviews and technical assistance efforts related to SRF recipients. VDH-ODW personnel will communicate with other funding agencies (*e.g.*, Rural Development, Community Development Block Grant Program, the Virginia Tobacco Commission, and the Virginia Coalfield Economic Development Authority).

8.2 STAKEHOLDER COMMUNICATION

As discussed in Section 5, the Capacity Development Strategy Focus Group will meet to review this revision of the Strategy. The TAC will then review the strategy once a year. Each of the members of the TAC may pass information to their constituents and report any feedback to VDH-ODW's Capacity Development Manager. In addition, VDH-ODW may mail any additional information to the members.

Further, the VDH-ODW will periodically conduct surveys of stakeholders in an effort to gather data, evaluate, and seek input for the purpose of improving the menu of offerings of technical assistance and training.

8.3 WATERWORKS COMMUNICATION

An important component of the overall strategy is ensuring waterworks are aware of the Capacity Development Program. That the waterworks owners know the requirements; and that TMF assistance is available. There are many methods available to inform the waterworks. As described below, VDH-ODW will:

- Announce any technical assistance contracts in mass mailings, e-mails or other means. Interested waterworks will be requested to notify any service providers.

- Produce simple one-page handouts listing different programs and activities and distribute them through conferences and meetings. They are available to be handed out at sanitary surveys and when waterworks owners stop into VDH-ODW offices.

- Train sanitary survey personnel on the requirements of the WBOP and the Capacity Development Strategy and inform waterworks personnel about the program during sanitary surveys.

- Request stakeholders on the Focus Group inform waterworks regarding the requirements.

- Provide technical assistance for WBOPs development, inform waterworks of the revised Strategy and publish available technical assistance.

APPENDIX A

CODE OF VIRGINIA

CODE OF VIRGINIA

§ 32.1-172. Permit required.

A. No owner shall establish, construct or operate any waterworks or water supply in the Commonwealth without a written permit from the Commissioner, except for the extension of water distribution piping having a diameter of eight inches or less and serving less than fifteen equivalent residential connections.

B. The application for such a permit shall comply with regulations of the Board and shall be accompanied by a certified copy of the maps, plans and specifications for the construction of such waterworks, a description of the source or sources from which it is proposed to derive the water supply and the manner of storage, purification or treatment proposed for the water supply prior to its delivery to consumers.

The application also shall include a comprehensive business plan detailing the technical, managerial, and financial commitments to be made by the owner in order to assure that system performance requirements for providing the water supply will be met over the long term. The Board, in consultation with the State Corporation Commission, shall establish the criteria to be used by the applicant in the development of a business plan.

In addition, the Board may require the submission of a business plan by those existing waterworks that have demonstrated significant noncompliance with the waterworks regulations. The Board may waive the requirement for submission of a comprehensive business plan for applicants who have demonstrated a history of acceptable compliance with waterworks regulations.

If any applicant so requests, the Board shall not disclose the contents of the comprehensive business plan except as necessary to perform its duties.

C. The permit may state the permitted capacity of the waterworks, the permitted source or sources of the water supply, the permitted manner of storage, purification and treatment for the water supply and such other conditions as the Commissioner may deem necessary to afford a supply of pure water.

D. Except as may be provided by regulation of the Board, no other source of water supply shall subsequently be used for any such waterworks, nor shall any change in the manner of storage, purification and treatment of the water supply be made without obtaining an additional or amended permit.

E. Whenever application shall be made to the Commissioner for a permit, he shall examine the application and, as soon as practicable thereafter, shall issue the permit if, in his judgment, the proposed waterworks will furnish pure water. If the proposed waterworks is not in compliance with all regulations of the Board but, in the opinion of the Commissioner, the public health will not be jeopardized, the Commissioner may issue a temporary permit for such period of time and subject to such conditions as the Commissioner may deem appropriate for the owner to achieve compliance with such regulations.

F. No permit shall be assigned or transferred.

(Code 1950, §§ 62.1-50, 62.1-56; 1964, c. 475; 1968, c. 659; 1979, c. 711; 1994, cc. 395, 708.)

APPENDIX B

WATERWORKS PERMIT APPLICATION PROCESS

DATE: September 8, 2006, **Revised January 30, 2013**

TO: Office of Drinking Water Staff

FROM: John J. Aulbach II, P.E., Director
Office of Drinking Water

SUBJECT: PERMITS & PROJECT REVIEW – Policy for Issuing Operation Permits

Project Leader: Robert Payne

Reviewed by: Susan Douglas

DELETE: WM 730 (Exclusion from Regulation-Manufactured Home Parks)

REFERENCE: WM 784 (Project Review and Permit Procedures)

Revision Highlights:
Revokes WM 730 and deletes the exclusion for mobile home parks with meters at service connections. Provides guidance on the term "sell" water as contained in § 32.1-168. Exemptions.

SUMMARY STATEMENT:
This memo clarifies ODW authority and policy for issuing waterworks Operation Permits. Clarification is provided with respect to the subclassifications of nontransient noncommunity or transient noncommunity water systems. This memo also provides policy guidance on reliability requirements, grandparented waterworks, permit exemptions and variances.

TABLE OF CONTENTS

APPENDICES

I. DEFINITIONS

A. Waterworks:

Section 32.1-167 of the *Code of Virginia* and 12 VAC 5-590-10 of the *Waterworks Regulations* ("*Regulations*") state: " '*Waterworks'* means a system that serves piped water for drinking or domestic use to (i) the public, (ii) at least fifteen connections, or (iii) an average of twenty-five individuals for at least sixty days out of the year. The term 'waterworks' shall include all structures, equipment, and appurtenances used in the storage, collection, purification, treatment, and distribution of pure water except the piping and fixtures inside the building where such water is delivered."[1]

Exemptions. Section 32.1-168 of the *Code of Virginia* states: "The provisions of this article shall not be applicable to a waterworks which meets all of the following conditions:

1. The waterworks consists only of distribution and storage facilities and does not have any collection or treatment facilities;
2. The waterworks obtains all of its water from, but is not owned or operated by, a waterworks to which this article is applicable;
3. The waterworks does not sell water to any person; and,
4. The waterworks is not a carrier which conveys passengers in interstate commerce".

NOTE**:** To help clarify Item #3 above, a distributor of water for domestic use "sells" water if it charges consumers for the water as a separate item or bills separately for the water it provides. Conversely, if the distributor includes the charges for water in the rental fee, then it is not selling water. It is irrelevant whether water is sold for a profit or not, or whether the distributor is a public or private entity. (*See*, EPA WSG118 dated March 13, 1998,e **Appendix D**.

Excluded Facilities.

In addition, ODW has intentionally excluded from regulation the following facilities that are connected to a primary waterworks:

1. Apartment/condo complexes which sub-meter individual units if the local utility charges the residents directly, or if water usage is included as part of the monthly rent or fees. (*See*, EPA WSG 118)
2. Hotels (and like institutions) connected to a waterworks that provide ancillary water conditioning for aesthetic purposes.

B. Drinking Water:

"Drinking water" is water that is made available for drinking purposes. Drinking water does NOT include iced tea, coffee, or any other drinks made by mixing with water, ice, water processed through machines (vending machines), or foods that contain water. These are considered food products and not drinking water and therefore may be addressed by other applicable regulations and agencies.

C. Serves the Public:

"Serves the Public" means that the owner of an establishment, facility, or other entity provides the means by which the public, including employees, may obtain water for drinking. This would include the use of drinking fountains, water dispensed at soda machines, providing cups of water

[1] Physically separated systems (no interconnections) are to be evaluated individually as to whether they meet the definition criteria of a waterworks.

upon request, or providing cups adjacent to a faucet for obtaining water for human consumption. A waterworks that serves the public is a subset of noncommunity waterworks.

D. Grandparented:

Grandparenting is the practice of carrying a pre-existing condition into a new regulatory framework. With respect to Operation Permits, grandparenting means issuing an operating Permit to a waterworks with pre-existing conditions that may not comply with Part III (Manual of Practice for Waterworks Design) and IV (Exceptions to Manual of Practice for Noncommunity Waterworks) of the current *Regulations*.

E. Reliability:

"Reliability" means that a waterworks is able to demonstrate their ability to provide pure water of adequate quantity and quality. In accordance with 12 VAC 5-590-490B of the *Regulations*, all waterworks shall provide adequate treatment and pure water. Additionally, the owner shall assure a high degree of capability and reliability in accordance with 12 VAC5-590-360 A, which states:

> *"The [waterworks owner] shall provide and maintain conditions through the entirety of the water supply system in a manner which will assure a high degree of capability and reliability to effect compliance with these standards. This requirement shall pertain to the source of supply, treatment, transmission, storage, and distribution facilities and the operation thereof. In addition, this requirement shall include specific and continuing assessment of the capability, effectiveness, and reliability of the treatment process in relation to potential contaminants in the source of supply. Finally, this requirement shall include the identification and evaluation of all factors having potential for impairing the quality of the water as delivered to customers and appropriate preventive and control measures."*

F. Pure Water:

"Pure water" means water fit for human consumption and domestic use which is sanitary and normally free of minerals, organic substances, and toxic agents in excess of reasonable amounts for domestic usage in the area served and normally adequate in quantity and quality for the minimum health requirements of the persons served. (*Va. Code* §32.1-167, Chapter 5A, Article 2).

G. Domestic use or usage:

"Domestic use or usage" means normal family or household use, including drinking, laundering, bathing, cooking, heating, cleaning, and flushing toilets. (*Va. Code* §32.1-167, Chapter 5A, Article 2).

H. Year-round Resident (Residential Consumer):

"Year-round Resident (or Residential Consumer)" means an individual whose primary residence is served by the water system. The individual need not live at the residence for 365 day a year for it to be considered his/her year-round residence.[2]

[2] This definition comes from the August 21, 1991 EPA memo titled "Definitions of Types of Public Water Systems and Populations Served by Those Systems" found at www.epa.gov/safewater/wsg/wsg_66a.pdf

I. Population Served:

"Population Served" (for any type of system) means the number of residential consumers plus the average of the number of regular consumers served, per day, during a month plus the average of the number of transient consumers served, per day, during a month.[3]

II. WATERWORKS TYPES

These are the types of waterworks as defined by ODW policy:

A. Community Waterworks (C) – means a waterworks that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Refer to WM 865 for the definition of an ERC.

B. Noncommunity Waterworks – means a waterworks that is not a community waterworks but operates at least 60 days out of the year. The 60 days out of the year do not have to be consecutive.

C. Nontransient Noncommunity Waterworks (NTNC) – means a waterworks that is not a community waterworks and that regularly serves at least 25 of the same people over 6 months out of the year. "Regularly serves" means four or more hours per day, for four or more days per week, for 26 or more weeks per year.[4]

D. Transient Noncommunity Waterworks (TNC) – means a noncommunity water system that is not a nontransient noncommunity water system. These waterworks serve drinking water to at least 25 individuals (transient consumers) daily for at least 60 days out of the year. It is ODW policy to only permit transient noncommunity waterworks serving the public drinking water (domestic use intentionally excluded) with the public further defined as serving at least 25 individuals daily for at least 60 days out of the year. It is ODW policy to only permit systems serving churches or similar religious institutions if they have a permanent staff of at least 25 or have day care or school facilities or similar activities that serve at least 25 people.

E. Consecutive waterworks – means a waterworks that has no water production or source facility of its own and obtains all of its water from another permitted waterworks.

III. ODW'S AUTHORITY

ODW's authority extends to any water system that meets the definition of a waterworks. This authority over waterworks is granted *by law (Va. Code §32.1-169 & 170*), and not by the possession of an Operation Permit. Therefore, once a system meets the definition of a waterworks they are subject to the *Va. Code §32.1-167* et. seq., the *Regulations,* and ODW authority (see *12 VAC 5-590-20 through 40)*; regardless of whether they have been issued an Operation Permit. ODW may conduct sanitary surveys and issue NOVs for systems that meet the definition of a waterworks but do not have an Operation Permit. (This includes a waterworks whose permit has been revoked but continues to meet the definition of a waterworks.)

[3] *Ibid*
[4] *Ibid*

ODW will extend its authority to those systems that have applied for a permit with the intention of becoming a waterworks. By applying to VDH for a construction permit, the water system owner is voluntarily submitting to, and accepting, regulation by VDH as a waterworks. If, at some later date the water system still does not qualify as a waterworks under the regulatory definition and the owner challenges our authority[5] to regulate the system, VDH can make the decision to revoke the permit and stop regulating the system as a waterworks.

The following describes ODW's policy regarding systems whose population or service connections do not clearly meet the definition of a waterworks.

A. Proposed Waterworks

ODW will issue the owner of a proposed water system a waterworks an Operation Permit when:

1. The owner has confirmed[6] to ODW that the water system will eventually meet the definition of a waterworks (12 VAC 5-590-10); and,
2. The owner has met the requirements of the construction and Operation Permit application process. (See WM 784).

ODW can initiate revocation of the waterworks Operation Permit for a proposed waterworks that does not meet the 15/25 criterion for a waterworks within 36 months of issuance of the Operation Permit. See Section V for permit revocation procedures. The waterworks shall be required to meet all of requirements of the Regulations until the permit revocation process has been completed. See **Appendix A**, Examples 1, 2, & 3.

B. Reduced Service Connections

ODW's policy is to strongly discourage owners from separating systems simply to avoid regulation as a waterworks.

1. System Breakups:
   If a system has multiple sources, it can fall below the criteria used in defining a waterworks by removing physical interconnections between sources, such that one or more sources is directed to a discrete service zone of fewer than 15 connections and less than 25 individuals. The distribution piping for each service zone must be physically separated. The waterworks continues to meet the definition if there are <u>any</u> valved interconnections, even those intended for "emergency" purposes, since the use of these connections are too difficult to monitor to ensure the distribution systems actually remain separate. ODW will continue to regulate the waterworks until a physical separation can be confirmed.[7]

2. Permanent Reductions in Connections or Service Population:
   Occasionally an owner reduces service for various reasons and requests a revocation of the waterworks Operation Permit. Simply shutting off/locking out service or having unused connections is insufficient to avoid regulation as a waterworks. The owner must demonstrate that the waterworks definition does not apply by:
   - Physically removing and capping connections in excess of 14; and,

[5] Indicates in writing that the service area does not meet the definition of a waterworks as planned, and requests that the operation permit be revoked

[6] The Permit Application (WM784) has been revised to add such a statement.

[7] Confirmation can include but will not be limited to ODW staff present when the zones are segregated, signed statement from the owner, photographic evidence provided by the owner, etc.

- Certifying in writing that the population has permanently decreased below 25 persons. This certification can be a detailed census along with a written plan to hold the population below 25 persons.

ODW requires confirmation from the owner of physical removal or capped connections. This will usually require removing the service connection to below grade to prevent re-occupancy of the lot. Simply proving vacancy will not qualify for the change in status because it is too difficult to monitor occupancy. Staff will continue to regulate the waterworks until the revocation process is complete. See **Appendix A**, Example 4.

C. Unused Service Connections – System Inactivity

There are some systems, such as mobile home parks or small housing developments, that have 15 or more existing connections, but the used (or occupied) connections may fluctuate above and below 15. ODW and EPA consider such systems to be active and, therefore, subject to the *Regulations*, even during those times when the waterworks does not have at least 15 connections in use.

Simply having unused (unoccupied) service connections will not disqualify a system from the definition of a waterworks. To avoid regulation by ODW it must be determined that the system is "inactive." Following EPA policy, ODW determines inactivity based on the number of service connections that remain unused for one year or more. Waterworks that do not have at least 15 service connections in use and do not serve at least 25 people (both conditions must hold true for a period of a year or more), should be inactivated (from SDWIS inventory) and are not required to monitor, report, or conduct routine surveillance until the system becomes active. A system that meets the definition after a period of inactivity, by bringing unused connections back into service or adding new connections must be reactivated.

D. Reduced Operation Periods

Some facilities with seasonal operations such as: schools, summer camps or migrant labor camps will not continuously meet the population criteria of the waterworks definition. Even during these timeframes the waterworks remain active in SDWIS and subject to ODW's authority. Monitoring is suspended for seasonal waterworks that have a defined annual operating period and winterize facilities (e.g. TNC campgrounds and resorts). Seasonal waterworks that provide water (e.g. schools w/ office staff) during the "off" season are to continue to monitor.

IV. PERMITTING POLICY FOR EXISTING WATERWORKS

This section applies to newly-discovered waterworks, reclassified waterworks, or waterworks with a change in ownership, capacity, or treatment. In accordance with §32.1-172 E of the *Code*:

"*Whenever application shall be made to the Commissioner for a permit he shall examine the application and as soon as practicable thereafter shall issue the permit if in his judgment the proposed waterworks will furnish pure water. If the proposed waterworks is not in compliance with all regulations of the Board but in the opinion of the Commissioner the public health will not be jeopardized, the Commissioner may issue a temporary permit for such a period of time and subject to such conditions as the Commissioner may deem appropriate for the owner to achieve compliance with such regulations.*"

A. Permitting Actions

It is the policy of the ODW to issue permits in a timely fashion once all of the permit application requirements are satisfied. The following identifies the permitting options available to the ODW.

1. No permit is issued

ODW shall not issue permits until the applicant has met all the requirements of the permit process. See WM 784 for details. No Operation Permit shall be issued to a waterworks when an imminent danger to public health or welfare exists (for example, when water quality data showing levels of PMCL contaminants greater than the Unreasonable Risk to Health (URTH)[8] values).

2. Temporary Permit is issued

A Temporary Permit may be allowed by *Va. Code §32.1-172 E* if public health will not be jeopardized. A Temporary Operation Permit is an Operation Permit that specifies an expiration date and may contain conditions that the waterworks must address. The Temporary Permit option provides ODW with an additional tool to compel compliance, gather additional data, or set time limits for unresolved issues. Typically, a Temporary Permit will be issued as a result of unresolved issues during a requested permit application, in the case of a newly found system, or following revocation of a previous permit due to new owner or enforcement action.

Temporary Operation Permits shall be issued when the waterworks is not demonstrating reliability, and additional time is necessary for:

- Complying with an administrative order;
- Complying with a requirement to conduct an engineering evaluation or study, or perform tests to determine yield or drawdown;
- Complying with a requirement to install treatment or storage;
- Evaluating treatment for processes that do not fall under provisional Permits;
- Addressing deficiencies found during the sanitary survey; or,
- Developing a monitoring or performance history.

A Temporary Permit may also be issued under the following circumstances:

- A consecutive system has a purchase contract with a limited duration.
- A waterworks has been purchased and will be connected to another system by a specified date.

In general, a Temporary Permit will not be required for newly constructed waterworks except in the case where additional time is needed to complete a surface water influence determination.

3. Provisional Permit is issued

A Provisional Permit may be allowed by the *Regulation*s 12 VAC 5-590-290 for water treatment methods, processes, or equipment which are not covered by the design criteria in Part III or Part IV of the Regulations and which in principle and/or application are new or non-conventional. A Provisional Permit allows additional time for testing and evaluation of

[8] Unreasonable Risk To Health. An EPA term denoting contaminant levels that may be significantly above the PMCL.

the treatment method, process, or equipment to establish confidence the waterworks will operate as proposed without jeopardizing public health. Refer to 12 VAC 5-590-290 for requirements.

4. Standard Permit is issued

A Standard Operation Permit shall be issued when all of the following conditions have been met: The waterworks:

- is deemed reliable (see section IV B for clarification),
- is designed and constructed in accordance with Part III and IV of the *Regulations* (or they are deemed eligible for "grandparenting" - see section IV C for requirements),
- has met all the requirements identified in WM 784.

B. Demonstration of Reliability

The determination of reliability must be made when ODW is undertaking permitting or enforcement actions and in response to problems, complaints, etc. The resulting permitting action and eligibility for grandparenting are dependent upon the outcome of the reliability determinations. Reliability may be a factor in determining enforcement actions which are not covered in this memo.

Reliability means the ability to provide water consistently adequate in quality and capacity. In accordance with 12 VAC 5-590-490 B; *"All waterworks shall provide adequate treatment and pure water."* Additionally, waterworks must provide adequate capacity to meet maximum demands without creating health hazards.

1. Adequate Water Quality: Reliability relating to water quality is the ability to provide adequate treatment and pure water that consistently meets the requirements of Part II of the Regulations. Reliability related to water quality is to be addressed through the compliance and enforcement procedures but shall be considered when issuing a Temporary or Standard Permit or when no permit is to be issued.

2. Adequate Capacity: Waterworks shall be deemed reliable with regard to capacity unless there is evidence of water pressure problems, excessive leakage, or periodic water outages. Evidence that shows failure to maintain performance or failure to correct problems may consist of, but is not limited to VDH investigations, sanitary survey findings, or complaints.

The timeframe for reliability determination shall normally be the past five years with more recent information given greater weight. If the owner has not resolved problems or has not resolved complaints by consumers the waterworks shall be deemed as not meeting reliability requirements.

C. Grandparented Waterworks

1. Policy Application

For egregious health related problems, ODW is under no obligation to issue an Operation Permit, see Part IV A.1 of this memo.

Grandparenting status for permitting is only conferred upon existing waterworks with regard to Parts III (Design Manual) and IV (Noncommunity Exceptions) of the *Regulations*. There is no grandparenting with regard to Part II (Operational Regulations) or for newly constructed waterworks. A waterworks is eligible for grandparenting under a Standard Operation Permit only when they have demonstrated reliability related to capacity.

Waterworks with pre-existing structural or design conditions that do not meet Parts III or IV, but show reliability regarding capacity, are eligible for consideration. For those waterworks that qualify for grandparenting status, ODW policy is to permit the waterworks to the number of existing connections and existing conditions (usage as in number of restaurant seats) even if it exceeds the limiting values (i.e. capacity evaluation, reference WM 865) determined through engineering analysis based on Part III of the *Regulations*.

ODW's policy is to grant an exclusion from Part III of the *Regulations* (Manual of Practice for Waterworks Design) to newly-discovered waterworks *provided* that the system has a history of reliability as related to capacity and verified by ODW. This policy also applies to existing waterworks transferred to ODW's jurisdiction.

A Standard Operation Permit shall be issued to grandparented waterworks provided that they exhibit a history of reliability. A Temporary Operation Permit (see section IV A.2) shall be issued to grandparented waterworks where there is no history or an unsatisfactory history of reliability. The Temporary Permit shall confer grandparented status for the duration of the permit.

2. Transfer of Ownership

The grandparented status of a waterworks with a Standard Operation Permit can be transferred to a new owner provided that the system:

- has historically met and continues to meet the reliability requirements;
- maintains the number of connections and existing conditions of the previous permit; and,
- has completed the permit application requirements (see WM 784).

In this case, the new owner is issued a Standard Operation Permit. The Field Office staff shall meet with each new owner to discuss the *Regulations*, ownership requirements, and recommend waterworks improvements be made so the system will comply with Part III of the *Regulations*. The Owner shall be apprised in writing that grandparenting status may be terminated by expansion, modification, or failure to maintain reliability. It should be noted that there is no guarantee that the grandparented status will be granted to any new owners during future sales.

3. Loss of Grandparented Status

a. Failure to Achieve or Maintain Reliability:
If grandparented status is jeopardized due to a failure to meet the conditions of reliability as related to capacity the owner shall be notified of the deficiencies, issued an NOV (as appropriate), and provided adequate time to correct deficiencies. If the deficiencies are not resolved in the time provided, the Standard Operation Permit shall be revoked or the Temporary Permit shall be allowed to expire.

Because the grandparented waterworks failed to demonstrate reliability, its grandparented status is lost and cannot be transferred to a new owner through a Standard Operation Permit. The new owner can be issued a Temporary Permit for the existing connections and conditions, allowing time for the new owner to comply with requirements or make necessary improvements. See example in **Appendix B**.

b. Expansions and/or New Construction to Meet Additional Demand

In accordance with 12 VAC 5-590-50 B.:
"*Compliance with design criteria set forth in Part III and Part IV is necessary for waterworks modification and construction commenced after the effective date of these revised regulations [after September 1, 1974].*"

Grandparented waterworks that wish to expand service (an increase in service population or number of connections) lose grandparented status. The waterworks must comply with Part III and IV of the *Regulations* for any of the new and existing connections. See Appendix C, Examples 1 &2.

V. PERMIT REVOCATION POLICY

The Commissioner may revoke any waterworks Operation Permit whenever he determines that certain conditions have been met pursuant to §32.1-174 of the *Code* and 12 VAC 5-590-320 of the *Regulations*. These include:

1. Change in ownership;
2. Failure to comply with the conditions of the permit;
3. The waterworks can no longer be depended upon to furnish pure water;
4. The capacity of the waterworks is inadequate for the purpose of furnishing pure water;
5. The waterworks have been abandoned and discontinued supplying pure water;
6. Failure to pay the waterworks operation fee;
7. Failure to abide by order issued by the Commissioner; or,
8. Violation of Title 32.1 or of Part II of the Regulations.

Additionally, permit revocation may be initiated by ODW or voluntarily by written request from the owner when the system no longer meets or has not yet met the definition of a waterworks. It is imperative that the owner provide adequate justification to show the system no longer qualifies as a waterworks. Once ODW determines that the justification is adequate, the Field Office may proceed with permit revocation. Until that time the system will continue to be regulated as a waterworks.

ODW shall request that the C and NTNC owners voluntarily notify all customers of the change in status and of any outstanding water quality issues (such as PMCL, SMCL, or monitoring violations). If the owner declines to notify the customers 60 days prior to revocation, ODW shall consult with the local health director regarding the need to notify customers directly.

VI. WATERWORKS REQUESTING EXEMPTIONS TO PERMITS

12VAC 5-590-150 allows for the Commissioner to grant exemptions to PMCLs or treatment technique requirements due to compelling factors (which may include economic factors). ODW will evaluate requests for exemptions when received, and will make recommendations to the Commissioner about granting or denying such requests. Granting of an exemption will be a rare instance.

VII. WATERWORKS REQUESTING VARIANCES TO PERMITS

12VAC 5-590-140 allows the Health Commissioner (or designee) to grant a variance to an operational regulation, treatment technique requirement, primary maximum contaminant level (PMCL) or secondary maximum contaminant level (SMCL) by following appropriate procedures set forth in the Regulations. It is ODW policy to consider granting variances for some operator requirements and metering of TNC waterworks using less than 10,000 gpd. No variances shall be issued for SMCLs. ODW will evaluate requests for variances when received, and will make recommendations to the Commissioner about granting or denying such requests. Granting of a variance for treatment techniques requirements or PMCLs will be a rare instance.

END OF MEMO

APPENDIX A
Operation Permit Examples

Example 1:
A developer has applied for a new Operation Permit. Six homes are occupied, and 50 homes are proposed. Although the system does not yet meet the definition of a waterworks, it will be regulated as the owner intends to become a waterworks. If the number of connections or persons served does not meet the 15/25 criteria within 36 months, the field office shall consider revoking the permit. See Section III A. 1.

Example 2:
A preschool is licensed for 15 "slots." Fifteen children attend morning sessions and ten other children attend afternoon sessions, three days per week, September through May. Five staff members are present. On the surface this waterworks may appear to be an NTNC since it serves at least 25 of the same persons per day. However, 3 days per week for 38 weeks = 114 days which is less that 6 months and therefore it is to be regulated as a TNC.

Example 3:
A day care center is licensed for 40 "slots." Actual attendance varies, but the sum of children and staff is frequently less than 25 persons. Unless the service population is consistently below 25 (and verified via records) or the facility operates less that 6 months out of the year this facility is to be regulated as an NTNC.

Example 4:
An existing mobile home park that is currently served by a facility that has nine service connections in use and contains an additional six unused service connections. The facility has requested to have its permit revoked to avoid regulation. Since ODW assumes occupancy of 3 persons per trailer the owner must provide evidence of the population being less than 25 and a plan to maintain the population below 25. If the owner provides evidence, has service lines removed to below grade, and the field office verifies this - the permit can be revoked.

Example 5:
The owner of a small convenience store with a permitted waterworks wants to switch to serving bottled water to its consumers to avoid ODW regulation. They have a bathroom (toilet, sink and utility shower) and a kitchen with a sink for their employees. There are no water fountains but their soda machine had a "water" button that dispensed tap water. The field office has verified they have permanently disconnected the tap water. Since the system no longer serves water to the public it is no longer considered a waterworks and the permit can be revoked.

APPENDIX B
Loss of Grandparented Status Example

Example:
A mobile home park permitted with 28 existing connections has several PMCL violations. It has one well with unknown yield capacity and storage that does not meet Part III of the *Regulations*. ODW is proceeding with enforcement for the PMCL violations. The system is sold to a new owner and the owner has requested an Operation Permit.

Corrective Action Steps The Field Office shall:

Step 1: Begin the process to revoke the permit issued to the previous owner. Make an evaluation of the performance of the system capacity by reviewing files, records of complaints, site visit to install pressure recorder, sanitary surveys, etc. If the waterworks has satisfactory performance relating to capacity ODW proceeds with Step 2. If it is determined that the waterworks is not reliable relating to capacity ODW proceeds with Steps 3, 4, and 5.

Step 2: Issue a Standard Operation Permit for 28 existing connections. The installation of treatment for the PMCL violations shall be addressed through enforcement. The waterworks retains its grandparented status. This means the new owner is not required to address the unknown yield or storage capacity conditions at this time.

Step 3: If ODW has evidence of inadequate capacity (e.g. low pressure via pressure recorder), the waterworks forfeits its grandparented status. The field office issues an NOV for low pressure and storage and proceed to enforcement to require improvements. This would be combined with the order for PMCL violations.

Step 4: Issue a Temporary Operation Permit for 28 existing connections. Prior to the expiration of the Temporary Permit the waterworks must address all deficiencies to comply with Part III of the *Regulations*. The evaluation for adequate treatment, storage/source capacity and installation of improvements should also be made conditions of the Temporary Permit.

Step 5: Upon expiration of the Temporary Permit, a Standard Operation Permit may be issued if improvements have been completed. If not, an NOV is issued for operating without a permit and ODW will proceed with enforcement actions as necessary.

APPENDIX C
Grandparented Status During Expansion

Example 1:
A grandparented community system with an Operation Permit for 48 existing connections wishes to add 3 more homes. It has one well of unknown capacity and inadequate storage based on Part III of the *Regulations*. Due to the expansion the waterworks will forfeit its grandparented status.

Example 2:
A grandparented mobile home park with 54 connections has been found to have exceeded its permitted capacity of 49 existing connections. This may be due to unauthorized connections or in response to hardship conditions (private wells have gone dry). It has one well and inadequate storage based on Part III of the *Regulations*.

Corrective Action Steps The Field Office shall:

Step 1: Issue an NOV. Make an evaluation of the performance of the system capacity by reviewing files, records of complaints, site visit to install pressure recorder, sanitary surveys, etc. If it is determined that the waterworks is reliable relating to capacity, ODW may proceed with Step 2 or 3. If it is determined that the waterworks is not reliable relating to capacity ODW should proceed with Step 4.

Step 2:
Comply with the existing permit/Grandparented status can be retained. Give the owner an opportunity to reduce connections by a specific deadline, to return to compliance and routine surveillance.

Or,

Step 3:
Proceed with Expansion/Grandparented status is forfeited due to expansion. Issue a Temporary Permit for 54 existing connections that provides a reasonable amount of time for improvements. Add a condition of the Temporary Permit that requires the acquisition of additional capacity (a second source and 200 GPD/ERC of storage for each connection per Part III of the *Regulations*). Proceed to the next step.

Step 4: Upon expiration of the Temporary Permit, a Standard Operation Permit may be issued if improvements have been completed. If not, an NOV is issued for operating without a permit and ODW will proceed with enforcement actions as necessary.

APPENDIX D
EPA Water Supply Guidance (WSG) #118

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WSG 118
WSG 118
Date Signed: March 13, 1998

MEMORANDUM

SUBJECT: Submetering Water Systems

FROM: Cynthia C. Dougherty, Director
Office of Ground Water and Drinking Water

TO: Water Division Directors
Regions I - X

Drinking Water/Ground Water Representatives
Regions I - X

There have been numerous requests for guidance on whether an apartment complex or other similar residential communities (e.g. subdivisions and mobile home parks) which receives water from a public water system (PWS) through a master meter and then resells it to the residents qualifies as a PWS. It has long been and remains the Environmental Protection Agency's (EPA) position that apartment complexes and similar residential communities that sell water to their tenants constitute PWSs and are subject to the Safe Drinking Water Act (SDWA) regulations. However, EPA also recognizes that these PWSs may not require as stringent monitoring as PWSs which do not receive their water from another PWS, and thus States have the flexibility to modify the monitoring requirements for these apartment complexes or similar residential communities.

On March 31, 1997, in response to the above concerns, EPA held a meeting with several stakeholders to discuss the regulatory provisions and the guidance that had already been issued on these subjects. After this meeting, we received a few requests for more clarification to which we responded by individual letters. To make sure that everyone understands the Agency's position and to alleviate any confusion, we have incorporated the substance of our responses into this memorandum. Please share this information with your respective States.

Statutory Requirements

Under Section 1411 of the SDWA, a PWS is subject to regulation unless it is a system which meets all of the following four criteria:

(1) consists only of distribution and storage facilities (and does not have any collection and treatment facilities);
(2) obtains all of its water from, but is not owned or operated by, a public water system to

WSG 118

which the regulations apply;
(3) does not sell water to any person; and
(4) is not a carrier which conveys passengers in interstate commerce.

Assuming that apartment complexes and other similar residential communities meet the criteria enumerated in (1), (2), and (4), the issue is whether or not submetering of water to tenants constitutes selling water within the context of the SDWA.

Interpretation of to "Sell"

We believe that to "sell" should be given broad meaning under the SDWA. Construing the statute this way is consistent with the purpose of the SDWA which is to assure that the water supply systems that serve the public meet minimum national standards for protection of public health to the maximum extent feasible. (House Report No. 93-1185). The House Report further says, in explaining this provision, that Congress intends the primary drinking water regulations to apply to housing developments, motels, restaurants, trailer parks, and other business serving the public if the business in question maintains its own well or water supply and sells water.

A distributor of water for human consumption "sells" water within the meaning of the Act if it charges consumers for the water as a separate item or bills separately for the water it provides. (House Report No. 93-1185). Conversely, if the entity includes the charges for water in the rental fee, then it is not selling water within the context of the Act. It is irrelevant whether water is sold for a profit or not, or whether the distributor is a public or private entity. Thus, it is appropriate to interpret to "sell" to include submetering.

If an apartment building or similar residential community that submeters wants to avoid PWS classification, it would either need to remove the complex's master meter and allow the local water utility to bill the residents directly, or include water usage as part of the monthly rent or fees.

Monitoring Flexibility of "Consecutive" Water Systems

While an apartment complex that submeters is considered a PWS and thus subject to the requirements under the SDWA, it nonetheless may be afforded certain monitoring modifications if it is considered a "consecutive" water system. "Consecutive" water systems are water systems that purchase water from another public water system. Under federal regulations at 40 CFR 141.29, States have the flexibility to modify the monitoring requirements to the extent that the interconnection of the systems justifies treating them as a single system. This flexibility allows States considerable discretion to avoid unnecessary compliance activities for "consecutive" water systems consistent with the public health objectives of the Act. Because we support the practice of submetering to encourage water conservation and to provide an equitable method of distributing costs, we believe that it is appropriate for States to use this flexibility consistent with their

WSG 118

assessment of the need for these "consecutive" systems to conduct additional monitoring to protect the public health of their customers.

If you have any question concerning this guidance, please call Jennifer Melch at (202) 260-7035.

APPENDIX C

CAPACITY DEVELOPMENT STRATEGY FOCUS GROUP

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