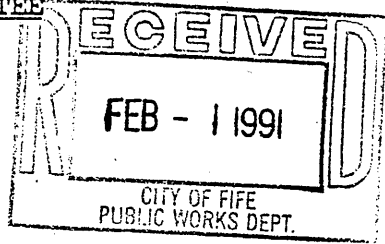


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FIRE PREVENTION OFFICER'S FIRE FLOW REVIEW COMMITTEE



CHAPTER 15.40

MINIMUM STANDARDS FOR

FIRE FLOWS, WATER MAINS AND FIRE HYDRANTS

Sections:

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15.40.010 PURPOSE. The purpose of this ordinance is to facilitate fire fighting by providing minimum standards relating to fire protection, including standards for installation and improvement of water mains and fire hydrants. Provisions of this ordinance shall be enforced by The Office of Fire Prevention & Arson Control.

15.40.020 DEFINITIONS. Words or phrases used herein shall have the following meanings, unless otherwise provided for in the Uniform Fire Code, as adopted by the Pierce County Council:

(A) AGRICULTURAL BUILDINGS - shall mean a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment for five (5) or more employees, where agricultural products are processed, treated or packaged; nor shall it be a place used by the public.

(B) A.W.W.A. - shall mean the American Water Works Association.

1 (C) Building Valuation Data - shall mean the Building Standards monthly  
2 publication issue by the International Conference of Building Officials.

3 (D) Commercial Projects - shall mean any use of a building as defined  
4 in Chapter 4, CLASSIFICATION OF OCCUPANCY, NFPA LSC Standard #101, current  
5 edition, as follows:

6 Assembly, Educational, Health Care, Detention & Correctional,  
7 Mercantile, Business, Storage and Special Structures.

8 Questions arising in the administration of this ordinance concerning whether a  
9 project is commercial shall be resolved by reference to the Classification of  
10 Occupancy tables contained in the Uniform Fire Code.

11 (E) C.W.S.P. - shall mean Coordinated Water System Plan.

12 (F) Deadend Water Main - shall mean a water main over fifty (50') feet  
13 long and not being fed from both ends at the time of installation.

14 (G) Draft Hydrant - shall mean a self-draining mechanical device designed  
15 for the removal of water by a fire pumper by applying a negative pressure without  
16 going through the normal domestic water system.

17 (H) Dwelling - is any building or portion thereof, which contains not  
18 more than two dwelling units.

19 (I) Dwelling Unit - is any building or portion thereof which contains  
20 living facilities including provisions for sleeping, eating, cooking and  
21 sanitation as required by the Uniform Building Code, for not more than one  
22 family.

23 (J) Expanding Water System - shall mean an approved, expanding water  
24 system which is undertaking new construction [See J (1)] to provide water service  
25 to additional service connections. Any expanding water system shall install  
26 facilities sized to meet the necessary minimum design criteria for area being  
27 served. The expanding system shall show by plans submitted by a registered  
28 professional engineer how fire flow is to be provided, and said plan shall be  
29 approved by the State Department of Health and the Pierce County Office of Fire  
30 Prevention & Arson Control.

31 (1) New Water Facility Construction - any addition of supply,  
32 transmission, distribution or storage facilities, either in a new water system  
33 or an expanding water system which provides the capability to serve additional  
34 dwelling units or other buildings.

35 **\*\*\*NOTE** - a utility whose existing water system plan is approved by  
36 the State Department of Health, the Pierce County Health Department, and the  
37 Pierce County Office of Fire Prevention and Arson Control, may install up to its

1 approved number of service connections without being considered an expanding  
2 system. If existing mains were installed and approved after December 19, 1978,  
3 the mains must also meet requirements of the Pierce County Office of Fire  
4 Prevention and Arson Control.

5 (K) Fire Area - is the total floor area in square feet for all floor  
6 levels within the exterior walls, or under the horizontal projection of the roof  
7 of a building. Each portion of a building separated by one or more four-hour  
8 area separation walls with no openings and provided with a 30-inch parapet  
9 constructed in accordance with the Building code may be considered as separate  
10 fire areas for the purposes of determining the required fire flow.

11 (L) Fire Department - shall mean a public fire protection district that  
12 provides fire extinguishment, fire prevention, emergency rescue and medical aid  
13 services to a given jurisdiction.

14 (M) Fire Flow - shall mean the minimum flow of water at 20 P.S.I required  
15 for extinguishing a fire. This amount is in addition to peak domestic flow  
16 requirements.

17 (N) Fire Hydrant - shall mean a self-draining mechanical device and is  
18 constructed to provide the required fire flow.

19 (O) Fire Marshal - shall mean the director of the Pierce County Office  
20 of Fire Prevention & Arson Control.

21 (P) Fire Sprinkler System - shall mean an integrated system of piping  
22 connected to a water supply, with sprinklers, which shall automatically initiate  
23 water discharge over a fire, conforming to the current requirements of the  
24 National Fire Protection Association Standards and/or the Pierce County Office  
25 of Fire Prevention & Arson Control.

26 (Q) G.P.M. - shall mean gallons per minute.

27 (R) Industrial Projects - shall mean any buildings used for industrial  
28 operations as defined in Chapter 4, CLASSIFICATION OF OCCUPANCY, NFPA LSC  
29 Standard #101, Current Edition.

30 (S) Looped Water Main - shall mean a water main laid out in a manner so  
31 that water will be supplied to any point from two directions, thus reducing  
32 friction loss in the main.

33 (T) Modifications - shall mean that fire flow requirements may be  
34 modified downward for isolated buildings or group of buildings in rural areas  
35 or small communities where the development of full fire flow requirements is  
impractical; or

1 fire flow may be modified upward where conditions indicate an unusual  
2 susceptibility to group fires or conflagrations. An upward modification shall  
3 not be more than twice that required for the building under consideration.

4 (U) Multiple Dwelling - shall mean any building or portion thereof which  
5 contains three (3) or more dwelling units. This shall include condominiums.

6 (V) N.F.P.A. - shall mean National Fire Protection Association.

7 (W) N.F.P.A. Standard #1231 - shall mean National Fire Protection  
8 Association Standard #1231 most current edition.

9 (X) N.H. - shall mean American National Fire Hose Connection Screw  
10 Thread.

11 (Y) Pierce County Fire Marshal - shall mean the director of the Pierce  
12 County Office of Fire Prevention and Arson Control.

13 (Z) Private Fire Protection System - shall mean a system which shall be  
14 installed in accordance with the Uniform Fire Code and N.F.P.A. Standards.

15 (AA) Private Hydrant - shall mean a fire hydrant situated and maintained  
16 to provide water for fire fighting purposes with restrictions as to use. The  
17 location may be such that it is not readily accessible for immediate use by the  
18 fire department for other than certain private property.

19 (BB) P.S.I. - shall mean pounds per square inch.

20 (CC) Public Hydrant - shall mean a fire hydrant so situated and maintained  
21 as to provide water for fire fighting purposes without restrictions as to use  
22 for the purpose. The location is such that it is accessible for immediate use  
23 of the fire department at all times.

24 (DD) Public Water - shall mean public water as defined by the State  
25 Department of Health or shall mean any system or water supply intended or used  
26 for human consumption or other domestic uses, including sources, treatment,  
27 storage, transmission and distribution facilities where water is furnished to  
28 any community, collection or number of individuals, or is made available to the  
29 public for human consumption or domestic use, excluding water systems serving  
30 a dwelling.

31 (EE) Purveyor - shall mean the federal agency, state agency, county  
32 agency, city, town, municipal corporation, firm, company, mutual, cooperative,  
33 association, corporation, partnership, district, institution, person or persons  
34 owning or operating a public water system or his/her authorized agent.

35 (FF) Rural Area - shall mean the area outside of the Urban Growth Area  
36 as denoted on the Pierce County Interim Generalized Urban Growth Area Map as

1 adopted by Pierce County. (NOTE: Subject to change when the Pierce County  
2 Comprehensive Use Plan is adopted).

3 (GG) Substantial Alteration - shall mean any alteration, remodeling or  
4 structural change to a structure, which change shall cost 40% or more of the  
5 building valuation within a twelve (12) month period; provided that if the cost  
6 of said change is less than \$50,000.00, said alteration shall not be considered  
7 a substantial alteration. Building valuation shall be determined by the  
8 "Building Valuation Data".

9 (HH) Transmission Main - shall mean a main used to transport water from  
10 a source to storage, storage to storage, source or storage to distribution main.  
11 No transmission main less than eight (8") inches in diameter will be used to  
12 provide fire flow.

13 (II) U.B.C. - shall mean the current edition of the Uniform Building Code  
14 as adopted by Pierce County.

15 (JJ) U.F.C. - shall mean the current edition of the Uniform Fire Code  
16 as adopted by Pierce County.

17 (KK) Urban Area - shall mean the area inside the Urban Growth Area as  
18 denoted on the Pierce County Interim Generalized Urban Growth Area Map as adopted  
19 by Pierce County. (Note: Subject to change when the Pierce County Comprehensive  
20 Use Plan is adopted.)

21 (LL) Water Main - shall mean the piping used to deliver domestic water  
22 and water intended for fire protection.

23 (MM) Yard System - shall mean any extension from a transmission main  
24 and/or water main onto a development site. Such system is defined in NFPA  
25 Standard #24, Private Fire Service Main.

26 15.40.030 GENERAL REQUIREMENTS.

27 (I) Fire flow is required for the following: new construction, new  
28 subdivisions of land, mobile home parks and R.V. parks; and substantial  
29 alterations to EXISTING commercial or industrial projects, multiple dwellings,  
30 mobile homes parks, and RV parks, in accordance with Appendix III-A of the U.F.C.  
31 as herein modified, in all urban areas; and N.F.P.A. Standard #1231 in rural  
32 areas as modified in Section 15.40.060.

33 EXCEPTIONS: The following exceptions are allowed provided the  
34 setback requirements in Section 15.40.060 are met.

35 1. No fire flow is required for R. V. parks in rural areas,  
36 except for the permanent structures found within them.

1 2. No fire flow is required for accessory buildings to dwellings  
2 or dwelling units that are defined as M-1 or M-2 by the Uniform  
3 Fire Code.

4 3. No fire flow is required for dwellings in a rural area with a  
5 gross floor area of 2,500 square feet or less, including attached  
6 garages.

7 4. No fire flow is required for agricultural buildings with a  
8 gross floor area of 5,000 square feet or less.

9 (II) Sprinkler System Requirements:

10 a) In a dwelling with a gross floor area of 3,600 square feet  
11 or more, including attached garage, a fire sprinkler system  
12 shall be installed in accordance with N.F.P.A. Standard 13-D.

13 b) All multiple dwellings having three or more floors or  
14 containing five or more dwelling units shall have a fire  
15 sprinkler system installed in accordance with N.F.P.A. Standard  
16 13-R or N.F.P.A. Standard 13, based on the size and type of  
17 construction of the building that is to be protected.

18 c) In an occupancy that requires more than 2,000 GPM of fire  
19 flow, or where the total gross floor area exceeds 10,000 square  
20 feet, a fire sprinkler system shall be installed in accordance  
21 with N.F.P.A. Standard 13.

22 NOTE: One-hour and two-hour area separation walls as  
23 defined in Section 505(e) of the Uniform Building Code  
24 shall not be considered to separate a building into  
25 sections that would allow the deletion of the required fire  
26 sprinkler systems.

1 15.40.040 FIRE FLOW REQUIREMENTS IN URBAN AREAS. Fire flow shall be required  
 2 in accordance with Appendix III-A, Uniform Fire Code, as modified in Table I  
 3 below:

4 TABLE I  
 5 BASIC FIRE FLOW GUIDE FOR BUILDINGS (1,2)

6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
	Basic Fire	Duration (hours)	Flow (gpm)	I and II F.R. (area in sq ft)	II (area in sq ft)	III & IV (area in sq ft)	V (area in sq ft)																									
10			1,000	up to 10,900	up to 6,100	up to 3,900	up to 1,700																									
11		1	1,250	16,200	9,100	5,800	2,600																									
12			1,500	22,700	12,700	8,200	3,600																									
13		1 1/2	1,750	30,200	17,000	10,900	4,800																									
14			2,000	38,700	21,800	13,900	6,200																									
15			2,250	48,300	27,200	17,400	7,700																									
16		2	2,500	59,000	33,200	21,300	9,400																									
17			2,750	70,900	39,700	25,500	11,300																									
18			3,000	83,700	47,100	30,100	13,400																									
19			3,200	97,700	54,900	35,200	15,600																									
20		3	3,500	112,700	63,400	40,600	18,000																									
21			3,750	128,700	72,400	46,400	20,600																									
22			4,000	145,900	82,100	52,500	23,300																									
23			4,250	164,200	92,400	59,100	26,300																									
24			4,500	183,400	103,100	66,000	29,300																									
25			4,750	203,700	114,600	73,300	32,600																									
26			5,000	225,200	126,700	81,100	36,000																									
27			5,250	247,700	139,400	89,200	39,600																									
28		3	5,500	271,200	152,600	97,700	43,400																									
29			5,750	295,900	166,500	106,500	47,400																									
30		4	6,000	greater	greater	115,800	51,500																									
31			6,250		125,500	55,700																										
32			6,500		135,500	60,200																										
33			6,750		145,800	64,800																										
34			7,000		156,700	69,600																										
35			7,250		167,900	74,600																										
36			7,500		179,400	79,800																										
37			7,750		191,400	85,100																										
38			8,000		greater	greater																										

39  
 40 (1) In Types I and II F.R. construction, only the three largest successive floor areas  
 41 shall be used.  
 42 (2) Each portion of a building separated by one or more four-hour area separation walls  
 43 with no openings and provided with a 30-inch parapet constructed in accordance with the  
 44 Building Code is considered as a separate fire area.

45  
 46  
 47

1            **MODIFICATIONS:** This section provides modifications to the basic fire flow  
2 required by this Ordinance.

3            REDUCTIONS:

4            A. GENERAL. Reductions are allowed as set forth in this subsection,  
5 except that the required fire flow shall not be reduced to less than  
6 750 GPM.

7            B. DWELLINGS. Fire flow requirements for dwellings with a gross  
8 floor area of less than 3600 square feet (including attached garages)  
9 shall be 750 GPM for a period of 45 minutes.

10           C. FIRE EXTINGUISHING SYSTEMS. The following reductions are allowed  
11 based on the installation of fire extinguishing systems:

12           a) Reduced by 75 percent when an approved commercial-type  
13 automatic fire extinguishing system meeting the requirements of  
14 the Uniform Fire Code is installed throughout the building and the  
15 system is electrically supervised in accordance with U.F.C.  
16 Standard No. 14-1 and is monitored by an approved central station.

17           b) Reduced by 50 percent when an approved commercial-type  
18 automatic fire extinguishing system meeting the requirements of  
19 the Uniform Fire Code is installed throughout the building without  
20 supervision and monitoring.

21           c) Reduced by 50 percent when an approved multifamily  
22 residential-type automatic fire extinguishing system meeting the  
23 requirement of the Uniform Fire Code is installed in a Group R,  
24 Division 1 Occupancy and the system is electrically supervised in  
25 accordance with U.F.C. Standard No. 14-1 and is monitored by an  
26 approved central station.

27           d) Reduced by 35 percent when an approved multifamily  
28 residential-type automatic fire extinguishing system meeting the  
29 requirements of the Uniform Fire Code is installed in a Group R,  
30 Division 1 Occupancy without supervision and monitoring.

31           D. FIRE DETECTION SYSTEMS. A reduction of 25 percent is allowed  
32 when an approved smoke-sensing fire detection system and an  
33 electrically interconnected manual fire alarm system meeting the



1 requirements of U.F.C. Standard No. 14-1 is installed throughout the  
2 building and is monitored by an approved central station.

3 E. FIRE RESISTIVE CONSTRUCTION.

4 a) A reduction of 25 percent is allowed when a two-hour area  
5 separation wall is provided in accordance with the Building Code  
6 and which divides the building in nearly equal portions.

7 b) A reduction of 10 percent is allowed for one-hour construction  
8 throughout, in accordance with the Building Code.

9 c) A reduction of 10 percent is allowed for a building with a  
10 Class A rated roof.

11 15.40.050 FIRE HYDRANT SPACING. The table below specifies the maximum  
12 permissible spacing between hydrants:

13		Maximum	Minimum
14	<u>Type of Development</u>	<u>Hydrant Spacing*</u>	<u>Hydrant Spacing**</u>
15			
16			
17	Subdivisions and Short Subdivisions -	700 Feet	350 Feet
18	Limited to Dwellings		
19	Multiple Dwelling - Low Density -	500 Feet	250 Feet
20	Twelve or Less Units Per Acre		
21	Commercial and Multiple Dwelling -	400 Feet	200 Feet
22	High Density - More Than Twelve		
23	Units Per Acre		
24	Industrial and areas of more than	300 Feet	150 Feet
25	20 Commercial Establishments		

26

27 \* Spacing shall be measured by the pathway  
28 required for the fire department to lay the fire  
29 hose. This spacing shall be determined by the  
30 Pierce County Fire Marshal.

31 \*\* Hydrants shall not be placed closer than 50' to  
32 any structure. This spacing may be modified by  
33 the Pierce County Fire Marshal.

34 Where possible hydrants shall be located at street intersections. The  
35 location of hydrants shall be determined by the Pierce County Fire Marshal.

36 Subdivisions and short subdivisions - in no event shall any hydrant be  
37 more than three hundred fifty (350') feet from the center of the frontage of any  
38 lot except on deadend cul-de-sacs with dwellings only. When the deadend cul-  
39 de-sac exceeds six hundred (600') feet from the center of the intersection to  
40 the end of the cul-de-sac, a hydrant shall be located at the intersection and

1 additional hydrant(s) will be required. The hydrant(s) shall be located within  
2 three hundred fifty (350') feet from the center of the frontage of all lots on  
3 the cul-de-sac road, and shall comply with the maximum spacing requirements  
4 listed above.

5 Multiple dwellings, commercial & industrial - hydrants shall be within  
6 one half of the above spacing distance to the closest portion of the building(s)  
7 and no portion of the building shall be more than the total spacing distance  
8 from the hydrant. (i.e., 400' spacing = hydrant 200' to the closest portion of  
9 the building and no more than 400' to the furthest portion of the building).

10 15.40.060 FIRE FLOW REQUIREMENTS IN RURAL AREAS - shall be in accordance with  
11 the provisions of N.F.P.A. Standard #1231 as herein modified. On-site storage  
12 required for a project located less than two miles from a fire station may be  
13 reduced by the amount that the fire district can provide by mobile units. If  
14 that amount does not meet the requirement for the project, additional storage  
15 shall be provided on site to meet the required storage.

16 **Exception:** All buildings, except agricultural buildings,  
17 requiring in excess of 10,000 gallons of total storage for fire  
18 fighting purposes, as computed by N.F.P.A. Standard #1231, shall  
19 provide a fire flow system in accordance with Pierce County Code  
20 15.40.070.

21 **SETBACK REQUIREMENTS:**

- 22 1. The minimum setback distance for all structures from all lot  
23 lines, shall be thirty (30') feet, unless otherwise approved by  
24 the Pierce County Fire Marshal.

25 **Exception:** This shall not apply if fire flow is provided in  
26 accordance with Section 15.40.070, or a sprinkler system is  
27 provided in accordance with N.F.P.A. Pamphlet 13-D, if not  
28 otherwise required.

29 **SPRINKLER SYSTEM REQUIREMENTS:**

- 30 1. Dwellings exceeding 2,500 square feet in area without fire flow  
31 shall install a sprinkler system in accordance with N.F.P.A.  
32 Standard 13-D.

1           NOTE: One-hour and two-hour area separation walls as defined in  
2           Section 505(e) of the Uniform Building Code shall not be  
3           considered to separate a building into sections that would allow  
4           the deletion of the required water storage capacity.

5           **ON-SITE STORAGE:**

6           1. Where water storage is required on-site, storage facilities  
7           shall comply with the following requirements:

8           a) The minimum required storage shall be 2,000 gallons;

9           b) Tanks or other approved water sources, (i.e., ponds, lakes,  
10           rivers, streams, swimming pools, etc.) equipped with approved fire  
11           department connections shall be engineered according to N.F.P.A.  
12           Standard #1231;

13           c) Where drafting facilities are provided, plans for access as  
14           required by N.F.P.A. Standard #1231 shall be prepared and  
15           submitted by a professional engineer, and approved by the Pierce  
16           County Fire Marshal, with concurrence of the affected fire  
17           district.

18           d) Plans for (b) and (c) above shall be submitted for approval  
19           to the Pierce County Fire Marshal prior to installation.

20           e) After construction is complete, "As Built" plans shall be  
21           submitted for approval to the Pierce County Fire Marshal by the  
22           registered professional engineer, certifying construction to NFPA  
23           Standard #1231 requirements. It shall be the owner's  
24           responsibility to maintain said drafting facilities.

25           **15.40.070 WATER SYSTEM REQUIREMENTS.**

26           (I) When the required fire flow exceeds 2,500 GPM, the fire hydrants  
27           shall be served on the property by a looped main capable of supplying the  
28           required flow.

29           (II) Pumps being used to provide fire flow shall conform to N.F.P.A.  
30           Standard #20.

31           (III) New or replaced water mains (water main repair excluded) shall  
32           be a minimum of eight (8") inches in diameter for deadends, and six (6") inches  
33           for looped mains, provided that for deadend cul-de-sacs, an eight (8") inch main

1 need only extend to the last required fire hydrant and normal domestic mains may  
2 be installed thereafter to the remaining residences. Hydrant leads less than  
3 fifty (50') feet in length shall be a minimum of six (6") inches in diameter.  
4 A deadend main which extends across a street only for the purpose of serving a  
5 single hydrant shall be of a size capable of providing the required fire flow,  
6 but it shall not be less than six (6") inches in diameter. All mains shall have  
7 hydrants and/or tees and valves installed to conform with this regulation,  
8 except that no hydrants, tees or valves shall be required along transmission  
9 mains. Any service connection made to a transmission main may require that a  
10 hydrant or hydrants be installed, pursuant to Section No. 15.40.060, Fire  
11 Hydrant Spacing.

12 (IV) Standard hydrants shall have not less than five (5") inch main  
13 valve openings (MVO) with two two-and-one-half (2 1/2") inch N.H. outlet ports  
14 and one (1) four and one-half (4 1/2") inch N.H. outlet port. All four-and-  
15 one-half (4 1/2") inch outlet ports shall have 5" storz fittings. Hydrants  
16 shall meet the current A.W.W.A. Standards.

17 (V) There shall be an auxiliary gate valve installed to permit the  
18 repair and replacement of the hydrants without disruption of water service.

19 (VI) Hydrants shall stand plumb and be set to the finished grade. The  
20 bottom of the lowest outlet of the hydrant shall be no less than eighteen (18")  
21 inches above the finished grade, and the bottom of the ground flange shall be  
22 a minimum of one (1") inch above finished grade. There shall be thirty-six  
23 (36") inches of clear area about the hydrant for operation of a hydrant wrench  
24 on the outlets and on the control valve. The pumper port shall face the street.  
25 Where the street cannot be clearly defined or recognized, the port shall face  
26 the most likely route of approach and the location of the fire truck while  
27 pumping, as determined by the Pierce County Fire Marshal.

28 (VII) Hydrants shall be accessible for fire department pumpers.

29 (VIII) Fire hydrants subject to vehicle damage (i.e., those located in  
30 parking lots) shall be adequately protected.

31 (IX) All hydrants shall be subject to testing and inspection by the  
32 fire department.

1 (X) The location of all water mains, fire hydrants, and valves to be  
2 installed shall be properly and accurately marked on identifiable plans or  
3 drawings, which shall be prepared by a registered professional engineer. Three  
4 copies of all plans or drawings shall be furnished to the Pierce County Fire  
5 Marshal prior to installation.

6 (XI) After construction is completed, three copies of the "As Built"  
7 drawings shall be filed with the Pierce County Fire Marshal, as well as test  
8 results showing the amount of fire flow at each hydrant at 20 p.s.i.

9 (XII) The tops of all fire hydrants may be color coded as follows:

- 10  
11 A) GREEN - over 1,000 g.p.m.  
12 B) ORANGE - 500 to 1,000 g.p.m.  
13 C) RED - less than 500 g.p.m.  
14 D) BLACK - for drafting use only (hard suction/steamer port).  
15 E) WHITE CROSS - over top of color coded hydrant to indicate  
16 that it is to be used to fill tankers only.

17 (XIII) Maintenance of Hydrants:

18 (A) The purveyor shall provide written notification to the fire  
19 district of any hydrant installation. Said notification will state whether or  
20 not they have minimum fire flow, and will be accepted in writing by the affected  
21 fire protection district.

22 (B) The fire district will, after notifying the purveyor, test  
23 hydrants for flow capability and may color code tops of hydrants with proper  
24 notification to the purveyor.

25 (C) The fire district will check operation of hydrants and notify the  
26 purveyor, in writing, of any malfunction or leaking which will require  
27 correction.

28 (D) The purveyor will respond within 48 hours when notified of a  
29 malfunction of a hydrant, and no hydrant shall be out of service more than  
30 thirty (30) days. The purveyor shall be responsible for maintaining all  
31 portions of the fire hydrants, except for external painting and elimination of  
32 vegetation obstructing or blocking access to or operation of hydrants, which  
33 shall be conducted by the affected fire protection district. In the event that  
34 repairs require reduction of water flow or shutdown of a system, the purveyor  
35 shall notify the local fire district immediately.

1 15.40.080 Purveyor Requirements. All purveyors shall continuously supply water  
2 at or above the minimum flow requirements at all times as specified herein;  
3 provided that the purveyor need not comply with these requirements in the event  
4 of vandalism, acts of God, loss of power, temporary shut down for repairs and/or  
5 replacement. Purveyors shall conform to all requirements of this Ordinance  
6 pertaining to the installation of source, storage, distribution mains and fire  
7 hydrants.

8 15.40.090 MINIMUM FLOW VARIANCE FOR WATER PURVEYORS. In the event a  
9 subdivision, short subdivision or commercial or industrial project is unable to  
10 provide adequate water flow due to the unavailability of an adequate water  
11 supply, the development may be allowed to proceed pursuant to this variance.  
12 The applicant shall submit the following:

13  
14 (I) A letter to the Pierce County Fire Marshal from the water purveyor  
15 indicating the reason the water company is unable to provide the fire  
16 flows in accordance with this ordinance.

17 (II) A plan designed by a registered professional engineer must be  
18 submitted to the Pierce County Fire Marshal which shows the system  
19 improvements necessary to increase the water flows, and shall be in  
20 accordance with the current water system plan for the purveyor, approved  
21 by the Washington State Department of Health for the service area, and  
22 it shall comply with this ordinance in the time period specified herein.  
23 The system improvements or expansion shall be designed so that the water  
24 supply for the remainder of the supplier's service will not be  
25 detrimentally affected.

26 (III) A letter from the water purveyor stating that at the very minimum,  
27 the purveyor will comply with the following schedule:

<u>Type of Development</u>	<u>Percent of Compliance with Required Fire Flow GPM</u>	<u>Time When Applicable Percent Must Be Satisfied</u>
Commercial or Industrial	75% of GPM	Prior to Issuance of Building Permit
	100% of GPM	Within 5 Years After Issuance of Building Permit