

Title 13

PUBLIC SERVICES

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Chapter 13.04

WATER MAIN, FIRE HYDRANT AND FIRE FLOW REQUIREMENTS

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13.04.010 Scope.

Water mains and fire hydrants shall be provided in accordance with this chapter for the protection of buildings, or portions of buildings, hereafter constructed. The procedure for determining fire flow requirements for buildings or portions of buildings hereafter constructed shall be in accordance with this chapter. This chapter does not apply to structures other than buildings. (Ord. 320 § 1 (part), 2004)

13.04.020 Definitions.

Unless otherwise provided in this section, the definitions in the International Fire Code, as adopted by the State Building Code Act, and in the rules and regulations of the State Health Department regarding public water systems shall apply to this chapter.

“Approved” or “approval” means that the requirement, condition, system, modification or standard is subject to the director’s approval or authorization.

“Building Code” means the International Building Code, as adopted by Chapter 15.04 of this code.

“Chief of police” or “police department,” where used in the International Fire Code, means the Grays Harbor County sheriff or sheriff’s department.

“Chief” or “chief of the fire department,” where used in the International Fire Code, means the Grays Harbor County planning and building division director except as related to fire suppression, and in such case the chief will be the chief of the fire authority responsible for the suppression of fire in that area.

“Contiguous subdivision” means those subdivisions that are within three hundred (300) feet of another residential, commercial or industrial structure, or other subdivision.

“Department of fire code prevention” means the planning and building division.

“Director” means the Grays Harbor County planning and building division director.

“Fire area” means the aggregate floor area enclosed and bounded by fire walls, fire barriers, exterior walls, or fire-resistant-rated horizontal assemblies of a building.

“Fire code official” means the planning and building division director or his or her designated representative.

“Fire district” or “chief of fire district” means the fire authority normally responsible for fire suppression in a specified area.

“Fire flow” is the flow rate of a water supply, measured at a residual pressure of twenty (20) pounds per square inch for a specified duration, that is available for firefighting purposes.

“Fire flow calculation area” means the floor area, in square feet, used in the determination of fire flow.

“Supervised,” when applied to a fire protection system, means that the system is under constant monitoring by an approved central station.

“Water main” means piping used to deliver water to any fire hydrant or to one or more individual service connections. (Ord. 344 § 1, 2006; Ord. 320 § 1 (part), 2004)

#### 13.04.030 Application.

A. Subdivisions are required to be provided with water mains, fire hydrants, and fire flow consistent with Grays Harbor County and State Department of Health requirements for water system design. Plans for such water mains and hydrants shall be submitted to and approved by the director, and shall be a condition of final plat or short plat approval.

B. All structures or additions erected pursuant to a building permit or mobile home permit shall be served by operational water mains, fire hydrants, and fire flows consistent with county standards. Prior to issuance of a building or mobile home permit, plans for such water mains and hydrants shall be submitted to the director. Construction or installation shall not be commenced until such plans for water mains and hydrants are approved by the director.

C. Mobile home parks and recreational vehicle parks shall be required to provide water mains, fire hydrants, and fire flow consistent with Grays Harbor County and State Department of Health standards for water system design. Prior to issuance of a building or mobile home permit, plans for such water mains and hydrants shall be submitted to the director. Construction or installation shall

not be commenced until such plans for water mains and fire hydrants are approved by the director, and shall be a condition of the final site plan.

D. Uses not involving a structure shall be regulated at the discretion of the director, and plans for such water mains, fire hydrants, and fire flows, if any are required, shall be submitted to the director. Construction or installation of uses shall not be commenced until such plans are approved by the director.

E. All new water mains and all additions and extensions to existing water mains shall meet the requirements of this chapter.

F. All changes in occupancy, as defined in the International Building Code, shall meet the requirements of this chapter when it has been found by the director that the degree of hazard is increased. (Ord. 344 § 2, 2006: Ord. 320 § 1 (part), 2004)

#### 13.04.040 Exemptions.

A. The following permits or approvals are exempt from the fire hydrant, water main, and fire flow requirements of this chapter:

1. All subdivisions consisting of lots that are each larger than one acre in size;
2. All long subdivisions that contain ten (10) lots or less when not contiguous with another subdivision and within the boundaries of a fire district, if the district can provide a tender or tanker of water in the amount of two hundred fifty (250) gallons per minute for a duration of one-half hour, provided further that subdivisions with five or more lots within one thousand (1,000) feet of an approved water system shall be required to connect to that system;
3. Short subdivisions not contiguous to other long or short subdivisions;
4. All existing subdivisions previously approved by the board of commissioners and recorded without the requirement to provide water mains and fire hydrants as a condition of subdivision approval;
5. Lot located in a residential zoning district that is larger than one acre in size, including parks, open space, or agricultural land;
6. All (a) single-family detached dwellings and mobile homes, including attached garages and covered porches, (b) detached garages, or (c) accessory buildings, any of which are less than five thousand (5,000) square feet in fire area;
7. Agricultural buildings that are (a) less than twelve thousand (12,000) square feet in fire area, or (b) open on all four sides; and
8. Structures containing an area less than one thousand (1,000) square feet.

B. All subdivisions, whether long or short, are as defined in Chapter 58.17, Revised Code of Washington, as amended.

C. The director is authorized to impose conditions, including but not limited to, increased setbacks, use of fire retardant materials and/or drafting ponds on permits, exempt pursuant to Section 13.04.030 of this chapter, where necessary to mitigate identified fire hazards. (Ord. 344 § 3, 2006: Ord. 320 § 1 (part), 2004)

#### 13.04.050 Water main requirements.

A. All water mains that serve fire hydrants subject to the provisions of this chapter shall be a minimum of eight inches inside diameter for dead end mains that are over fifty (50) feet in length and a minimum of six inches inside diameter for circulating mains. Fire hydrant leads less than fifty (50) feet in length may be six inches in inside diameter.

B. All newly installed water mains shall have fire hydrants installed to conform to the requirements of this chapter. (Ord. 320 § 1 (part), 2004)

#### 13.04.060 Fire hydrant requirements.

##### A. General Requirements.

1. Fire hydrants shall conform to standards prescribed by the American Water Works Association, and otherwise meet sound engineering practices as presented by a licensed engineer.

2. Fire hydrants shall have an auxiliary gate valve sufficient to permit repair or replacement, without disruption of water services.

3. Fire hydrants shall have (a) a minimum five-inch main valve opening, (b) two two and one-half-inch outlets and a four and one-half-inch steamer port with a five-inch or four-inch pumper port connection as per local fire district requirement, (c) a one-quarter turn quick connect Storz adapter, and (d) all such outlets and ports shall have National Standard Threads.

4. Fire hydrants shall stand plumb and be set to finished grade. The center of the lowest outlet shall be no less than eighteen (18) inches, or more than twenty-eight (28) inches, above grade. There shall be not less than a thirty-six (36) inch radius of clear area surrounding the outlets and control valve, to permit the operation of a hydrant wrench. The steamer or pumper port shall face the street or, if there is no street, the most likely route of emergency approach.

5. Fire hydrants shall have breakaway features, which allow the fire hydrant to break away from the water main without substantial damage to the water main.

6. Fire hydrants shall be painted as follows:

a. Barrel: any bright, highly visible color;

b. Tops and outlets:

i. Blue: one thousand five hundred (1,500) gallons per minute or more,

ii. Green: one thousand (1,000) gallons per minute to one thousand four hundred ninety-nine (1,499) gallons per minute,

iii. Orange: five hundred (500) gallons per minute to nine hundred ninety-nine (999) gallons per minute,

iv. Red: four hundred ninety-nine (499) gallons per minute or less.

7. Flush-type fire hydrants are not allowed, except with written approval of the director.

8. No material or item shall be placed or stored in proximity to a fire hydrant that would hinder the immediate observation of or access to the hydrant.

9. Fire hydrants shall be located at street intersections whenever practical.

B. Parking Prohibited Near Fire Hydrants. No person shall park any vehicle within fifteen (15) feet of a fire hydrant.

C. Physical Protection. Where fire hydrants are subject to impact by motor vehicles, guard posts or other means of protection shall be installed as provided by the International Fire Code.

D. Location of Fire Hydrants Serving Single-Family Dwellings. Fire hydrants serving detached single-family dwellings or duplex dwellings on individual lots shall be located not more than seven hundred (700) feet apart; provided, however, that no lot is more than three hundred fifty (350) feet from a hydrant.

E. Location of Fire Hydrants Serving Uses Other than Single-Family Dwellings. Fire hydrants serving any use other than detached single-family dwellings or duplex dwellings on individual lots shall be located not more than three hundred (300) feet apart; provided that one hydrant shall be located within one hundred fifty (150) feet of all structures or uses.

F. Location and Number of Fire Hydrants. The director, based on the International Fire Code and National Fire Protection Association standards, may specify the number and location of fire hydrants where more than one is required for a premise. (Ord. 344 § 4, 2006; Ord. 320 § 1 (part), 2004)

13.04.070 Fire flow requirements.

A. General Requirements. Compliance with this section shall be considered compliance with the fire flow requirements of the International Fire Code, 2003 Edition, as amended.

1. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings or portions of buildings are hereafter constructed within or moved into the county.

2. On-site fire hydrants and mains capable of supplying the required fire flow shall be provided, when required by the director, when a building is in excess of one hundred fifty (150) feet from a water supply on a public street, with such distance measured from any portion of the structure's first floor exterior wall.

B. Minimum Fire Flow. The following contains the minimum fire flow requirements for individual structures:

1. The minimum fire flow requirement for single-family dwellings greater than five thousand (5,000) square feet in size shall be in accordance with Chart A of this chapter.

Exception: The single-family dwelling may be granted a full fire flow requirement credit by installing a National Fire Protection Association 13-D sprinkler system.

2. The minimum fire flow requirement for buildings, other than a single-family dwelling, shall be in accordance with Chart A of this chapter. Fire flow requirements for structures other than buildings shall be as determined by the director.

Modified Fire Flow Guide: Chart A

Fire Flow Guide for Buildings  
Other Than One-Family Dwellings

Construction Type

Fire Flow I	II One-HR	IV -- H.T.	II-N		
Duration (GPM)	II-F.R.*	III One-HR*	V-One-HR*	III-N*	V-N*

Fire Flow I		II One-HR	IV -- H.T.	II-N	
Duration (GPM)	II-F.R.*	III One-HR*	V-One-HR*	III-N*	V-N*
30 min.					
500	5,500	3,700	2,600	2,100	1,600
750	7,800	5,000	3,500	2,700	2,000
1,000	1,100	6,800	4,700	3,500	2,400
1,250	15,900	9,300	6,200	4,500	2,900
1,500	22,750	12,700	8,200	5,900	3,600
1 hr.					
1,750	30,200	17,000	10,900	7,900	4,800
2,000	38,700	21,800	12,900	9,800	6,200
2,250	48,300	24,200	17,400	12,600	7,700
2,500	59,000	33,200	21,300	15,400	9,400
2,750	70,900	39,700	25,500	18,400	11,300
3,000	83,700	47,100	31,100	21,800	13,400
3,250	97,700	54,900	35,200	25,900	15,600
2 hr.					
3,500	112,700	63,400	40,600	29,300	18,000
3,750	128,700	72,400	46,400	33,500	20,600
4,000	145,900	82,100	52,500	37,900	23,300
4,250	164,200	92,400	59,100	42,700	26,300
4,500	183,400	103,100	66,000	47,700	29,300
4,700	203,700	114,600	73,300	53,000	32,600
5,000	225,200	126,700	81,100	58,600	36,000
5,250	247,700	139,400	89,200	65,400	39,600
5,500	271,200	152,600	97,700	70,600	43,400
5,750	295,900	166,500	106,500	77,000	47,400
4 hr.					
6,000	UNLIMITED	UNLIMITED	115,800	83,700	51,500
6,200	UNLIMITED	UNLIMITED	125,500	90,600	55,700
6,500	UNLIMITED	UNLIMITED	135,500	97,900	60,200
6,750	UNLIMITED	UNLIMITED	145,800	106,800	64,800
7,000	UNLIMITED	UNLIMITED	156,700	113,200	69,600
7,250	UNLIMITED	UNLIMITED	167,900	121,300	74,600
7,500	UNLIMITED	UNLIMITED	179,400	129,600	79,800
7,750	UNLIMITED	UNLIMITED	191,400	138,300	85,100
8,000	UNLIMITED	UNLIMITED	UNLIMITED	UNLIMITED	UNLIMITED

The value obtained from the chart may be reduced by up to twenty-five (25) percent for occupancies having a low fire hazard or may be increased by up to twenty-five (25) percent for occupancies having a high fire hazard.

\* MEASURED I-N FIRE AREA

C. Modification of Fire Flow Requirement.

1. General Requirements.

a. Fire flow requirements may be decreased by the director for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire flow requirements is impractical. The director may base a fire flow decrease upon one of the following: type of occupancy, type of construction, location on property, floor area, height and number of stories, drafting ponds, clear yards as defined by the International Building Code, fire walls, and the fire fighting capabilities of the local fire district.

b. Fire flow may be increased upward by the director where conditions indicate an unusual susceptibility to group fires or conflagrations. An increase shall not be more than twice that required for the building under consideration. The director may base upward modification to fire flow on the following: type of occupancy, type of construction, location on property, floor area, height and number of stories, clear yards as defined by the International Building Code, fire walls, and the fire fighting capabilities of the local fire district.

2. Modification Allowed for Automatic Sprinkler System.

a. Up to a fifty (50) percent reduction in fire flow may be granted dependent on the type of construction and the hazards of the contents, for an approved automatic sprinkler system designed and approved by a state licensed fire protection engineer.

b. Up to a seventy-five (75) percent reduction in fire flow may be granted, dependent on the type of construction and the hazards of the contents for a fully-supervised, approved automatic sprinkler system reviewed and approved by the Washington Survey and Rating Bureau.

3. Modification Allowed for Fire Alarm.

a. The director may grant a reduction in fire flow for an Underwriters Laboratory (UL) listed fire alarm system, as approved by the National Fire Protection Association that is monitored by an approved central receiving station.

b. A National Fire Protection Association-approved fire alarm system may be granted up to five hundred (500) gallons per minute for one hour credit in fire flow.

c. A modified approved fire alarm system may be granted up to three hundred (300) gallons per minute for thirty (30) minutes credit in fire flow.

4. Modification Allowed for Fire District with a Water Tanker or Water Tender. The director may grant a modification to the fire flow requirements if the building or structure is located within a fire district that owns and operates a water tanker tender truck.

5. Modification Allowed for Fire Wells. The director may allow for a modification to fire flow requirements if a pressured or nonpressured fire well is installed. Such fire flow credits may be as follows:

a. Pressured fire well: up to five hundred (500) gallons per minute for one hour fire flow credit;

b. Nonpressured fire well located within a fire district: up to five hundred (500) gallons per minute for one hour fire flow credit.

D. Limits to Modifications. In no case shall the fire flow be less than as follows:

1. Residential. Lot sizes one acre or less, including mobile homes and recreational vehicle parks single-family and mobile homes five thousand (5,000) square feet or more in size, five hundred (500) gallons per minute for thirty (30) minutes.

2. Commercial and Multi-family. Seven hundred fifty (750) gallons per minute for sixty (60) minutes.

3. Industrial. One thousand (1,000) gallons per minute for sixty (60) minutes. In no event shall the required fire flow be less than that required by Washington Administrative Code 246-293 as amended. (Ord. 344 § 5, 2006: Ord. 320 § 1 (part), 2004)

#### 13.04.080 Alternate methods of compliance.

A. The director shall have the authority to issue a written administrative variance from the standards established pursuant to this chapter when documentation is provided that results in a finding that:

1. Strict compliance would require unreasonable water main, fire hydrant locations, or fire flow requirements; and

2. Alternate requirements would not unreasonably affect adequate fire protection to the area or structures served.

B. The director is authorized to issue a written administrative variance, except as provided in subsection D of this section, for connections to single-family residences served by an existing water system that provides a minimum fire flow of at least five hundred (500) gallons per minute when documentation is provided that results in a finding that:

1. The administrative variance would not unreasonably affect fire protection; and

2. The purveyor's approved water system plan includes a method for increasing the fire flow to current standards.

C. Notice of the administrative variance decision shall be given in at least one publication in a newspaper of general circulation in the county not more than ten (10) working days from the date of the final decision.

D. The director shall not issue an administrative variance that results in a violation of Washington Administrative Code 246-293 without prior written approval of the State Department of Health. (Ord. 344 § 6, 2006: Ord. 320 § 1 (part), 2004)

#### 13.04.090 Enforcement.

The director shall enforce provisions of this chapter and any rules and regulations promulgated thereunder as provided by enforcement and penalty provisions of the International Fire Code. The director may impose a civil penalty of not more than one thousand dollars (\$1,000.00) per incident for violation of this chapter. Any person violating any requirements of this chapter shall be guilty of a misdemeanor and upon conviction thereof be fined not more than one thousand dollars (\$1,000.00) or imprisoned for not more than ninety (90) days, or both. (Ord. 344 § 7, 2006: Ord. 320 § 1 (part), 2004)

13.04.100 Appeals.

Appeals of any decision of the director made under authority of this chapter shall be made to the building codes advisory council as provided in Chapter 15.16 of this code. (Ord. 344 § 8, 2006; Ord. 320 § 1 (part), 2004)

## Chapter 13.08

### WATER AVAILABILITY PROGRAM FOR NEW BUILDINGS

#### Sections:

- 13.08.010 Definitions.
- 13.08.020 State regulations adopted by reference.
- 13.08.030 Connection to approved water source required.
- 13.08.040 Water availability verification application--Expiration.
- 13.08.050 Private well systems.
- 13.08.060 Potable water source--Surface water prohibited.
- 13.08.070 Intent of provisions--Warranty not implied.

#### 13.08.010 Definitions.

As used in this chapter:

“Drilled well” is a well in which the hole is usually excavated by mechanical means such as rotary, cable tool, or auger rigs.

“Driven well” is a well constructed by joining a “drive point” to a length of pipe, then driving the assembly into the ground.

“Dug well” is a well generally excavated with hand tools or by mechanical methods. The side-walls may be supported by material other than standard weight steel casing.

“Potable” means suitable for drinking.

“Public water supply” means any system, excluding a system serving only a single -family residence or family farm serving four or less connections, all of which serves residences on the same farm, providing piped water for human consumption subject to the State Board of Health Drinking Water Regulations, WAC 246-290 and WAC 246-291.

“Right-of-way” means that property occupied or intended to be occupied by a street, crosswalk, railroad, road, electric transmission line, oil or gas pipeline, water main, sanitary or storm sewer components or channels, or for another special use. Rights-of-way intended for maintenance by a public agency shall be dedicated to public use by the maker of the plat, site plan, or map on which such right-of-way is established.

“Surface water sources” means any body of water, whether fresh or marine, including streams, springs, ponds, lakes, swamps, marshes and tidal waters.

“Water availability verification application” means a form, when completed by the appropriate public water purveyor or by an individual for a single residence, is reviewed by the Grays Harbor County environmental health division. (Ord. 251 § 10.00, 1998)

#### 13.08.020 State regulations adopted by reference.

The current edition of the Washington State Department of Ecology and Washington State Department of Health Joint Guidelines for Determining Water Availability for New Buildings, or its successor is adopted by reference except where in conflict with this chapter. (Ord. 251 § 20.00, 1998)

13.08.030 Connection to approved water source required.

Every new building required by its occupancy to provide water shall be connected to an approved source of potable water. Development and use of springs and dug wells for single-family residences is discouraged. Approval will take one of the following forms:

A. For parcels of land served by a public water system, the applicant shall provide a water availability verification application, which is signed and dated by the water purveyor. The system shall be reviewed by the health department for substantial compliance with the State Drinking Water Regulations (WAC 246-290 and WAC 246-291).

B. For parcels of land served by a private drilled well, the applicant shall provide a water availability verification application, which is signed and dated by the applicant along with the required information listed on the form. This information will be reviewed by the health department using the guidelines referred to in Section 13.08.020.

C. For parcels of land served by dug or driven wells, the applicant shall provide documentation for the following requirements:

1. Continuous disinfection;
2. Tests for bacteriological quality;
3. An operation and maintenance manual for the treatment system;
4. A notice attached to the property title which states the requirement for a treatment system;
5. Construction design in accordance with the minimum sealing requirements of the Water Well Construction Standards (Chapter 173-160 WAC);
6. A water availability verification application which is signed and dated by the applicant. This information is reviewed by the health department using the guidelines referred to in Section 13.08.020.

D. For parcels of land served by surface water sources (see Section 13.08.010, Definitions) the applicant shall provide documentation for the following requirements:

1. A water right permit or covered by a valid registered water right claim;
2. Ownership of a protective zone of two hundred (200) feet around a spring. Recorded restrictive covenant if not owned by the applicant;
3. Continuous disinfection to be designed by a licensed professional engineer and installed in accordance with the approved design;
4. An operation and maintenance manual for the treatment system;
5. A notice attached to the property title which states the requirement for a treatment system and that a surface water source is utilized;
6. Volume capacity measurements performed on springs during August through October;
7. Tests for bacteriological quality and nitrates.

(Ord. 251 § 30.00, 1998)

13.08.040 Water availability verification application--Expiration.

Once approved, water availability verification applications have an expiration date of one year from date of approval. (Ord. 251 § 40.00, 1998)

13.08.050 Private well systems.

It is the policy of Grays Harbor County to discourage the proliferation of small public water systems. Private individual wells for domestic consumption shall be prohibited within the service areas of public water purveyors; provided, that the public water is immediately available to the property, i.e., the public water purveyor has adequate sized lines and water quantities to serve the property requesting the service.

If it is determined by the county that the public water purveyor cannot currently serve the property based on quantity or quality of water then the property owner may exercise the option of individual well or wells if it is determined that the property can support such installations and meet current regulations for onsite water source. It is also determined that requiring an annexation commitment is inappropriate and unreasonable for purposes of this chapter. (Ord. 251 § 50.00, 1998)

13.08.060 Potable water source--Surface water prohibited.

Surface water sources are prohibited as the source of potable water for new public water supplies. (Ord. 251 § 60.00, 1998)

13.08.070 Intent of provisions--Warranty not implied.

The policies, regulations and standards herein are intended to promote potable water development in accordance with the State Board of Health Drinking Water Regulations (WAC 246-290 and WAC 246-291). There is no warranty implied or expressed that wells installed under these policies, regulations and standards will not fail or become contaminated. (Ord. 251 § 70.00, 1998)

## Chapter 13.12

### WATERSHED AREAS

#### Sections:

- 13.12.010 Areas designated.
- 13.12.020 Declaration of county jurisdiction.
- 13.12.030 Entrance to areas unlawful--Exceptions.
- 13.12.040 Deposit of material or substance prohibited.
- 13.12.050 Enforcement.
- 13.12.060 Violation--Penalty.

13.12.010 Areas designated.

A. The following described land area, situate in Grays Harbor County, state of Washington, is declared to be and constituted as the watershed for the domestic water supply of the city of Aberdeen:

West half of west half of Section 10;

West half of Section 15;

South half and northeast quarter of southeast quarter of Section 16;

East half of Section 19;  
All of Section 20;  
All of Section 21;  
West half of northwest quarter, and southwest quarter, and southwest quarter of southeast quarter of Section 22;  
All of Section 27;  
All of Section 28;  
All of Section 29;  
Northeast quarter, and east half of northwest quarter, and north half of southeast quarter, and northeast quarter of southwest quarter of Section 30;  
Northeast quarter, and east half of northwest quarter, and north half of southeast quarter of Section 32;  
North half, and north half of southwest quarter of Section 33;  
North half, and north half of south half, and southeast quarter of southwest quarter of Section 34;  
All in Township 21 North, Range 8 West of the Willamette Meridian.

B. The following described land area, situate in Grays Harbor County, state of Washington, is declared to be and constituted as the watershed for the domestic water supply of the city of Hoquiam:

South half of the south half of Section 10;  
Southwest quarter of the southwest quarter of Section 13;  
Northwest quarter and the south half of Section 14;  
North half and the southeast quarter of Section 15;  
East half of the northeast quarter of Section 16;  
South half of the southeast quarter of Section 21;  
All except the northwest quarter of the northwest quarter of Section 22;  
All of Section 23;  
West half of Section 24;  
West half of Section 25;  
All of Section 26;  
All of Section 27;  
All except the northwest quarter of the northwest quarter of Section 28;  
Northeast quarter of the southwest quarter, south half of southwest quarter, southeast quarter of Section 29;  
Northeast quarter of the northeast quarter, south half of the north half, south half of Section 31;  
All of Section 32;  
All of Section 33;  
All of Section 34;  
North half and the southwest quarter of Section 35;  
All in Township 19 North, Range 10 West of the Willamette Meridian.  
Northwest quarter of Section 2;

All of Section 3;  
All of Section 4;  
All of Section 5;  
North half and the southeast quarter of Section 6;  
North half of the northeast quarter of Section 7;  
North half of the northeast quarter, northeast quarter of northwest quarter of Section 9 (Pump Station);  
Northeast quarter of southeast quarter, south half of southeast quarter of Section 19;  
South half of the northeast quarter, south half of Section 20;  
Southwest quarter, west half of southeast quarter Section 21;  
South half of northwest quarter of northwest quarter – west of State Highway Section 27;  
All of Section 28;  
All of Section 29;  
Northeast quarter, southeast quarter of northwest quarter, south half Section 30;  
Northeast quarter of Section 31;  
North half of north half of Section 32;  
North half of northwest quarter of Section 33;  
All in Township 18 North, Range 10 West of the Willamette Meridian.

C. The following described land area, situate in Grays Harbor County, state of Washington, is declared to be and constituted as the watershed for the domestic water supply of the city of Montesano:

South half of Section 16;  
All of Sections 19, 20, and 21;  
West half of Section 22;  
All of Sections 28, 29, 30, 31, and 32;  
All in Township 18 North, Range 7 West of the Willamette Meridian.

(Ord. 50 §§ 1--3, 1971)

13.12.020 Declaration of county jurisdiction.

Grays Harbor County does exercise its jurisdiction over the land areas described in Section 13.12.010 for the purpose of the prevention of pollution to the domestic water supply of the cities of Aberdeen, Hoquiam, and Montesano and for the purpose of general regulation and control of the use of the area. (Ord. 50 § 4, 1971)

13.12.030 Entrance to areas unlawful--Exceptions.

It is unlawful for any person, firm or corporation to enter or go upon the watershed lands of the cities of Aberdeen, Hoquiam and Montesano, as the same are described in Section 13.12.010 for any purpose whatsoever; provided, that this section shall not apply to authorized officials, employees or agents of the cities of Aberdeen, Hoquiam and Montesano engaged in city business nor to authorize

permittees of the cities who enter upon these lands under the terms of a permit granted them by the cities of Aberdeen, Hoquiam, or Montesano; nor to officers authorized to enforce this chapter; nor to the owners of the land and their authorized agents or employees or permittees who enter the area for management purposes including, but not limited to, the harvesting of forest products. (Ord. 50 § 5, 1971)

13.12.040 Deposit of material or substance prohibited.

It is unlawful for any person, firm or corporation to deposit any material or substance within the area of the watersheds, as defined in Section 13.12.010, which material or substance might in any way pollute or be harmful to the water derived from the area. (Ord. 50 § 6, 1971)

13.12.050 Enforcement.

The Grays Harbor County sheriff and all Grays Harbor County deputy sheriffs, (regular, special and reserve) are authorized to enforce all the terms and provisions of this chapter, and to arrest any person, firm or corporation, found violating the provisions of this chapter. (Ord. 50 § 7, 1971)

13.12.060 Violation--Penalty.

Any person, firm or corporation violating any provision of this chapter shall be guilty of a misdemeanor and upon conviction be punished by a fine of not more than two hundred fifty dollars (\$250.00) or by imprisonment in Grays Harbor County jail for a term of not more than ninety (90) days. (Ord. 50 § 8, 1971)

Chapter 13.16

## WATER SYSTEM CROSS CONNECTION CONTROL PROGRAM

Sections:

- 13.16.010 Purpose.
- 13.16.020 Responsibilities.
- 13.16.030 Applicability of regulations and references.
- 13.16.040 Operating procedures.
- 13.16.050 Installation procedures.
- 13.16.060 Inspection and testing procedures.
- 13.16.070 Backflow incident response procedures.
- 13.16.080 Quality control program.
- 13.16.090 Records.
- 13.16.100 Public education program.
- 13.16.110 Improvements program.

13.16.010 Purpose.

Any county operated water system, referred to hereafter as the "system," needs to develop and have in place a cross-connection control program under the requirements for Group A water systems (WAC 246-290-490). The purpose of this program is to protect the health of water consumers and the

sources of the public water system. This cross connection control program addresses this requirement by establishing minimum operating policies and backflow prevention assembly installation and testing practices and procedures for a water system and is structured such that it may be supplemented with published documents and materials developed by each system for their specific use. The authority to enforce these practices and policies has been established in Grays Harbor County Resolution 77-32 and its future revisions. (Ord. 301 (part), 2002)

#### 13.16.020 Responsibilities.

##### A. The water system shall:

1. The system or its designated representative shall prevent the contamination of the water distribution system and maximize protection of on-property water consumers by inspecting cross connections, providing guidance for new installations and existing connections, maintaining records on new and existing building plumbing and, responding to customer inquiries to meet the requirements of the state regulations in cross connection control.

2. The system has no responsibility beyond the furthest downstream installed and operable backflow assemblies or cross connections within the customer's water system.

##### B. Water customer shall:

1. The water customer shall be responsible for identifying and eliminating cross connections or controlling them through the installation, regular testing and maintenance of approved backflow prevention assemblies.

2. The water customer shall be responsible for providing the necessary information, scheduling and providing access for inspection to allow a determination of cross connection potential and the necessary control methods.

3. The water customer is responsible for notifying the system of any assemblies that the customer believes are no longer required.

4. The water customer is responsible for all costs associated with the inspection of their facility and installation, testing, repair and replacement of backflow prevention assemblies.

C. CCS and BAT Staffing and Qualifications. The county will have a certified cross connection specialist (CCS) and a backflow assembly tester (BAT) person to implement the CCCP. (Ord. 301 (part), 2002)

#### 13.16.030 Applicability of regulations and references.

A. The control or elimination of cross connections shall be in accordance with the most current revisions of the following state, county and local rules and regulations:

1. Cross Connection Control WAC 246-290-490;
2. Washington State Plumbers Code RCW 18.106;
3. Washington State Building Code RCW 19.27;
4. Washington State Public Water Systems Mandate RCW 70.119A.060;
5. Washington State Powers and Duties of the State Board of Health RCW 43.20.050;
6. Grays Harbor County Resolution 77-32;

B. The policies, procedures and criteria for determining appropriate levels of protection shall be in accordance with the most current editions of the following references:

1. Accepted Procedure and Practice in Cross Connection Control Manual Pacific Northwest Section, American Water Works Association;
  2. Manual of Cross Connection Control, Foundation for Cross Connection Control and Hydraulic Research, University of Southern California;
  3. M-14, American Water Works Association.
- C. Interpretation of the above regulation and references are subject to the discretion of the system or its designated representatives. (Ord. 301 (part), 2002)

13.16.040 Operating procedures.

A. Guidelines for type and location of protection:

1. The type of backflow protection required shall depend on the degree of hazard. The system or its designated representative shall make the final hazard determination.

a. For customers requesting new service connections, an initial evaluation of the premises' planned or future water service in regards to cross connections shall be made by the system or its designated representative. Proper selection and installation of a backflow preventer as determined by the system or its designated representative shall be a condition of allowing a new water service connection.

b. For existing service connections, the system will perform an initial inspection according to a plan developed by the customer service staff. The system will notify the customer of the required inspection, and the customer is responsible scheduling the inspection. The inspection may occur coincident with a meter reading.

c. For all service connections, upon initial evaluation, an annual reevaluation of hazard shall occur in accordance with Section 5 of this program.

2. An air gap (AG), reduced pressure backflow assembly (RPBA), or a reduced pressure detector assembly (RPDA) shall be used for services that present a high health cross connection hazard. Some of these premises are listed in Table 9, High Health Cross Connection Hazard Requiring Premises Isolation by AG or RPBA, in WAC 246-290-490.

3. A double check valve assembly (DCVA) or a double check detector assembly (DCDA) shall be used if objectionable pollution (not hazardous to health) is present. Higher levels of protection, i.e. AG, RPBA, or RPDA, may be installed but would not be required.

4. A pressure vacuum breaker assembly (PVBA) would be required if objectionable pollution (not hazardous to health) is present, and there is no possibility of backpressure. Higher levels of protection, i.e. AG, RPBA, RPDA, DCVA, or DCDA may be installed but would not be required.

5. The system shall rely on both premises isolation and in-premises protection, as they are defined in WAC 246-290-101, for cross connection control.

a. Premises isolation is the preferred method of cross connection control, where an approved air gap or approved backflow prevention assembly is installed at or near the service connection or alternative location acceptable to the system to isolate the consumer's water system from the system's distribution system.

b. If the in-premises isolation method is used, it must provide a level of protection commensurate with the system's assessed degree of hazard. In-premises isolation employs an approved air gap

or approved backflow prevention assembly that is located within the property lines of the customer's premises, which is generally a plumbing fixture. If the water customer denies access for inspection, in lieu of denying water service, the system may require that an AG or RPBA be installed at the property line or immediately upstream of the area to which access has been denied.

B. Guidelines for elimination of cross connections:

1. Cross connections shall be eliminated whenever possible.
- 2.. When cross connections cannot be eliminated, an approved air gap or an approved backflow prevention device, commensurate to the degree of hazard as determined by the system or its designated representative shall be installed in accordance with Section 4 of this program.

C. Guidelines for enforcement and corrective actions:

1. Notify consumer that consumer shall take corrective actions to eliminate the cross-connection hazard in accordance with the system requirements. By mutual agreement between the consumer and the system, the system may take corrective action at consumer's expense.

2. If no mutual agreement exists for the system to take corrective action, and if consumer fails to take corrective actions to eliminate the cross-connection hazard, the system staff may take one or more of the following enforcement and corrective actions, as it deems appropriate based on the risk associated with the cross-connection hazard:

a. Deny or discontinue water service to the consumer's premises until the cross-connection hazard is eliminated or controlled to the satisfaction of the system;

b. The system shall install the required backflow prevention device(s) commensurate with the degree of hazard at consumer's expense.

D. Prohibition of intentional return of used water:

1. Intentional return by any consumer to the distribution system is strictly prohibited. Such water includes, but is not limited to, water used for heating, cooling or other purposes within the consumer's water system. (Ord. 301 (part), 2002)

13.16.050 Installation procedures.

A. General:

1. The criteria for assembly installation practices shall be in accordance with the current edition of Accepted Procedure and Practice in Cross Connection Control Manual Pacific Northwest Section, American Water Works Association or the Manual of Cross Connection Control, Foundation for Cross Connection Control and Hydraulic Research, University of Southern California.

2. The installer is responsible for notifying the system of newly installed assemblies.

3. All new installations shall be inspected and tested by a state certified cross connection control inspector.

4. Assemblies shall be accessible for testing and maintenance. They shall be installed no higher than five feet above the floor or ground surface to the centerline of the assembly, or be provided with an OSHA approved work platform for assembly maintenance and testing.

5. Assemblies shall be protected against freezing, flooding and mechanical damage.

6. Assemblies shall not be installed in any enclosure or area containing fumes, which are corrosive or toxic.

B. Installation of prevention devices:

1. Air gaps:
  - a. An approved air gap shall mean a physical separation, unobstructed by guards, shields or any other covering, between the potable water system, measured vertically from the terminus of the supply pipe to the overflow rim of the receiving vessel.
  - b. This vertical separation must be at least twice the diameter of the supply pipe, but not less than one-inch in any case.
2. Reduced pressure backflow assembly:
  - a. RPBA's shall be installed horizontally, unless they are approved by the state or the system for vertical installation.
  - b. RPBA's shall be installed with minimum clearances of six-inches in front of test cocks, check valves and relief valve covers to facilitate testing and maintenance. If an assembly is installed in an area with limited accessibility, e.g., a crawl space, a minimum of twenty-four (24) inches clearance in front of test cocks shall be provided.
  - c. RPBA's shall be installed a minimum of twelve (12) inches above ground or flood level, whichever is greater.
  - d. RPBA's shall not be installed in a below grade pit, vault or box.
  - e. RPBA's shall be installed in a location where discharge from the relief port will not be objectionable, and shall be provided with an air-gapped drain which will reasonably handle the full discharge of the relief port.
3. Double check valve assembly:
  - a. DCVA's shall be installed horizontally, unless they are approved by the state for vertical installation.
  - b. DCVA's shall be installed with minimum clearances of six-inches in front of test cocks, check valves, and relief valve covers to facilitate testing and maintenance. If an assembly is installed in an area with limited accessibility, e.g., a crawl space, a minimum of twenty-four (24) inches clearance in front of test cocks shall be provided.
  - c. DCVA's shall be installed a minimum of twelve (12) inches above ground or flood level, whichever is greater.
  - d. DCVA's shall not be installed in a below grade pit, vault or box without prior written approval from the system.
4. Pressure Vacuum Breaker Assembly.
  - a. PVBA's shall not be installed in where there are any chemical addition capabilities; e.g., dishwashers supply lines with detergent dispenser lines, proportioners or aspirators. (Ord. 301 (part), 2002)

13.16.060 Inspection and testing procedures.

- A. General:
  1. Backflow prevention assemblies shall be inspected and tested at the time of:
    - a. Initial Installation. If a device is installed prior to the enactment of this program, an initial inspection time should be scheduled;
    - b. After the device is repaired;
    - c. Annually after the initial installation;

d. As required by the system if testing indicates repeated failures.

2. Annual testing of backflow assemblies shall be per WAC 246-290-490. The system may require more frequent testing of certain facilities.

3. Testing procedures shall be in accordance with the current edition of Accepted Procedure and Practice in Cross Connection Control Manual Pacific Northwest Section, American Water Works Association or the Manual of Cross Connection Control, Foundation for Cross Connection Control and Hydraulic Research, University of Southern California.

B. Inspection and Testing of New Installations.

1. All new assemblies shall be tested upon initial installation.

2. The system shall notify property owners of required backflow preventers, including AGs. The system will notify property owners of required inspection for all new installations of backflow preventers including AGs, but not including replacements of existing backflow preventers that are no longer repairable, in the systems' service area.

3. The installer is responsible for notifying the system of newly installed assemblies.

4. If at the inspection, the test of the newly installed backflow preventer fails its performance test, the installer and/or owner of the backflow preventer must have repair completed and provide evidence of a satisfactory performance test by a state-certified backflow assembly tester, submitted to the system within thirty (30) days of the initial unsatisfactory performance test.

5. The system or its designated representative shall inspect premises after the removal of any assembly that is no longer needed. An assembly no longer needed and for which the site was inspected, will be removed from the system's records.

6. The system will levy a standard charge, in accordance with the proper system resolution, against the customer's water service account for inspection or any installed or removed backflow preventers.

C. Inspection and Testing of Existing Installations.

1. All assemblies shall be tested annually by a certified backflow assembly tester, who has on file a current certificate proving verification of accuracy of his/her test equipment at the system office. If this information is not on file, then the tester should submit this verification to the system prior to submitting any test results.

2. The system shall do notification of the requirement for testing to all water customers responsible for assemblies of record.

3. Results indicating satisfactory performance must be forwarded to the system within sixty (60) days from the date of notification.

4. If satisfactory results have not been received within sixty (60) days of notification, a second, certified letter will be sent, requesting satisfactory testing reports be forwarded to the system within ten (10) days, with notification of a specific date of termination of water service, if reports are not received within ten (10) days. The system will levy a standard charge, in accordance with the proper system resolution, against the customer's water service account for each overdue backflow preventer.

5. If satisfactory test results have not been received within ten (10) days of the certified letter being sent, a notification of water shut-off will be sent or hand delivered, if necessary to the occu-

pants of the building to which water is scheduled for termination. The system will levy a standard charge against the customer's water service account for each notification of water shut-off.

6. Water service will be terminated if no action is satisfactorily taken to test and/or repair and retest the backflow assembly(ies) and will remain discontinued until the testing is successfully completed and satisfactory test reports are provided to the system. The system will levy a standard charge against the customer's water service account for each shut-off and turn-on action required at the affected address.

7. The system or its designated representative may require testing more often than annually or may field verify the test results.

D. Inspection and Testing of Repaired or Replaced Installations.

1. Testing is required of any assembly that is repaired or replaced due to problems found during the annual test.

E. Inspections of High Hazard Sites.

1. The system shall assign priorities to high hazard site inspections with special emphasis on the following types of facilities: hospital, schools, clinics, laboratories, piers and docks, mortuaries, sewage treatment plants, food and beverage processing plants, chemical plants using water process, metal plating industries, petroleum processing or storage plants, car washes, facilities having a non-potable auxiliary water supply and others specified by the system.

2. The system shall notify the responsible party of the premises that require inspection.

a. If during the site survey, a cross connection is found that presents in the opinion of the inspector, an imminent threat to public health, water service to the site shall be immediately terminated, and shall remain off until the hazard is corrected.

b. The state-certified inspector must provide the property owner and system a written notice of the results of the survey including a list of the cross connections found. If an approved backflow prevention assembly is required on the customer's system, the type and location of the assembly shall be specified in the inspector's written notice. The owner has thirty (30) days after the written notice to have the required backflow prevention assembly(ies) installed and tested.

c. The water customer shall notify the system at the completion of the required work and certification that the backflow assemblies have been installed and tested with a positive test result.

d. If the water customer does not complete the work required in the inspector's letter within the time specified, a certified letter will be sent by the system requiring the water customer to complete the work within a shorter specified time (generally ten (10) days) and reminding the water customer that it is the system's responsibility to deny water service to anyone who does not comply with backflow protection requirements. The system will levy a standard charge, in accordance with system resolutions, against the customer's water service account for each certified letter sent to the customer.

e. If the water customer does not complete the work within the time specified or does not make special arrangements with the system for an alternate compliance date based on extenuating circumstances, the system will give notice to the water customer of its intention to terminate water service to the site. (Ord. 301 (part), 2002)

A. Due to the severity of cross-connection effects, the system shall respond to backflow incidents immediately upon receipt of an incident report. The response time may vary depending on the location of the incident, time and day of the report and location of the responder, but this time should not be more than six hours. (Ord. 301 (part), 2002)

13.16.080 Quality control program.

A. General.

1. The criteria for tester certification and test kit calibration practices shall be in accordance with the current edition of Accepted Procedure and Practice in Cross Connection Control Manual Pacific Northwest Section, American Water Works Association or the Manual of Cross Connection Control, Foundation for Cross Connection Control and Hydraulic Research, University of Southern California.

B. Tester Certification and Test Kit Calibration.

1. Acceptance of customer's test reports will be contingent upon the system's records for or the receipt of records of the state certified cross connection control inspector and the test kit calibration.

C. Test Reports.

1. Sample test reports are attached to this program.
2. Test Report Submittal Schedule.

Connection Type	Results	Test Report Submittal Schedule
New Connection	Satisfactory Results	Submit Test Report at the time of the inspection (within 10 days of inspection date).
	Unsatisfactory Results	Submit Unsatisfactory Test Report at the time of inspection (within 10 days of inspection date). Submit Retest Report within 30 days of the unsatisfactory test date.
Existing Connection	Satisfactory Results	Submit Satisfactory Test Report within 60 days of notification of annual test requirement.
	Unsatisfactory Results	Make necessary repairs and submit Satisfactory Test Report within 60 days of notification of annual test requirement

(Ord. 301 (part), 2002)

13.16.090 Records.

A. General.

1. The master list of service connections shall be in accordance with Table 9 of the Cross Connection Control Manual Pacific Northwest Section, American Water Works Association. Information to be included in the table:

- a. Assessed hazard level;
- b. Required backflow preventer;
- B. The system shall maintain an inventory of information on:
  1. Air gaps used in lieu of approved assemblies:
    - a. Property owner,
    - b. Location,
    - c. Assessed degree of hazard,
    - d. Installation date,
    - e. Inspection results and history,
    - f. Person who inspected,
  2. Approved backflow assemblies:
    - a. Property owner,
    - b. Location,
    - c. Assembly description (manufacturer, model, S.N., size, etc.),
    - d. Assessed degree of hazard,
    - e. Installation date,
    - f. Inspection results and history,
    - g. Person who inspected.
  3. PVBA's used for irrigation systems:
    - a. Property owner,
    - b. Location,
    - c. Assembly description (manufacturer, model, and size),
    - d. Assessed degree of hazard,
    - e. Installation date,
    - f. Inspection results and history,
    - g. Person who inspected.
  4. Cross connection control program summary reports.
  5. Backflow incident reports.
- C. Sample reports are provided as attachments.
- D. Sample notification letters are provided as attachments. (Ord. 301 (part), 2002)

13.16.100 Public education program.

A. The system shall provide their existing and future water customers with information regarding backflow and backflow prevention, as well as the system's cross connection control program. This public education program shall include, but is not limited to:

1. Biannual mailings of information with the consumer confidence reports;
2. Fact sheets available for new customers and developers;
3. Information pamphlets available at the system office. (Ord. 301 (part), 2002)

13.16.110 Improvements program.

A. The system shall prepare their staff and resources to meet the requirements of this cross connection control program. Their tasks include upgrading their existing procedures to the requirements set in this program and preparing the program so that it will meet the challenges of future water system operations. This shall include, but is not limited to:

1. Dedicating staff to execute and maintain the cross connection control program;
2. Establishing funds for all new and existing cross connection program activities;
3. Identification, inspection and record of all cross connections:
  - a. New cross connections (first priority),
  - b. Existing cross connections (second priority).
4. Establishing an annual inspection schedule for all new and existing cross connections after the initial inspection. (Ord. 301 (part), 2002)