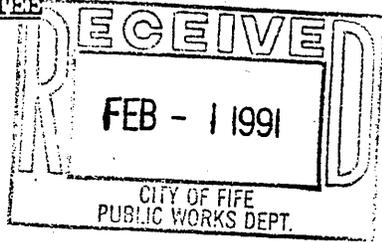


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FIRE PREVENTION OFFICER'S FIRE FLOW REVIEW COMMITTEE



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)																										
			1,000	up to 10,900	up to 6,100	up to 3,900	up to 1,700																										
		1	1,250	16,200	9,100	5,800	2,600																										
			1,500	22,700	12,700	8,200	3,600																										
		1 1/2	1,750	30,200	17,000	10,900	4,800																										
			2,000	38,700	21,800	13,900	6,200																										
			2,250	48,300	27,200	17,400	7,700																										
		2	2,500	59,000	33,200	21,300	9,400																										
			2,750	70,900	39,700	25,500	11,300																										
			3,000	83,700	47,100	30,100	13,400																										
			3,200	97,700	54,900	35,200	15,600																										
		3	3,500	112,700	63,400	40,600	18,000																										
			3,750	128,700	72,400	46,400	20,600																										
			4,000	145,900	82,100	52,500	23,300																										
			4,250	164,200	92,400	59,100	26,300																										
			4,500	183,400	103,100	66,000	29,300																										
			4,750	203,700	114,600	73,300	32,600																										
			5,000	225,200	126,700	81,100	36,000																										
			5,250	247,700	139,400	89,200	39,600																										
		3	5,500	271,200	152,600	97,700	43,400																										
			5,750	295,900	166,500	106,500	47,400																										
		4	6,000	greater	greater	115,800	51,500																										
			6,250		125,500	55,700																											
			6,500		135,500	60,200																											
			6,750		145,800	64,800																											
			7,000		156,700	69,600																											
			7,250		167,900	74,600																											
			7,500		179,400	79,800																											
			7,750		191,400	85,100																											
			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	14	15	16
	<u>Type of Development</u>	<u>Maximum Hydrant Spacing*</u>	<u>Minimum Hydrant Spacing**</u>
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

1
2 (IV) The letter from the purveyor shall specify dates when aspects of
3 the plan must be satisfied and that said purveyor will notify the Pierce
4 County Fire Marshal as to when these dates occur and what progress has
5 been made. Status reports shall be provided to the Pierce County Fire
6 Marshal on a schedule set by the Fire Marshal.

7 (V) The letter shall include a breakdown of the necessary costs for
8 the system improvements and must include the purveyor's sources for the
9 funds necessary to implement said system.

10 Based on the information supplied and any other available
11 information, including the water supplier's past history for
12 reliability, the Pierce County Fire Marshal shall approve or disapprove
13 the applicant's request to proceed under this variance. The Pierce
14 County Fire Marshal's decision shall be made in writing and shall
15 briefly explain the primary basis for the decision.

16 (VI) If at the end of five (5) years, the purveyor shows intent to
17 comply in accordance with the approved plan but development in the area
18 has not been as expected so that the purveyor is not in full compliance,
19 an extension of time may be granted a water purveyor based on unforeseen
20 circumstances and approval by the Pierce County Fire Marshal and the
21 Washington State Department of Health. The extension of time shall not
22 exceed five (5) years.

23 15.40.100 PROCEDURES FOR COMPLIANCE. The following shall be required for
24 formal subdivisions, short subdivisions, commercial and industrial projects, all
25 water systems, and all other projects which must comply with this regulation:

26 (I) Requirements for formal subdivisions:

27 A) Upon submittal of site plan or preliminary plat, the applicant
28 shall submit to the Pierce County Fire Marshal, a letter from the water
29 purveyor addressing its willingness and ability to satisfy the
30 requirements of this regulation.

31 B) Prior to final plat approval, the following shall be required:

32 (1) Water system plans and specifications which shall comply with
33 this ordinance must be designed and stamped by a registered
34 professional engineer. Said plans shall be filed with and

1 approved by the Pierce County Fire Marshal and the Washington
2 State Department of Health.

3 (2) Water system plans shall be approved in writing by the Pierce
4 County Fire Marshal.

5 (3) The approved water system shall be installed prior to final
6 plat approval; however, this requirement may be waived if a bond
7 or other security is posted and approved prior to said plat
8 approval. The form of security, if other than a bond, shall be
9 approved by the Prosecuting Attorney's Office. The amount of the
10 bond or security shall be determined by the registered engineer
11 who designed the system and the purveyor who shall supply the
12 water. The bond or other security shall be issued to Pierce
13 County and shall be approved by the Pierce County Fire Marshal.
14 Periodic progress reports on the installation of the system may
15 be required by the Pierce County Fire Marshal. Prior to said
16 approval, the purveyor shall submit a letter to the Pierce County
17 Fire Marshal stating its commitment to install the water system
18 in the event the system is not installed by the applicant.

19 (4) Three (3) copies of the "As Built" drawings shall be filed
20 with the Pierce County Fire Marshal, as well as test results
21 showing the amount of fire flow at each hydrant at 20 p.s.i.

22 C) When the distribution system is installed, said installation must
23 be under the direction of a registered professional engineer who shall
24 certify that the construction of the system is in accordance with the
25 approved design. In the event a bond is posted, installation of the
26 system must be completed and operable, in accordance with this
27 ordinance, prior to occupancy or any other use of any structure.

28 (II) Requirements of short subdivisions and commercial and industrial
29 projects:

30 A) Prior to approval of plat/project, the applicant shall submit to
31 the Pierce County Fire Marshal, a letter from the water purveyor
32 addressing its willingness and ability to satisfy the requirements of
33 this regulation. Water system plans and specifications which comply

1 professional engineer. Three sets of said plans shall be filed with and
2 approved by the Pierce County Fire Marshal.

3 B) Water system plans shall be approved in writing by the Pierce
4 County Fire Marshal.

5 C) The approved water system must be installed prior to final short
6 plat approval and prior to the issuance of a building permit; provided
7 that this requirement may be waived if a bond or other security is
8 posted and approved prior to said issuance. The form of security, if
9 other than a bond, shall be approved by the Prosecuting Attorney's
10 Office. The amount of the bond or security shall be determined by the
11 registered engineer who designed the system and the purveyor who shall
12 supply the water. The bond or other security shall be issued to Pierce
13 County and shall be approved by the Pierce County Fire Marshal. Prior
14 to said approval, the purveyor shall submit a letter to the Pierce
15 County Fire Marshal stating its commitment to install the water system
16 in the event the system is not installed by the applicant.

17 D) After the system is installed, three (3) copies of the "As Built"
18 drawings shall be filed with the Pierce County Fire Marshal, as well as
19 test results showing the amount of fire flow at each hydrant at 20
20 p.s.i.

21 (III) Requirements for Water Systems; Water Storage; and Comprehensive
22 Water System Plans as required by C.W.S.P.

23 A) Prior to approval, water system plans and specifications subject
24 to this ordinance, must be designed and stamped by a registered
25 professional engineer, and shall be filed with the Pierce County Fire
26 Marshal.

27 B) Water storage and water system plans shall be approved in writing
28 by the Pierce County Fire Marshal.

29 C) Prior to final approval, three (3) copies of "As Built" drawings
30 shall be filed with the Pierce County Fire Marshal, as well as test
31 results showing the amount of fire flow at each hydrant at 20 p.s.i., as
32 required by this Ordinance.

1 (IV) Water System Requirements for Rural Areas Covered by NFPA
2 Standard #1231.

3 A) Upon submittal of the site plan and engineered system plans, the
4 applicant shall include a letter to the Pierce County Fire Marshal
5 detailing the proposal to meet the requirements of this regulation.

6 B) Prior to final approval, the following shall be required:

7 (1) Water system plans and specifications which comply with NFPA
8 Standard #1231 must be designed and stamped by a registered
9 professional engineer, and three (3) copies shall be filed with,
10 and approved by, the Pierce County Fire Marshal.

11 (2) The approved water system shall be installed prior to final
12 approval, provided that this requirement may be waived if a bond
13 or other security is posted and approved prior to said final
14 approval. The form of security if other than a bond, shall be
15 approved by the Prosecuting Attorney's Office. The amount of the
16 bond or security shall be determined by the registered
17 professional engineer who designed the system, and the purveyor
18 and/or contractor who shall install the system. The bond or other
19 security shall be issued to Pierce County, and shall be approved
20 by the Pierce County Fire Marshal. Prior to said approval, the
21 purveyor and/or contractor shall submit a letter to the Pierce
22 County Fire Marshal stating their commitment to install the water
23 system in the event the system is not installed by the applicant.

24 (3) Three (3) copies of the "As Built" plans shall be submitted
25 to the Pierce County Fire Marshal by the registered professional
26 engineer, certifying the construction to NFPA Standard #1231
27 requirements.

28 15.40.100 15.40.110 WAIVERS. Some of the requirements of this Chapter may be
29 waived and/or alternate procedure(s) approved by the Pierce County Fire Marshal,
30 after conferring with the affected fire district, if the waiver(s) or alternate
31 procedure(s) will not result in inadequate fire protection. These alternate
32 procedure(s) may include (but not be limited to) sprinkler systems that meet the
33 requirements of the N.F.P.A. Standards, approved alarm system(s) that meet the

1 requirements of U.F.C. Article 14, or other alternative(s). All waiver(s) and
2 alternate procedure(s) approvals must be in writing, the reasons given for each,
3 and a copy must be placed in a waiver notebook, and a copy mailed to the
4 appropriate fire district chief. Neither the Pierce County Fire Marshal or his
5 designee, nor any other authority is authorized by this ordinance to waive the
6 requirements of the Uniform Fire Code or the Uniform Building Code as adopted
7 by Pierce County.

8 15.40.120 ENFORCEMENT, VIOLATIONS, APPEALS AND PENALTY.

9 (I) No final plat for subdivisions shall be approved by the Hearing
10 Examiner until receipt of verification from the Pierce County Fire Marshal that
11 the provisions of this ordinance have been satisfied. No building permit shall
12 be issued in subdivisions, short subdivisions or for commercial and industrial
13 structures until the Building Department has received verification from the
14 Pierce County Fire Marshal that the provisions of this ordinance have been
15 satisfied.

16 (II) In the event a water purveyor has violated the terms of this
17 ordinance, the Pierce County Fire Marshal shall issue a Violation Notice to the
18 purveyor.

19 (III) In addition to the above, the Pierce County Fire Marshal and/or
20 the Building Official shall issue Cease and Desist Orders whenever any person,
21 firm or corporation is taking any action which is in violation of this
22 ordinance. Such Cease and Desist Order shall not cause any interruption of
23 domestic service provided by a water purveyor. Such Order shall specify each
24 violation and shall state that a hearing may be requested by the affected party
25 by sending a written request for the hearing to the Board of Appeals within ten
26 (10) days of receipt of the said Order.

27 (IV) Appeals. Decisions or orders of the Pierce County Fire Marshal
28 made pursuant to the authority granted herein may be appealed by an aggrieved
29 party to the Board of Appeals (as established by Pierce County Code) by making
30 a written request for a hearing to such Board within ten (10) days of the
31 receipt of such written order or decision. The Board of Appeals shall hold a
32 hearing within thirty (30) days and may uphold, modify, or reverse the decision
33 of the Pierce County Fire Marshal. Decisions of the Board of Appeals may be

1 appealed to the Pierce County Hearing Examiner within ten (10) days of receipt
2 of the Board's final order, pursuant to the provisions of Pierce County Code.
3 All issues which are on appeal are stayed until final resolution by the Board
4 of Appeals or the Pierce County Hearing Examiner. No plat shall be approved,
5 no building permit shall be issued nor development continued during this stayed
6 appeal period unless such is authorized by the authority before which the appeal
7 is pending.

8 (V) Civil Penalty. Any person, firm or corporation who is found to
9 be in violation of any provisions of this code, and who is issued a Cease and
10 Desist Order, and fails to act on that Order shall incur a cumulative civil
11 penalty in the amount of \$500.00 per day for each violation. The civil penalty
12 shall commence five (5) days after service of the Cease and Desist Order;
13 provided, that the civil penalty shall be tolled if a proper request is made for
14 a hearing, until the time of the final decision of the Board of Appeals or the
15 Pierce County Hearing Examiner. A lien shall attach (in favor of Pierce County)
16 for any civil penalty imposed pursuant to this code against the real property
17 on which the civil penalty was imposed. Said lien shall attach by filing a copy
18 of the Cease and Desist Order, the penalty amount and a notice of lien with the
19 Pierce County Budget & Finance Department. The penalty amount shall be paid to
20 the Pierce County Office of Fire Prevention and Arson Control.

21 15.40.130 SEVERABILITY. If any provision of this Chapter, or its application
22 to any person or legal entity or circumstance, is held invalid, the remainder
23 of the ordinance, or the application of the provision to other persons or legal
24 entities or circumstances shall not be affected.
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33 WP\A:FIREFLOW.13
34 December 10, 1990