



WHATCOM COUNTY COUNCIL

SPECIAL COUNCIL MEETING AS THE HEALTH BOARD

10:30 a.m. Tuesday, October 29, 2013
Council Chambers, 311 Grand Avenue

A G E N D A

| <u>Meeting Topics</u> | <u>Pages</u> | <u>Time</u> |
|---|--------------|-------------|
| 1. Public Session | no ppr | 10:30-10:40 |
| 2. Public Health Advisory Board Update & Resolution | 1-10 | 10:40-11:00 |
| 3. Group B Regulations | 11-37 | 11:00-noon |

**HEALTH BOARD
Discussion Form
10-29-2013**

AGENDA ITEM #: 1 Health Board Resolution “Call for Compassionate Community Approach to Public Health Related Services.”

PRESENTER: Doug Benjamin

BOARD ACTION: Action Item Discussion FYI - Only

SIGNIFICANT POINTS OR EXECUTIVE SUMMARY

The PHAB has been exploring a community “collective change” approach focused on nurturing children, youth and families through healthy environments, positive interactions and healing relationships. This discussion aligns with the goals of the Community Health Improvement Plan. The Board explored “trauma-informed” services and systems that consider the impact of adversity and trauma during childhood and other life periods on long-term health. The Compassionate Schools model is an example of a trauma-informed approach designed for school settings. Background information about “trauma-informed” services and compassionate approaches to service delivery are included in the packet for Health Board review.

As a result of the PHAB discussion, the Board developed a resolution for consideration by the Health Board which recognizes the importance of a “compassionate approach” particularly in public health service delivery.

BOARD ROLE / ACTION REQUESTED

Consider adopting the Health Board Resolution “Call for Compassionate Community Approach to Public Health Related Services.”

ATTACHMENT(S)

- Draft Health Board Resolution: Compassionate Communities
- Background Reading “Compassionate Services Approach”

RESOLUTION NO. _____

**CALL FOR COMPASSIONATE COMMUNITY APPROACH
TO PUBLIC HEALTH RELATED SERVICES**

WHEREAS, the Public Health Advisory Board has spent significant time reviewing and digesting the compelling research which points out the negative impact of adverse childhood experiences ("ACEs") and early trauma on population health outcomes; and

WHEREAS, the impact that early trauma has on our children, families and general population is on par with, or greater than, biological or infectious diseases; and

WHEREAS, the Health Board recognizes that a "trauma sensitive" or "compassionate" approach to public health services, is a necessary and fundamental characteristic of successful service delivery; and

WHEREAS, there are known effective and emerging responses to the influences of early childhood traumatic experiences; and

WHEREAS, "Building community connectedness and resilience" and "Enhancing child and family well-being" are identified as strategic directions in the emerging *Whatcom County Community Health Improvement Plan*.

NOW, THEREFORE, BE IT RESOLVED by the Whatcom County Health Board that:

The Health Board will work with Health Department staff to ensure that "compassionate approaches" are built into all public health related services and contracts including human services programs and;

The Health Board will seek opportunities to increase awareness and promote the concept of a "compassionate" or "trauma sensitive" approach, and to integrate this paradigm into the broadest possible range of all public health, education and human services in our county.

APPROVED this 29th day of October, 2013.

ATTEST:

WHATCOM COUNTY HEALTH BOARD
WHATCOM COUNTY, WASHINGTON

Dana Brown-Davis, Clerk of the Council

Kathy Kershner, Health Board Chair

APPROVED AS TO FORM:

Civil Deputy Prosecutor

**Background Reading for Health Board
Meeting**

10/29/2013

Compassionate Services Approach

Adverse Childhood Experiences.....page 2-5

Trauma Informed Services.....page 6

Compassionate Schools Model.....page 7-8



Adverse Childhood Experiences

The Adverse Childhood Experiences Study

Adverse childhood experiences (ACEs) are stressful or traumatic experiences, including abuse, neglect and a range of household dysfunction such as witnessing domestic violence, or growing up with substance abuse, mental illness, parental discord, or crime in the home. ACEs are strongly related to development and prevalence of a wide range of health problems, including substance abuse, throughout the lifespan.

When children are exposed to chronic stressful events, neurodevelopment can be disrupted. Disruption in early development of the nervous system may impede a child's ability to cope with negative or disruptive emotions and contribute to emotional and cognitive impairment. Over time, and often during adolescence, the child adopts coping mechanisms, such as substance use. Eventually, this contributes to disease, disability and social problems, as well as premature mortality. Figure 1. depicts the lifespan impact of ACEs.



Figure 1. ACE Pyramid (CDC)

Over the past 15 years, many studies have examined the relationship between ACEs and a variety of known risk factors for disease, disability, and early mortality. The original ACE study began in 1995 and was conducted by

the Centers for Disease Control and Prevention (CDC), in collaboration with the health maintenance organization Kaiser Permanente.^{*i} More than 17,000 Kaiser patients completed a confidential survey containing questions about childhood maltreatment and family dysfunction, as well as items detailing their current health status and behaviors. (Felitti et al, 1998). Participants were mostly middle class, white adults with health insurance. Here's what the study revealed:

- *ACEs are common.* For example, 28% of Kaiser participants reported physical abuse and 21% reported sexual abuse. Substance abuse and mental illness of a parent and divorce or separation were also common events.
- *ACEs cluster.* Almost 40% of the Kaiser sample reported two or more ACEs and 12.5% experienced four or more. Because ACEs cluster, many subsequent studies now look at the cumulative effects of ACEs rather than the individual effects of each.
- *ACEs have a dose-response relationship with many health problems.* Participants in the ACE Study were followed over time. Findings demonstrated that a person's cumulative ACE score has a strong, graded relationship to numerous health, social, and behavioral problems throughout their lifespan, including substance use and abuse. Also, many ACE-related problems tend to be co-morbid or co-occurring.

Since the launch of the initial ACE Study, numerous other studies with different populations have been conducted with similar results.

The Relationship of ACEs to Substance Use and Related Behavioral Health Problems

Research has demonstrated a strong graded (i.e., dose-response) relationship between ACEs and a variety of substance use-related behaviors, including:

- Early initiation of alcohol use. For states, tribes, and jurisdictions focusing on underage drinking, these results suggest the importance of addressing ACEs as one component of preventing underage drinking, as responses to underage drinking may not be effective unless they help youth recognize and cope with stressors of abuse, domestic violence and other adverse experiences (Dube et al, 2006)
- Problem drinking behavior into adulthood (Dube et al, 2002)
- Increased likelihood of early smoking initiation (Anda et al, 1999)
- Continued smoking, heavy smoking during adulthood (Ford et al, 2011)
- Prescription drug use (Anda et al, 2008)

- Lifetime illicit drug use, ever having a drug problem, and self-reported addiction (Dube et al, 2003)

Research has also demonstrated a strong graded relationship between ACEs and related behavioral problems, such as the following:

- Increased risk of suicide attempts, including attempts by men and women, as well as attempts during adolescence and adulthood (Dube et al, 2004).
- Lifetime depressive episodes (Chapman et al, 2004).
- Sleep disturbances in adults (Chapman et al, 2011)
- Sexual risk behaviors (Hillis et al, 2001)
- Teen pregnancy (Hillis et al, 2004)

Incorporating ACEs into Substance Abuse Prevention Efforts

Because ACEs are common and strongly related to a variety of substance abuse and related behavioral health outcomes, prevention of ACEs and early identification of those who experience ACEs could prevent a number of negative consequences and have a significant impact on a range of critical health problems. Specifically, practitioners can thus strengthen their substance abuse prevention efforts by:

- Collecting state- and county-level ACE data to drive local decision making (e.g., by incorporating ACEs indicators into Behavioral Risk Factors Surveillance Systems)
- Increasing awareness of ACEs among state- and community-level substance abuse prevention practitioners, emphasizing the relevance of ACEs to multiple behavioral health disciplines
- Including ACEs among the primary risk and protective factors considered when engaging in substance abuse prevention planning efforts
- **Selecting and implementing programs, policies, and strategies designed to address ACEs; including efforts focusing on reducing intergenerational transmission of ACEs**
- Using ACEs research and local ACEs data to identify groups of people who may be at higher risk for substance abuse and related behavioral health problems

Additional Resources

- [The Adverse Childhood Experiences Study](#). This site offers a clear overview of the Adverse Childhood Experiences Study.
- [Reducing Adverse Childhood Experiences by Building Community Capacity: A Summary of Washington Family Policy Council Research Findings](#). This study, recently published in the Journal of Prevention & Intervention in the Community, demonstrates the strong impact of community networks to interrupt health and social problems. Findings suggest that community networks reduce health and safety problems for the entire community population. Further, community networks with high community capacity reduced ACEs in young adults ages 18–34.
- [Adverse Childhood Experiences and Population Health in Washington: The Face of a Chronic Health Disaster](#) This paper presents results from the 2009 Behavioral Risk Factor Surveillance System.
- [ACE Course](#) This online course, developed by the Family Policy Council, covers brain science, the Adverse Childhood Experiences (ACE) Study, and resilience research. Participants will learn the prevalence and high-cost lifelong outcomes of ACEs, the vital role of culture and community to optimize well being, and how to use this emerging research to create transformative conversations.
- [ACE Response](#) ACE Response grew out of a partnership between [Prevent Child Abuse America](#) and the [University at Albany \(SUNY\) School of Social Welfare](#). This website seeks to raise awareness of ACEs and mobilize comprehensive responses to ACEs across the lifespan in order to prevent ACEs and their consequences. ACE Response supports the integration of prevention/intervention research with practice wisdom in local areas to promote resilience, recovery, and transformation. It highlights the healing power of social networks, which can provide a recovery context that enhances the services offered.

Source: <http://captus.samhsa.gov/prevention-practice/targeted-prevention/adverse-childhood-experiences/3>



Trauma-Informed Care and Trauma Services

What is Trauma-Informed Care?

Most individuals seeking public behavioral health services and many other public services, such as homeless and domestic violence services, have histories of physical and sexual abuse and other types of trauma-inducing experiences. These experiences often lead to mental health and co-occurring disorders such as chronic health conditions, substance abuse, eating disorders, and HIV/AIDS, as well as contact with the criminal justice system.

When a human service program takes the step to become trauma-informed, every part of its organization, management, and service delivery system is assessed and potentially modified to include a basic understanding of how trauma affects the life of an individual seeking services. Trauma-informed organizations, programs, and services are based on an understanding of the vulnerabilities or triggers of trauma survivors that traditional service delivery approaches may exacerbate, so that these services and programs can be more supportive and avoid re-traumatization.

What are Trauma-Specific Interventions?

Trauma-specific interventions are designed specifically to address the consequences of trauma in the individual and to facilitate healing. Treatment programs generally recognize the following:

- The survivor's need to be respected, informed, connected, and hopeful regarding their own recovery
- The interrelation between trauma and symptoms of trauma (e.g., substance abuse, eating disorders, depression, and anxiety)
- The need to work in a collaborative way with survivors, family and friends of the survivor, and other human services agencies in a manner that will empower survivors and consumers

Source: <http://www.samhsa.gov/nctic/trauma.asp>



Compassionate Schools: The Heart of Learning and Teaching

The Compassionate Schools Initiative within Learning and Teaching Support provides training, guidance, referral, and technical assistance to schools wishing to adopt a Compassionate Schools Infrastructure. Compassionate Schools benefit all students who attend but focus on students chronically exposed to stress and trauma in their lives. These schools create compassionate classrooms and foster compassionate attitudes of their school staff. The goal is to keep students engaged and learning by creating and supporting a healthy climate and culture within the school where all students can learn. It is not a program; it is a process and as such is not "one size fits all." Each school and community will develop their own unique compassionate "personality."

Ten Principles of Compassionate Schools

1. Focus on culture and climate in the school and community.
2. Train and support all staff regarding trauma and learning.
3. Encourage and sustain open and regular communication for all.
4. Develop a strengths based approach in working with students and peers.
5. Ensure discipline policies are both compassionate and effective (Restorative Practices).
6. Weave compassionate strategies into school improvement planning.
7. Provide tiered support for all students based on what they need.
8. Create flexible accommodations for diverse learners.
9. Provide access, voice, and ownership for staff, students and community.
10. Use data to:
 - Identify vulnerable students, and
 - Determine outcomes and strategies for continuous quality improvement.

For more information on the book and about the Compassionate Schools Initiative in Washington, contact Ron Hertel, (360) 725-4968, ron.hertel@k12.wa.us.

The Heart of Learning and Teaching: Compassion, Resiliency, and Academic Success. Staff from The Learning and Teaching Support section of OSPI and the Woodring College of Education at Western Washington University in Bellingham (including Ray Wolpow, Public Health Advisory Board Member) have co-written a 246 page handbook entitled The Heart of Learning and Teaching: Compassion, Resilience, and Academic Success as one resource to be used by those schools wishing to adopt a compassionate approach to learning and teaching.

The purpose of the handbook is to inform, validate, and strengthen the collective work of educators to support students whose learning is adversely affected by chronic stress and trauma. This handbook provides current information about trauma and learning, self care, classroom strategies, and building parent and community partnerships that work.

It includes many case studies and vignettes from classrooms across Washington as well as an introduction to the Compassionate Schools Initiative which has already been successfully implemented in several schools across Washington State.

Source: <http://www.k12.wa.us/CompassionateSchools>

**HEALTH BOARD
Discussion Form
10-29-2013**

AGENDA ITEM #: 2

PRESENTER: Kyle Dodd

BOARD ACTION: Action Item

FYI & Discussion

SIGNIFICANT POINTS OR EXECUTIVE SUMMARY

Historically in Whatcom County, we have maintained responsibility for primary oversight of Group B water systems (14 or less connections) through a Joint Plan of Responsibility (JPR) with the State Department of Health. We currently review and approve new Group B water systems and provide minimal technical assistance to existing systems on an as needed basis. Recent revisions to the Group B regulations, effective January 1, 2014, requires us to determine our level of oversight moving forward under the new rule and to sign a new Joint Plan of Responsibility with DOH.

On September 12, 2013, we solicited input from the Public Health Advisory Board (PHAB). The unanimous decision was to recommend option #2 to the Health Board.

BOARD ROLE / ACTION REQUESTED

Staff has prepared a two page report and outlined two options for your consideration in making a decision.

1. Do not accept primary responsibility for Group B water systems under the pending Joint Plan of Responsibility. This would leave DOH responsible for Group B water systems. Under this scenario, applicants proposing developments utilizing Group B water systems would be subject to the DOH review timeline and costs. In addition, we would need to refer all inquiries from existing systems to DOH.
2. Continue with our current Group B water system program utilizing the revised WAC 246-291 as it is currently written. WCHD would review and approve new Group B water systems applying the revised rule and charging fees for services. Utilizing the revised WAC without modification would mean the elimination of ongoing water quality monitoring requirements for existing and new water systems, even though we do have the option of modifying the WAC and adopting a local code that includes monitoring requirements.

Staff recommends option #2.

By maintaining primary responsibility for Group B water systems, we can continue to provide local support and service which results in a benefit to our community. Staff agrees with DOH rationale that reducing risk during initial approval results in a final water system design that can be operated and maintained with minimal ongoing oversight. Staff will refer system owners and consumers of existing water systems to online resources provided by DOH, and respond to significant public health risks as they arise.

ATTACHMENTS

- Group B Public Water System staff report - 2 pages
- WAC 246-291 revised Group B rule - 23 pages

Introduction

The primary focus of the health department's drinking water program is to ensure that the public has access to an adequate quantity of safe drinking water. More specifically, our water availability review process supports Whatcom County Planning and Development Services by ensuring that new construction and land subdivisions have approved water sources. When applying for water availability, residents can obtain water from one of three sources:

- Group A water systems
- Group B water systems
- Private water systems

Group A water systems are public water systems that provide water to at least 15 residential service connections or 25 or more people/day for 60 days/year. These water systems can be owned by municipalities (i.e. City of Bellingham), water associations with privately elected governing boards (i.e. Deer Creek Water Association), churches or grocery stores. There are 182 Group A water systems serving approx. 175,000 people in Whatcom County.

Private water systems or 'individual' water systems consist of wells that serve one or two single family residences. There are approx. 24,000 people being served by private water systems in Whatcom County.

The focus of this discussion will be on Group B water systems; which are public water systems that serve less than 15 residential connections, less than 25 people/day, or more than 25 people/day for less than 60 days/year. These water systems typically serve small subdivisions, small businesses and small churches. Group B water systems are needed in areas where public water is required for the development and no existing public water systems can serve the project.

Background

Group B water systems are regulated by WAC 246-291, which was recently revised and will become effective January 1, 2014. The Department of Health (DOH) shares regulatory responsibility of Group B systems with Local Health Jurisdictions (LHJs). An agreement called a "Joint Plan of Responsibility" defines the roles and responsibilities between DOH and LHJs. In Whatcom County, historically we have maintained the responsibility for primary oversight of Group B water systems. We currently review and approve new Group B water systems by collecting fees for service, and provide minimal technical assistance to existing systems on an as needed basis.

There are currently approximately 230 Group B water systems in Whatcom County serving a population of approximately 2,700 people.

Discussion of changes to rule

In 2009, the Governor and Legislature eliminated funding for DOH oversight of Group B water systems. In doing this, they recognized the challenge for DOH to regulate the large number of Group B systems in Washington if LHJs did not accept primary responsibility. As a result, the State Board of Health (Board) was directed to include the following into the Group B rule revision.

- At a minimum, rules must address the initial design and construction of Group B water systems. This change allowed the Board to adopt rules that have no ongoing requirements after initial approval of the system.
- LHJs can set requirements that are more stringent than state rules.

In keeping with the legislative guidance, the revised rule establishes more rigorous design and construction requirements for new and expanding Group B systems. This increased focus on protective standards and risk reduction is intended to provide long-term water system sustainability and reduce the need for ongoing support and regulation.

A summary of the significant changes to WAC 246-291 that apply to new or expanding systems are as follows:

- Currently, we apply the public water system rules to all systems except those that serve one or two single family residences. The new rule will also exempt many non-residential one and two connection water systems (i.e. small businesses and cottage industry) from needing to develop a public water system.
- Requires all applications to be submitted by professional engineers, whereas the current rule allows some simple systems to be designed by non-engineers.
- Requires new or expanding systems to be developed with drilled well sources only (no shallow dug wells, surface water, or groundwater under the influence of surface water).
- Reduces the primary drinking water standard for arsenic from 50 ppb to 10 ppb. This makes the standard consistent with Group A water systems and private water systems.
- Prohibits use of a source that exceeds a primary drinking water standard. Sources can no longer rely on treatment to meet primary drinking water standards.
- Eliminates the ongoing coliform and nitrate monitoring requirements, except in situations where we: determine a public health risk exists; receive documentation of contamination; receive a report of suspected or known waterborne illness; or observe a situation where the water source may be vulnerable to contamination.

The existing Group B water systems will fall into one of two categories, and the majority of systems will continue to operate status quo under the new rule:

1. Existing systems that were approved prior to the effective date of the rule may provide water to additional service connections without meeting the new design standards provided that they do not exceed the number of connections for which the system was originally approved.
 2. Existing systems that did not receive design approval prior to the effective date of the rule, may be deemed adequate for existing connections without meeting the new design standards provided they meet specific minimum requirements outlined in the rule.
- The ongoing coliform and nitrate monitoring requirements were also eliminated for existing systems, however, we will require current water quality monitoring prior to water availability approval.

Chapter 246-291 WAC
GROUP B PUBLIC WATER SYSTEMS

Last Update: 12/4/12

WAC

| | |
|-------------|--|
| 246-291-001 | Purpose and scope. |
| 246-291-005 | Applicability. |
| 246-291-010 | Definitions, abbreviations, and acronyms. |
| 246-291-020 | Applicability. |
| 246-291-025 | Bottled water and ice-making facilities. |
| 246-291-030 | General administration. |
| 246-291-040 | Requirements for engineers. |
| 246-291-050 | Enforcement. |
| 246-291-060 | Waivers. |
| 246-291-090 | Public Water System Coordination Act and satellite management. |
| 246-291-100 | Groundwater source approval and protection. |
| 246-291-110 | Surface water and GWI source approval and protection. |
| 246-291-120 | Design report approval. |
| 246-291-125 | Groundwater source approval. |
| 246-291-135 | Interties. |
| 246-291-130 | Existing system approval. |
| 246-291-140 | Water system planning and disclosure requirements. |
| 246-291-170 | Water quality requirements for groundwater source approval. |
| 246-291-200 | Design standards. |
| 246-291-205 | Drinking water materials and additives. |
| 246-291-210 | Distribution systems. |
| 246-291-220 | Group B system disinfection . |
| 246-291-230 | Treatment design and operations. |
| 246-291-240 | Reliability. |
| 246-291-250 | Continuity of service. |
| 246-291-260 | Recordkeeping and reporting. |
| 246-291-270 | Cross-connection control. |
| 246-291-280 | Existing Group B systems. |
| 246-291-300 | General requirements. |
| 246-291-310 | General follow-up. |
| 246-291-320 | Bacteriological. |
| 246-291-330 | Inorganic chemical and physical. |
| 246-291-340 | Turbidity. |
| 246-291-350 | Other substances. |
| 246-291-360 | Public notification. |
| 246-291-370 | Severability. |

**DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER**

| | |
|-------------|---|
| 246-291-020 | Applicability. [Statutory Authority: RCW 43.20.050. 95-20-078, § 246-291-020, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-020, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. |
| 246-291-040 | Requirements for engineers. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-040, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. |
| 246-291-100 | Groundwater source approval and protection. [Statutory Authority: RCW 43.20.050. 95-20-078, § 246-291-100, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-100, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. |
| 246-291-110 | Surface water and GWI source approval and protection. [Statutory Authority: RCW 43.20.050. 95-20-078, § 246-291-110, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-110, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. |
| 246-291-130 | Existing system approval. [Statutory Authority: RCW 43.20.050. 95-20-078, § 246-291-130, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-130, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. |
| 246-291-230 | Treatment design and operations. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-230, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. |
| 246-291-240 | Reliability. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-240, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. |
| 246-291-260 | Recordkeeping and reporting. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-260, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. |

246-291-270 Cross-connection control. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-270, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW.

246-291-310 General follow-up. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-310, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW.

246-291-320 Bacteriological. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-320, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW.

246-291-330 Inorganic chemical and physical. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-330, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW.

246-291-340 Turbidity. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-340, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW.

246-291-350 Other substances. [Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-350, filed 6/22/94, effective 7/23/94.] Repealed by 12-24-070, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW.

WAC 246-291-001 Purpose and scope. (1) The purpose of this chapter is to protect the health of consumers by establishing minimum design, construction, and other standards for Group B public drinking water systems.

(2) This chapter is adopted under chapter 43.20 RCW. A purveyor of a Group B public water system shall comply with this chapter and rules adopted by a local board of health under RCW 70.05.060 or 70.46.060 as applicable.

(3) Other statutes relating to this chapter are:

(a) RCW 43.20B.020, Fees for services--Department of health and department of social and health services;

(b) Chapter 43.70 RCW, Department of health;

(c) Chapter 70.116 RCW, Public Water System Coordination Act of 1977; and

(d) Chapter 70.119A RCW, Public water systems--Penalties and compliance.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-001, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-001, filed 6/22/94, effective 7/23/94.]

WAC 246-291-005 Applicability. (1) The rules of this chapter apply to a Group B public water system that provides drinking water to fewer than fifteen service connections and:

(a) Fewer than twenty-five people per day; or

(b) Twenty-five or more people per day for fewer than sixty days per year, provided the system does not serve one thousand or more people for two or more consecutive days.

(2) The rules of this chapter do not apply to a Group B system that:

(a) Consists only of distribution or storage facilities and does not have any source or treatment facilities;

(b) Obtains all water from, but is not owned by, a public water system where the rules of this chapter or chapter 246-290 WAC apply; and

(c) Does not sell water directly to any person.

(3) The rules of this chapter do not apply to a Group B

system that provides water to one or two service connections, except:

(a) In a county in which a local board of health has adopted requirements for Group B systems with one or two service connections; or

(b) When the department determines that it is necessary to protect public health and safety, such as if the system serves a connection with a use listed under WAC 246-291-010 (62) (a) through (h).

(4) A proposed Group B system shall meet planning, engineering, and design requirements under WAC 246-290-100 through 246-290-250 if:

(a) The design submitted under WAC 246-291-120 proposes to supply water to another public water system and the combined number of service connections or total population served meets the definition of a Group A public water system; or

(b) The proposed system is being designed to serve ten to fourteen residential service connections using average household population standards as required under WAC 246-291-200(2).

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-005, filed 12/4/12, effective 1/1/14.]

WAC 246-291-010 Definitions, abbreviations, and acronyms.

The definitions, abbreviations, and acronyms in this section apply throughout this chapter unless the context clearly indicates otherwise.

(1) "**Acute**" means posing an immediate risk to human health.

(2) "**ADD (average day demand)**" means the total volume of water produced from all sources of supply over a calendar year divided by three hundred sixty-five.

(3) "**APWA**" means American Public Works Association.

(4) "**ASTM**" means American Society for Testing and Materials.

(5) "**AWWA**" means American Water Works Association.

(6) "**Board**" means the Washington state board of health.

(7) "**Certified lab**" means an analytical laboratory meeting requirements under chapters 246-390 and 173-50 WAC for one or more drinking water analytical parameters.

(8) "**Coliform bacteria**" means a group of rod-shaped bacteria found in the gastrointestinal tract of vertebrate animals. The presence of coliform bacteria in water is an indicator of possible fecal contamination.

(9) "**Contaminant**" means a substance present in drinking water which may adversely affect the health of the consumer or the aesthetic qualities of the water.

(10) "**Critical water supply service area**" means a geographical area characterized by a proliferation of small, inadequate water systems, or by water supply problems that threaten the present or future water quality or reliability of service in a manner that efficient and orderly development may best be achieved through coordinated planning by the water utilities in the area.

(11) "**Cross-connection**" means any actual or potential physical connection between a public water system or a consumer's water system and any source of nonpotable liquid, solid, or gas that could contaminate the potable water supply by backflow.

(12) "**Cross-connection control plan**" means a document that identifies the procedures the purveyor uses to protect the Group B system from contamination from cross-connections.

(13) "**Department**" means the Washington state department of health.

(14) "**Disinfection**" means the use of chlorine or other agent or process the department approves for killing or inactivating microbiological organisms, including pathogenic and indicator organisms.

(15) "**Distribution system**" means all piping components of a Group B system that serve to convey water from transmission mains linked to source, storage, and treatment facilities to the consumer excluding individual services.

(16) "**Drilled well**" means a well where the well hole is excavated by mechanical means such as rotary, cable tool, or auger drilling equipment.

(17) "**Dwelling unit**" means a structure, or unit within a structure, with independent living facilities for one or more persons that includes permanent provisions for living, sleeping, eating, cooking, and sanitation. A dwelling unit includes, but is not limited to:

(a) A single-family residence; or

(b) Each unit of an apartment building or multifamily building.

(18) "**Ecology**" means the Washington state department of ecology.

(19) "**Equalizing storage**" means the volume of storage needed to supplement supply to consumers when the peak hourly demand exceeds the total source pumping capacity.

(20) "**Expanding Group B system**" means a Group B system installing additions, extensions, changes, or alterations to its existing source, transmission, storage, or distribution facilities that will enable the system to increase the size of its existing service area or the number of approved service connections.

(21) "**Fire flow**" means the maximum rate and duration of water flow needed to suppress a fire under WAC 246-293-640 or as required under local fire protection authority standards.

(22) "**Fire suppression storage**" means the volume of stored water available during fire suppression activities maintaining a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system, and under the condition where the designed volume of fire suppression and equalizing storage has been depleted.

(23) "**Generator disconnect switch**" means an electrical device that physically prevents electrical current from flowing back into the main service line.

(24) "**gpm**" means gallons per minute.

(25) "**Group A public water system**" is defined and referenced

under WAC 246-290-020.

(26) "**Group B public water system**" or "**Group B system**" means a public water system that is not a Group A public water system, and is defined and referenced under WAC 246-291-005.

(27) "**Guideline**" means a department document assisting a purveyor in meeting a rule or statutory requirement.

(28) "**GWI (groundwater under the direct influence of surface water)**" means any water beneath the surface of the ground, that the department determines has the following characteristics:

(a) Presence of insects or other macroorganisms, algae, or larger-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*; or

(b) Significant and relatively rapid shifts in water conditions such as turbidity, temperature, conductivity, or pH closely correlating to weather or surface water conditions, where natural conditions cannot prevent the introduction of surface water pathogens into the source at the systems' point of withdrawal.

(29) "**Health officer**" means the health officer of the local health jurisdiction, or an authorized representative.

(30) "**Human consumption**" means the use of water for drinking, bathing, showering, handwashing, cooking, food preparation, dishwashing, ice-making, or oral hygiene.

(31) "**Hydraulic analysis**" means the study of the Group B system's distribution main and storage network to determine the system's present or future adequacy for providing service to consumers within the established design parameters for the system under peak flow conditions, including fire flow. The analysis establishes the adequacy of design for distribution system components such as piping, elevated storage, booster stations or similar facilities used to pump and convey water to consumers.

(32) "**Infiltration gallery**" means a water collection system built of perforated pipe or conduit and placed in permeable earth, for collecting shallow groundwater. An infiltration gallery is usually located close to springs, wetlands, streams, or ponds.

(33) "**Intertie**" means an interconnection between public water systems permitting the exchange or delivery of water between those systems.

(34) "**JPR (joint plan of responsibility)**" means a written agreement between the department and local health jurisdiction that:

(a) Lists the roles and responsibilities of the department and health officer for reviewing and approving Group B system designs;

(b) Provides for a level of supervision necessary to effectively achieve the responsibilities in the JPR;

(c) Is signed by an authorized representative from the department and local health jurisdiction; and

(d) Is reviewed at least once every five years and updated as needed.

(35) "**kPa**" means kilo pascal (Standard International units of pressure).

(36) "**Local board of health**" means the governing body of a county health department under chapter 70.05 RCW, or a health district under chapter 70.46 RCW.

(37) "**Local health jurisdiction**" means a county health department under chapter 70.05 RCW, city-county health department under chapter 70.08 RCW, or health district under chapter 70.46 RCW.

(38) "**Local permitting authority**" means the local building official, health officer, or authorized representative that makes determinations regarding building permits and development proposals.

(39) "**MCL (maximum contaminant level)**" means the maximum permissible level of a contaminant in water the purveyor delivers to any Group B system consumer, measured at the source before entry to the distribution system.

(40) "**MDD (maximum day demand)**" means the highest actual or estimated quantity of water that is, or is expected to be, used over a twenty-four hour period, excluding unusual events or emergencies.

(41) "**mg/L**" means milligrams per liter (1mg/L = 1 part per million).

(42) "**ml**" means milliliter.

(43) "**mm**" means millimeter.

(44) "**Nonresidential service connection**" means a connection to a public water system that provides potable water including, but not limited to a:

(a) Commercial property;

(b) Industrial property;

(c) Civic property;

(d) Municipal property;

(e) Institutional property;

(f) School;

(g) Recreational use as defined in this section; or

(h) Any other authorized use that provides potable water to a nonresidential population.

(45) "**PAS**" means pitless adaptor standard.

(46) "**PHD (peak hourly demand)**" means the maximum rate of water use, excluding fire flow that can occur within a defined service area over a continuous sixty minute time period. PHD is typically expressed in gallons per minute (gpm).

(47) "**Potable**" means water safe for human consumption.

(48) "**Potential GWI**" means a source identified by the department or local health jurisdiction as possibly under the direct influence of surface water including, but not limited to a:

(a) Well that has a screened interval fifty feet or less from the ground surface at the wellhead and is located within two hundred feet of a freshwater surface water body;

(b) Ranney well;

(c) Infiltration gallery; or

(d) Spring.

(49) "**Primary MCL**" means a standard based on chronic, nonacute, or acute human health effects.

(50) "**psi**" means pounds per square inch.

(51) "**Public water system**" means any system providing water for human consumption through pipes or other constructed conveyances, excluding a system serving only one single-family residence and a system with four or fewer service connections all of which serve residences on the same farm. The term includes:

(a) Collection, treatment, storage, or distribution facilities under the control of a purveyor and used primarily in connection with the system; and

(b) Collection, or pretreatment storage facilities not under the control of a purveyor, and primarily used in connection with the system.

(52) "**Purveyor**" means an agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, or person or other entity owning or operating a public water system, or applying to create a public water system. Purveyor also means the authorized agents of these entities.

(53) "**Ranney well**" means a water well or collection system including a central chamber with horizontal perforated pipes extending out into an aquifer. The perforated pipes may extend out under a surface water body such as a lake or river.

(54) "**Recreational service connection**" means a connection to a public water system that provides potable water to each:

(a) Campsite; or

(b) Recreational vehicle site.

(55) "**Residential service connection**" means a connection to a public water system that provides potable water to a dwelling unit.

(56) "**Same farm**" means a parcel of land or series of parcels connected by covenants and devoted to the production of livestock or agricultural commodities for commercial purposes.

(57) "**Sanitary survey**" means a review, inspection, and assessment of a public water system by the department or local health jurisdiction.

(58) "**SCA (sanitary control area)**" is defined under WAC 246-291-125(5).

(59) "**SMA (satellite system management agency)**" means a person or entity approved by the department in accordance with chapter 246-295 WAC to own or operate public water systems on a regional or county-wide basis without the necessity for a physical connection between the systems.

(60) "**Secondary MCL**" means a standard based on factors other than health effects.

(61) "**Service connection**" means a residential, nonresidential, or recreational service connection as defined in this section.

(62) "**Single family residence**" means a structure in which one or more persons maintain a common household. A structure is not a single family residence if it is used for an activity requiring a permit or license under one or more of the following rules:

(a) Food service, chapter 246-215 WAC;

- (b) Food inspection, chapter 16-165 WAC;
- (c) Residential treatment facility, chapter 246-337 WAC;
- (d) Transient accommodations, chapter 246-360 WAC;
- (e) Boarding homes licensing rules, chapter 388-78A WAC;
- (f) Minimum licensing requirements for child care centers, chapter 170-295 WAC;
- (g) School-age child care center minimum licensing requirements, chapter 170-151 WAC; or
- (h) Adult family home minimum licensing requirements, chapter 388-76 WAC.

(63) **"Spring"** means a source of water where the aquifer comes in contact with the land surface.

(64) **"Surface water"** means a body of water open to the atmosphere and subject to surface runoff, including captured rainfall.

(65) **"WSDOT"** means Washington state department of transportation.

(66) **"Water right"** means a permit, claim, or other authorization, on record with or accepted by the department of ecology, authorizing the beneficial use of water in accordance with all applicable state laws.

(67) **"Well site inspection"** means a physical inspection of the area near an existing or proposed well location, and completion of a department or health officer-approved form that identifies the suitability of the site for a public water supply well.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-010, filed 12/4/12, effective 1/1/14.
Statutory Authority: RCW 43.20.050. 95-20-078, § 246-291-010, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-010, filed 6/22/94, effective 7/23/94.]

WAC 246-291-025 Bottled water and ice-making facilities.

Water sources used by a facility regulated under chapter 16-165 WAC that produces bottled water or ice for public consumption shall meet the requirements under chapter 246-290 WAC.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-025, filed 12/4/12, effective 1/1/14.
Statutory Authority: RCW 43.20.050. 95-20-078, § 246-291-025, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-025, filed 6/22/94, effective 7/23/94.]

WAC 246-291-030 General administration. (1) The department administers this chapter unless:

(a) A local board of health adopts rules under RCW 70.05.060 or 70.46.060 to implement this chapter that are at least as stringent as this chapter; or

(b) The local health jurisdiction has accepted primary responsibility for administering this chapter in a JPR.

(2) Existing local rules shall remain in effect, except requirements of this chapter that are more stringent than the local board of health rules.

(3) In addition to the requirements of this chapter for Group B systems, local board of health rules may include, but are not limited to:

- (a) System operations and maintenance;
- (b) Ongoing water quality and water use monitoring;
- (c) Reporting of water quality and water use monitoring data to the local health jurisdiction;
- (d) System inspections or sanitary surveys;
- (e) Public notification;
- (f) Additional requirements for existing systems to be considered in compliance; and
- (g) Regulation of systems with one or two service connections.

(4) A local board of health may adopt rules that require a purveyor of a Group B system to obtain an annual operating permit as authorized under RCW 70.119A.130.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-030, filed 12/4/12, effective 1/1/14.
Statutory Authority: RCW 43.20.050. 95-20-078, § 246-291-030, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-030, filed 6/22/94, effective 7/23/94.]

WAC 246-291-050 Enforcement. (1) When a Group B system is out of compliance with this chapter, the department may initiate enforcement actions under RCW 70.119A.030 and 70.119A.040.

(2) A health officer may initiate enforcement actions as authorized under RCW 70.46.060 and 70.119A.050, and as authorized under local board of health rules.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-050, filed 12/4/12, effective 1/1/14.
Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-050, filed 6/22/94, effective 7/23/94.]

WAC 246-291-060 Waivers. (1) A health officer or local board of health may grant a waiver from the requirements of this chapter, provided that:

- (a) The local health jurisdiction has:
 - (i) Adopted rules under RCW 70.05.060 or 70.46.060 that are at least as stringent as this chapter; or
 - (ii) Accepted primary responsibility for administering this chapter in a JPR;
- (b) The health officer or local board of health conditions the approval of a waiver to include, at a minimum:
 - (i) Water quality treatment;
 - (ii) Monitoring; or
 - (iii) Maintenance and oversight; and
- (c) The health officer or local board of health obtains

sufficient evidence from a purveyor that a proposed Group B system will deliver drinking water that does not exceed a primary MCL under WAC 246-291-170, and will provide an adequate supply of water under WAC 246-291-125.

(2) The health officer or local board of health shall not grant a waiver from the residential population requirement for each dwelling unit under WAC 246-291-200(2).

(3) A request for a waiver is not considered an adjudicative proceeding as defined under chapter 34.05 RCW.

(4) A waiver granted under this section shall be valid for up to five years from the date of issuance as specified by the health officer or local board of health if construction of the Group B system is not completed.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-060, filed 12/4/12, effective 1/1/14.
Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-060, filed 6/22/94, effective 7/23/94.]

WAC 246-291-090 Public Water System Coordination Act and satellite management. (1) A purveyor of a new or expanding Group B system shall comply with the applicable coordinated water system plan created under chapter 246-293 WAC and 70.116 RCW if located within the boundaries of a critical water supply service area.

(2) The department or health officer shall approve a new or expanding Group B system consistent with requirements under WAC 246-293-190 and RCW 70.116.060(3).

(3) A new Group B system must comply with SMA requirements under RCW 70.119A.060.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-090, filed 12/4/12, effective 1/1/14.]

WAC 246-291-120 Design report approval. (1) A purveyor shall receive written department or health officer approval of a design report prior to:

(a) Installing a new Group B system; or
(b) Providing service to more than the current approved number of service connections.

(2) To obtain design report approval for a Group B system, a purveyor shall provide a copy of the following, at a minimum, to the department or health officer:

(a) Documentation that creating a new system or expanding an existing system does not conflict with any applicable coordinated water system plan adopted under chapter 246-293 WAC;

(b) Documentation that creating a new system complies with the SMA requirements under RCW 70.119A.060(2);

(c) Source approval under WAC 246-291-125 or 246-291-135;

(d) Documentation that all requirements under WAC 246-291-140 are met;

(e) A system design that complies with the requirements

under WAC 246-291-200 including, but not limited to:

(i) Drawings of each project component, including:

(A) Location;

(B) Orientation;

(C) Size; and

(D) Easements for:

(I) Future access and maintenance of distribution system pipelines located on private property, or franchise agreements necessary for distribution system pipelines located within public right of way; and

(II) Other system components, including access and maintenance of reservoirs, wells, and pumping stations.

(ii) Material specifications for each project component;

(iii) Construction specifications and assembly techniques;

(iv) Testing criteria and procedures; and

(v) A description of disinfection procedures as required under WAC 246-291-220.

(3) The design report shall be prepared, sealed, and signed in accordance with chapter 196-23 WAC by a professional engineer who:

(a) Is licensed in the state of Washington under chapter 18.43 RCW; and

(b) Has specific expertise regarding design, operation, and maintenance of public water systems.

(4) A local health jurisdiction that has accepted primary responsibility in a JPR under WAC 246-291-030 may adopt by rule, an exception to the professional engineer requirement for Group B systems that:

(a) Do not use a variable speed pump;

(b) Do not provide fire flow;

(c) Do not have special hydraulic considerations;

(d) Do not have atmospheric storage in which the bottom elevation of the storage reservoir is below the ground surface; and

(e) Serve fewer than ten service connections.

(5) A purveyor shall submit a "Construction Completion Report for Public Water System Projects" to the department or health officer on a form approved by the department or health officer within sixty days of construction completion, and before use of any approved Group B system. The form must:

(a) Be signed by a professional engineer, unless the health officer approves the project as meeting the requirements under subsection (4) of this section;

(b) Include a statement that the project is constructed and completed according to the design report requirements under this chapter; and

(c) Include a statement that the installation, testing, and disinfection of the Group B system is completed in accordance with this chapter.

(6) All design changes, except for minor field revisions, must be submitted in writing to, and approved by, the department or health officer.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW.]

12-24-070, § 246-291-120, filed 12/4/12, effective 1/1/14.
Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-120,
filed 6/22/94, effective 7/23/94.]

WAC 246-291-125 Groundwater source approval. (1)

Groundwater sources submitted to the department or health officer for design approval under WAC 246-291-120 must comply with the following requirements:

(a) Drinking water shall be obtained from the highest quality source feasible.

(b) All permanent groundwater sources must:

(i) Be designed to be physically connected to the distribution system;

(ii) Be a drilled well constructed in accordance with chapter 173-160 WAC; and

(iii) Meet water quality requirements under WAC 246-291-170.

(c) The department or health officer shall not approve a design for a new or expanding Group B system using a GWI source.

(d) The department or health officer shall not approve a design for a new or expanding Group B system using a potential GWI source until a hydrogeologic evaluation is completed by a licensed hydrogeologist or engineer that determines the source is not GWI. The GWI evaluation and determination must be completed before the department or health officer will review the Group B design report.

(2) Before pursuing groundwater source approval under this section, a purveyor shall contact the department or local health jurisdiction to identify any additional requirements.

(3) A purveyor shall provide a copy of the following to the department or health officer to obtain groundwater source approval:

(a) The water right permit, if required, for the source, quantity, type, and place of use;

(b) The water well report, as required under WAC 173-160-141;

(c) The well site inspection report form completed by the department or local health jurisdiction, or designee;

(d) A map showing:

(i) The project location;

(ii) A six hundred foot radius around the well site designating the preliminary short-term groundwater contribution area; and

(iii) The perimeter of a one hundred foot SCA, meeting the requirements in subsection (5) of this section.

(e) A map showing topography, distances to the well from existing property lines, buildings, potential sources of contamination within the six hundred foot radius around the well, and any other natural or man-made features that could affect the quality or quantity of water;

(f) The recorded legal documents for the SCA;

(g) Results from an initial analysis of raw source water quality from a certified lab, including, at a minimum:

(i) Coliform bacteria;

(ii) Inorganic chemical and physical parameters under WAC 246-291-170, Tables 2, 3, and 4; and

(iii) Other contaminants, as directed by the department or health officer in areas where it determines that other contamination may be present.

(h) Pump test data establishing groundwater source capacity including, but not limited to:

- (i) Static water level;
- (ii) Sustainable yield;
- (iii) Drawdown;
- (iv) Recovery rate; and
- (v) Duration of pumping.

(i) Additional pump testing in locations where water resource limitations or known seasonal groundwater fluctuations may affect future reliability as directed by the department or health officer.

(4) Groundwater source capacity.

(a) A groundwater source for a Group B system with residential connections must be pump tested to determine if the well(s) and aquifer are capable of reliably supplying water that meets the minimum requirements under Table 1 of this section.

(b) A groundwater source must be pump tested to determine if the well(s) and aquifer are capable of supplying water at the rate required to provide the water volume as determined under WAC 246-291-200 for a source supplying a Group B system with:

- (i) Nonresidential service connections; or
- (ii) Both residential and nonresidential service connections.

(c) Where a locally adopted watershed plan or ecology watershed rule under Title 173 WAC establishes a higher water supply requirement, the purveyor shall use the higher value to assess the adequacy of the source of supply.

(d) A purveyor shall design the Group B system to meet the requirements under Table 1, even if a locally adopted watershed plan or watershed rule under Title 173 WAC limits water use below the values in Table 1.

Table 1
Minimum Source Capacity and Water Supply for Residential Service Connections

| County | Gallons per day per dwelling unit |
|--|-----------------------------------|
| Clallam, Clark, Cowlitz, Grays Harbor, Island, Jefferson, King, Kitsap, Lewis, Mason, Pacific, Pierce, San Juan, Skamania, Skagit, Snohomish, Thurston, Wahkiakum, and Whatcom | 750 |
| Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman, and Yakima | 1,250 |

(5) SCA.

(a) A purveyor shall establish the SCA around each groundwater source to protect it from contamination.

(b) The SCA must have a minimum radius of one hundred feet, unless technical justification submitted by a licensed hydrogeologist or engineer to the department or health officer supports a smaller area. The justification must address geological and hydrogeological data, well construction details, and other relevant factors necessary to provide adequate sanitary control.

(c) The department or health officer may require a larger SCA if geological and hydrological data support such a decision.

(d) A purveyor shall own the SCA, or the purveyor shall have the right to exercise complete sanitary control of the land through other legal provisions.

(e) A purveyor shall record a restrictive covenant to the title of each property that is sited partially or completely within the SCA to protect the SCA in perpetuity.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-125, filed 12/4/12, effective 1/1/14.]

WAC 246-291-135 Interties. (1) A purveyor submitting a new or expanding Group B system design for approval using a nonemergency intertie source shall provide the following to the department or health officer:

(a) A copy of the intertie agreement under subsection (2) of this section;

(b) Evidence that the supplying water system currently operates in compliance with chapter 246-290 or 246-291 WAC;

(c) Location of the proposed intertie;

(d) Information on any water quality issues and treatment being used;

(e) Demonstration of the source capacity and hydraulic capacity of the supply and receiving systems at the designed flow rate through the intertie;

(f) A copy of the water right or water right change issued by ecology, if required under RCW 90.03.383;

(g) Identification of alternative sources that will be used when the intertie agreement expires if the water is not being provided in perpetuity; and

(h) Verification that a source meter has been installed to measure water received.

(2) An intertie agreement between purveyors must identify:

(a) Specific time periods in which water will be provided;

(b) The volume of water available for use, including any seasonal or other restrictions; and

(c) How operations will be coordinated.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-135, filed 12/4/12, effective 1/1/14.]

WAC 246-291-140 Water system planning and disclosure requirements. (1) A purveyor submitting a new or expanding Group B system design for approval shall provide the following information to the department or health officer:

- (a) The system's management and ownership;
- (b) The system's service area and existing and proposed major facilities;
- (c) The maximum number of service connections the system can safely and reliably supply;
- (d) The relationship and compatibility with other locally adopted plans;
- (e) The amount of revenue needed to operate and maintain the system, and a plan to meet revenue needs;
- (f) A cross-connection control plan if any existing cross-connections are identified;
- (g) Security measures under the strict control of the purveyor to be provided to protect the water source, water storage reservoir, and the distribution system;
- (h) For systems that will use sources with a well pump test indicating a yield of 5.0 gpm or less, a contingency plan describing short-term and long-term measures to restore water to consumers in the event the well(s) cannot provide an adequate supply of water;
- (i) The public notification procedures that the purveyor will use as required under WAC 246-291-360.

(2) A purveyor shall record the following information on each customer's property title before providing water from the Group B system to any service connection:

- (a) System name and a department issued public water system identification number;
- (b) System owner name and contact information;
- (c) The following statement: "This property is served by a Group B public water system that has a design approval under chapter 246-291 Washington Administrative Code";
- (d) Parcel numbers to be served by the system;
- (e) Indicate if the system is designed and constructed to provide fire suppression;
- (f) A copy of any waiver granted under WAC 246-291-060 to the purveyor and any required monitoring and reporting;
- (g) Indicate:
 - (i) If service connections are metered or not;
 - (ii) If the purveyor intends to monitor the system for contaminants;
 - (iii) How often monitoring will occur; and
 - (iv) How the consumers of the system will be notified of monitoring results;
- (h) Contact information for the approving authority (department or local health jurisdiction);
- (i) The type of source treatment provided for any contaminants that exceed secondary MCLs;
- (j) Instructions about how to obtain a copy of the agreements for consumers, if one exists; and
- (k) Other information, as directed by the department or health officer.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-140, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050. 95-20-078, § 246-291-140, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-140, filed 6/22/94, effective 7/23/94.]

WAC 246-291-170 Water quality requirements for groundwater source approval. (1) All water quality samples collected under this section must be:

(a) Collected without chlorine, ultraviolet light, ozone, or other disinfectant in use to treat the source;

(b) Collected after the well has been pumped long enough to allow for collection of a representative sample of the aquifer, as described in the *Group B Water System Design Guidelines (2012)*; and

(c) Analyzed by a certified lab.

(2) To meet the requirements for design approval under WAC 246-291-120, a purveyor shall obtain, at a minimum:

(a) Satisfactory results from two raw source water samples analyzed for coliform bacteria;

(b) Results from one raw source water sample that has been analyzed for, and does not exceed, any primary MCL in Table 2 of this section; and

(c) In areas known or suspected to have contaminants of public health concern, one raw source water sample analyzed for the contaminant(s) as directed by the department or health officer.

(3) When analytical results indicate a presence of coliform bacteria, a purveyor shall do the following:

(a) Disinfect the source using procedures under WAC 246-291-220; and

(b) Collect two repeat samples and analyze for coliform bacteria by a certified lab.

(4) A purveyor shall collect a confirmation raw source water sample and have the sample analyzed for each parameter that exceeded the MCL in the initial sample, if:

(a) An analysis exceeds a primary MCL in Table 2 of this section; or

(b) A contaminant of public health concern under subsection (2)(c) of this section exceeds the primary MCL under WAC 246-290-310.

(5) The department or health officer shall not approve the proposed source if:

(a) The average concentration from all samples for each substance taken under this section exceeds a primary MCL in Table 2 of this section;

(b) The repeat sample results collected under subsection (3) of this section indicate a presence of coliform bacteria; or

(c) A contaminant of public health concern collected under this section exceeds the primary MCL under WAC 246-290-310.

(6) When an analysis exceeds a secondary MCL in Table 3 or 4 of this section, a purveyor shall include treatment in the Group

B system design under WAC 246-291-200 so that drinking water delivered to consumers does not exceed a secondary MCL.

Table 2
Primary Inorganic Chemical Contaminants

| Substance | MCLs (mg/L) |
|----------------|-------------|
| Antimony (Sb) | 0.006 |
| Arsenic (As) | 0.010* |
| Barium (Ba) | 2.0 |
| Beryllium (Be) | 0.004 |
| Cadmium (Cd) | 0.005 |
| Chromium (Cr) | 0.1 |
| Cyanide (HCN) | 0.2 |
| Fluoride (F) | 4.0 |
| Mercury (Hg) | 0.002 |
| Nitrate (as N) | 10.0 |
| Nitrite (as N) | 1.0 |
| Selenium (Se) | 0.05 |
| Thallium (Tl) | 0.002 |

Note: *The arsenic MCL in Table 2 applies to new and expanding Group B systems. For Group B systems constructed prior to January 1, 2014, the arsenic MCL is 0.05 mg/L. WAC 246-291-360 (3) and (4) establish public notification requirements for Group B systems constructed prior to January 1, 2014, with an arsenic concentration exceeding 0.010 mg/L.

Table 3
Secondary Inorganic Chemical Contaminants

| Substance | MCLs (mg/L) |
|----------------------------|-------------|
| Chloride (Cl) | 250.0 |
| Fluoride (F) | 2.0 |
| Iron (Fe) | 0.3 |
| Manganese (Mn) | 0.05 |
| Silver (Ag) | 0.1 |
| Sulfate (SO ₄) | 250.0 |
| Zinc (Zn) | 5.0 |

Table 4
Secondary Physical Characteristics

| Substance | MCLs |
|------------------------------|----------------|
| Color | 15 color units |
| Specific conductivity | 700 umhos/cm |
| Total dissolved solids (TDS) | 500 mg/L |

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-170, filed 12/4/12, effective 1/1/14.]

WAC 246-291-200 Design standards. (1) A purveyor submitting a new or expanding Group B system design for approval

shall use good engineering practices and apply industry standards in the design, such as those in:

(a) The department guideline titled *Group B Water System Design Guidelines* (2012);

(b) *Water Systems Council PAS-97(04) Pitless Adapters and Watertight Well Caps* (2004);

(c) Standard specifications of the:

(i) American Public Works Association;

(ii) American Society of Civil Engineers;

(iii) American Water Works Association; and

(iv) American Society for Testing and Materials.

(d) Minimum standards for construction and maintenance of wells, chapter 173-160 WAC;

(e) *Recommended Standards for Water Works, A Committee Report of the Great Lakes - Upper Mississippi River Board of State Public Health and Environmental Managers* (2007);

(f) *Standard Specifications for Road, Bridge and Municipal Construction* (WSDOT/APWA 2012);

(g) *USC Manual of Cross-Connection Control*, 10th edition (October 2009);

(h) *PNWS-AWWA Cross-Connection Control Manual*, sixth edition (1996);

(i) International Building Code (IBC) (2012); and

(j) Uniform Plumbing Code (UPC) (2012).

(2) A purveyor submitting a new or expanding Group B system design for approval shall:

(a) Calculate residential population by using 2.5 persons per dwelling unit;

(b) Use full-time occupancy for each dwelling unit; and

(c) Use planning, engineering and design criteria under WAC 246-290-100 through 246-290-250 if the system is being designed to serve ten to fourteen residential service connections.

(3) A purveyor shall demonstrate that the source(s) of supply, pipes and other constructed conveyances are capable of meeting the minimum residential water supply as required under WAC 246-291-125(4) Table 1.

(4) A new or expanding Group B system must be designed with the capacity to deliver the PHD at 30 psi (210 kPa) measured along property lines adjacent to distribution mains, under the following conditions:

(a) When all equalizing storage has been depleted, if the system is designed to supply PHD in part with equalizing storage; and

(b) At the "pump-on" pressure setting for the pump directly supplying the distribution system, when the water system is designed to supply PHD without any equalizing storage.

(5) If the design PHD exceeds the total source pumping capacity, then sufficient equalizing storage must be provided.

(6) The minimum design flow and duration required for fire flow and fire suppression storage, if provided, shall be determined by:

(a) The local fire protection authority; or

(b) As required under chapter 246-293 WAC for Group B

systems within the boundaries of a designated critical water supply service area.

(7) In the design of a new or expanding Group B system that does not have to comply with minimum fire flow standards, a purveyor shall coordinate with the local fire protection authority to assess if any hydrants create adverse pressure problems as a result of expected fire suppression activities, and address any pressure problems in the design.

(8) If fire flow is provided, the distribution system must be designed to provide the MDD for the entire Group B system and the required fire flow at a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system when the designed volume of fire suppression and equalizing storage has been depleted.

(9) The Group B system design must contain a water meter that measures the water use of the entire water system (totalizing source meter) and a source sample tap.

(10) The use of individual service booster pumps to meet the requirements of this section is prohibited.

(11) A purveyor shall equip a new or expanding Group B system with a generator disconnect switch.

(12) A purveyor shall use generally accepted industry standards and practices in the elimination or control of all cross-connections, such as:

(a) *USC Manual of Cross-Connection Control*, Tenth Edition, October 2009; and

(b) *PNWS-AWWA Cross-Connection Control Manual*, Sixth Edition (1996).

(13) A pitless unit, pitless adaptor, and vented sanitary well cap must conform with the product, material, installation, and testing standards under the *Water Systems Council PAS-97(04) Pitless Adapters and Watertight Well Caps* (2004).

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-200, filed 12/4/12, effective 1/1/14.
Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-200, filed 6/22/94, effective 7/23/94.]

WAC 246-291-205 Drinking water materials and additives.

(1) In the design of a new or expanding Group B system, all materials in contact with potable water shall conform to the ANSI/NSF Standard 61.

(2) Pipes, pipe fittings, fittings, fixtures, solder, or flux used in the design of a new or expanding Group B system shall be lead-free. For the purposes of this section, lead-free means:

(a) Not more than a weighted average of twenty-five one-hundredths of one percent lead for wetted surfaces of pipes and pipe fittings; and

(b) No more than two-tenths of one percent lead in solder and flux.

(3) Any chemicals specified for use in the design of treatment for secondary MCLs in Table 3 under WAC 246-291-170,

with the exception of unscented commercial grade hypochlorite compounds, shall comply with ANSI/NSF Standard 60. The design dosage shall not exceed the maximum application dosage recommended for the product as certified by the ANSI/NSF Standard 60.

(4) The department may review and approve the use of materials or additives that are not ANSI/NSF Standard 60 or 61 certified on a case-by-case basis.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-205, filed 12/4/12, effective 1/1/14.]

WAC 246-291-210 Distribution systems. (1) Storage reservoirs shall be designed to:

- (a) Prevent entry by birds, animals, insects, excessive dust, and other potential sources of external contamination;
- (b) Include:
 - (i) A weathertight roof;
 - (ii) A lockable access hatch;
 - (iii) A screened roof vent;
 - (iv) An overflow pipe with atmospheric discharge or other suitable means to prevent a cross-connection;
 - (v) A sample tap;
 - (vi) A drain to daylight, or an alternative design approved by the department or health officer that is adequate to protect against cross-connection;
 - (vii) Tank isolation in order to perform maintenance procedures; and
 - (viii) Other appurtenances appropriate for the protection of stored water from contamination;
- (c) Be above normal ground surface level. If the bottom elevation of a storage reservoir must be below normal ground surface:
 - (i) The storage reservoir must be placed above the groundwater table; and
 - (ii) The top of a partially buried storage reservoir must be at least two feet above normal ground surface.

(2) A Group B system designed to supply fire hydrants must have a minimum distribution main size of six inches (150 mm) supplying each hydrant.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-210, filed 12/4/12, effective 1/1/14. Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-210, filed 6/22/94, effective 7/23/94.]

WAC 246-291-220 Group B system disinfection. (1) A purveyor shall disinfect a Group B system before providing service to any consumer.

(2) The water system disinfection procedures must conform to the following standards:

- (a) AWWA C651-05 or APWA/WSDOT (2010 revision), for water

main disinfection;

(b) AWWA C652-02, for reservoir disinfection; and

(c) AWWA C654-03, for well disinfection.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-220, filed 12/4/12, effective 1/1/14.

Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-220, filed 6/22/94, effective 7/23/94.]

WAC 246-291-250 Continuity of service. (1) A purveyor of a Group B system shall notify all the system's consumers in writing before transferring ownership. The notification must include a time schedule for transferring responsibilities, identification of the new owner, and under what type of authority the new ownership will operate.

(2) At least one year prior to terminating system operation, a purveyor of a Group B system shall notify all consumers in writing and provide a copy of the written notice to the department and health officer.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-250, filed 12/4/12, effective 1/1/14.

Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-250, filed 6/22/94, effective 7/23/94.]

WAC 246-291-280 Existing Group B systems. (1) A purveyor of a Group B system shall apply for and obtain design approval under WAC 246-291-120, or approval under subsection (3) of this section before the system:

(a) Expands to serve a new service connection needing potable water; or

(b) Provides potable water for a new use of an existing service connection if a local permitting authority requires an approved public water supply as a condition of an approval of the new use.

(2) A local permitting authority may determine a Group B system constructed before January 1, 2014, without design approval under this chapter, to be adequate for existing connections if, at a minimum, the following requirements are met:

(a) The system's source(s) must meet well construction standards, under chapter 173-160 WAC;

(b) A well site inspection completed by the department, local health jurisdiction, or designee has documented that there are no sources of contamination in the SCA that could create a public health risk;

(c) The system meets water quality standards under WAC 246-291-170, Table 2; and

(d) The system is capable of maintaining a minimum 20 psi at all points throughout the distribution system during peak demand.

(3) A purveyor of a Group B system approved prior to January 1, 2014, may provide potable water to additional service connections provided that:

(a) The expanded use is consistent with the existing design approval;

(b) The expanded use does not exceed the number of approved service connections; and

(c) The purveyor complies with all locally adopted requirements.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-280, filed 12/4/12, effective 1/1/14.]

WAC 246-291-300 General requirements. (1) A purveyor of a Group B system shall provide potable water to the system's consumers.

(2) The department or health officer may require a purveyor to collect water quality samples, have the samples analyzed by a certified lab, and report results as required under WAC 246-291-360, when the department or health officer:

(a) Determines a public health risk exists;

(b) Receives information documenting contamination;

(c) Receives a report of suspected or known waterborne illness from a health care provider as required under chapter 246-101 WAC; or

(d) Is aware of, or observes, a situation in which the source may be vulnerable to contamination. For example, a source is vulnerable to contamination from a flood event.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-300, filed 12/4/12, effective 1/1/14.]

Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-300, filed 6/22/94, effective 7/23/94.]

WAC 246-291-360 Public notification. (1) A purveyor of a Group B system shall notify the department, health officer, and all system consumers in writing within twenty-four hours when the purveyor:

(a) Obtains a water quality sample analysis from a certified lab indicating the presence of *E. coli*;

(b) Obtains a water quality sample analysis from a certified lab indicating the presence of nitrate at a concentration at or above 10.0 mg/L; or

(c) Is aware of circumstances that pose a threat of acute contamination, such as a flood event.

(2) A purveyor of a Group B system required to monitor water quality under WAC 246-291-300 that is not required to notify consumers within twenty-four hours under subsection (1) of this section shall notify the department, health officer, and all system consumers, in writing, within thirty days of receiving the results from a certified lab if directed by the department or health officer.

(3) If a Group B system constructed prior to January 1, 2014, has an arsenic concentration exceeding 0.010 mg/L, the purveyor shall notify consumers in writing:

(a) By March 31, 2014, if the sample analysis result from a certified lab was obtained prior to January 1, 2014;

(b) Within thirty days of receiving a sample analysis result from a certified lab; or

(c) Within thirty days of adding a new service connection under WAC 246-291-280(3).

(4) The public notification must include the following information:

(a) A description of contamination and any known problem(s);

(b) What the purveyor is doing to resolve the problem(s);

(c) Where to get information about potential health effects;

(d) What the consumers should do to protect their health, including the use of another source of water;

(e) When the purveyor expects the problem(s) to be resolved; and

(f) Group B system contact information, including address, phone number, and if available, an e-mail address.

[Statutory Authority: RCW 43.20.050 and chapter 70.119A RCW. 12-24-070, § 246-291-360, filed 12/4/12, effective 1/1/14.

Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-360, filed 6/22/94, effective 7/23/94.]

WAC 246-291-370 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the remainder of this chapter, or the application of the provision to other persons or circumstances, shall not be affected.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-370, filed 6/22/94, effective 7/23/94.]