

CHAPTER 3.18

MINIMUM STANDARDS FOR FIRE FLOWS, WATER MAINS, FIRE HYDRANTS, AND ROADS

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3.18.010 PURPOSE. The purpose of this chapter is to better protect the residents, inhabitants, commercial developments, and industrial developments in Benton County against the dangers of fire due to the inadequacy of water, inadequacy of water pressure, and the inadequacy of roads for firefighters.
[Ord. 149 (1981) ' 1]

3.18.015 DEFINITIONS. For the purposes of this chapter the following words and phrases shall have the indicated meanings:

(1) Agricultural Building - a structure which has as its sole use the storage or sheltering of farm implements, horticultural products, livestock, poultry, hay or grain. This definition shall not apply to buildings where agricultural products are processed, packaged or treated.

(2) "A.I.A." shall mean the American Insurance Association, Inc.

(3) "A.S.T.M." shall mean the American Society for Testing and Materials.

(4) "A.W.W.A." shall mean the American Water Works Association.

(5) "Building" shall mean any structure erected for the support, shelter, or enclosure of persons, animals, or property of any kind.

(6) "Building Valuation Data" shall mean the Building Standards monthly publication issued by the International Code Council, Inc.

(7) "Commercial Areas" shall mean any area proposed to be developed with buildings or structures other than a family dwelling.

(8) "Construction Classification Number" shall mean a series of numbers from 0.50 through 1.50 that are mathematical factors used in a formula to determine total water supply requirements of this standard only (NFPA 1142).

(9) "Continuous Supply" shall mean the providing of water at or above minimum flow levels at all times.

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(10) "Deadend Main" shall mean a water main over fifty (50) feet long and not being fed from both ends at the time of installation.

(11) "Draft Hydrant" shall mean a mechanical device designed for the removal of water by a fire pumper by applying a negative pressure without going through the normal domestic water system.

(12) "Dry Hydrant/Horizontal Standpipe" shall mean a non-pressurized piping system with four and one-half (4 1/2) inch National Standard Thread hose connections designed so that a fire pumper can connect to one end and supply water to the dry fire hydrant or dry horizontal standpipe connection.

(13) "Exposure Hazard" shall mean a structure within fifty (50) feet of another building and one hundred (100) square feet or larger in area. If a structure is of occupancy hazard classification number three (3) or four (4), it is considered an exposure hazard if within fifty (50) feet of another building, regardless of size.

(14) "Factory Assembled Structure (FAS)" shall have the meaning as set forth in BCC 3.20.030(c).

(15) "Family Dwelling" shall mean a building under one roof which accommodates not more than two (2) families.

(16) "Fire Chief," "Chief," "Local District Fire Chief" shall mean the chief officer of the fire district having jurisdiction.

(17) "Fire Department" shall mean the fire authority normally responsible for fire protection in the area.

(18) "Fire Flow" shall mean the minimum flow of water required for fighting a fire at a specific building, development, or within a specific area. Said minimum flows shall be determined by the Benton County Fire Marshal, after consultation with the Local District Fire Chief, based on the criteria set forth in this chapter and in the current adopted issue of the National Fire Protection Associations (NFPA) Standard on Water Supplies for Suburban and Rural Fire Fighting (NFPA 1142).

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(19) "Fire Hydrant" shall mean a mechanical device which is self draining, frost free, and is constructed to provide the required fire flow for the area serviced.

(20) "Fire Marshal" shall mean the Benton County Fire Marshal or representative.

(21) "Flush-type Hydrant" shall mean a hydrant that is installed entirely below grade.

(22) "G.P.M." shall mean gallons per minute.

(23) "Gross Area" shall mean the area of a lot or parcel and includes public and private roads, and other easements.

(24) "Industrial Area" shall mean an area developed with uses permitted in zone classifications Commercial "C", Industrial "I-1" and Industrial "I-2". Industrial area includes shopping centers, hospitals and schools.

(25) "I.B.C." and "International Building Code" shall mean the International Building Code as adopted by Benton County.

(26) "I.F.C." and "International Fire Code" shall mean the International Fire Code as adopted by Benton County.

(27) "I.R.C." and "International Residential Code" shall mean the International Residential Code as adopted by Benton County.

(28) "Labeled" shall mean equipment or materials to which has been attached a label, symbol or other identifying mark of an organization acceptable to the Benton County Fire Marshal or designee, and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

(29) "Large Diameter Hose" shall mean fire department hose having an inside diameter of three and one-half (3 1/2) inches or larger.

(30) "Listed" shall mean equipment or materials included in a list published by an organization acceptable to the Benton County Fire Marshal or designee, and concerned with product evaluation, that maintains periodic inspection of production of listed equipment or materials and whose listing states either that the equipment or material meets appropriate standards or has been tested and found suitable for use in a specified manner.

(31) "Manmade Sources of Water" shall mean above ground tanks, elevated gravity tanks, livestock watering tanks, cisterns, swimming pools, wells, quarries, mines, reservoirs, aqueducts, tankers, and hydrants served by a water supply system.

(32) "Manufactured Home" shall have the meaning as set forth in BCC 3.20.030(g).

(33) "Manufactured Home/FAS Park" shall have the meaning as set forth in BCC 3.20.030(h).

(34) "Minimum Requirements for Water Supply" shall mean the smallest quantity of water supply suggested for any degree of fire control. In some fires, this supply may be suitable for protecting exposures only.

(35) "Multiple Dwelling" shall mean a building designed for occupancy by three (3) or more families living separate from each other and containing three (3) or more dwelling units.

(36) "Municipal Type Water System" shall mean a system having water pipe serving hydrants and designed to furnish, over and above domestic consumption, a minimum flow of two hundred fifty (250) gpm and twenty (20) psi residual pressure for a two (2) hour period.

(37) "Mutual Aid" shall mean a plan developed between two (2) or more districts or departments to render assistance to the parties of the agreement. Often the request for such aid to be rendered will come only after an initial response has been made and the fire scene status has been determined.

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(38) "N.F.P.A." shall mean the National Fire Protection Association, and this specific section shall refer to NFPA 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting as adopted by Benton County.

(39) "NST" shall mean National Standard Thread.

(40) "Natural Bodies of Water" shall mean bodies of water contained by earth only, and shall include ponds, lakes, rivers, streams, bays, creeks, springs, artisan wells, and irrigation canals.

(41) "Normal Living Area Dwelling" shall mean the area which includes typical rooms, such as: living room, dining room, parlor, kitchen, bath, bedroom, halls, library, music room, family room, laundry room, etc., and includes any other areas that are normally heated or cooled as well as attic-basement provisions, enclosed parking (garage), and storage areas.

(42) "Occupancy Hazard Classification Number" shall mean a number between three (3) and seven (7) that is a mathematical factor used in a formula to determine total water supply requirements for Benton County and obtained from NFPA 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting.

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

(44) "Private Road" means a road, driveway or any form of access easement in excess of two hundred (200) feet in length that is not dedicated to and maintained by Benton County.

(45) "Protected Property" shall mean property protected by a water supply that is minimally adequate in volume and duration and by a fire department capable of using the water supply to suppress a possible fire within the property.

(46) "PSI" shall mean pounds per square inch.

(47) "Public Fire Protection" shall mean the current edition of the pamphlet entitled, "Public Fire Protection," published by the Washington Surveying and Rating Bureau.

(48) "Public Hydrant" shall mean a fire hydrant so situated and maintained as to provide water for fire fighting purposes without restrictions as to use, the location of which is accessible for immediate use of the fire department at all times.

(49) "Public Road" means a road dedicated to and maintained by Benton County.

(50) "Public Water" shall mean any system or water supply intended or used for human consumption or other domestic uses, including sources, treatment, storage, transmission and distribution facilities where water is furnished to any community, collection or number of individuals, or is made available to the public for human consumption or domestic use, excluding water systems serving one single-family residence.

(51) "Purveyor" shall mean the federal agency, state agency, county agency, city, town, municipal corporation, firm, company, mutual, cooperative, association, corporation, partnership, district, institution, person, or persons owning or operating a public water system or the authorized agent thereof.

(52) "Rural Areas" shall mean any section designated on the Public Land Survey System that is wholly or partially within Benton County with a population density of less than five hundred (500) persons and with no more than ten (10) dwellings that utilize any private, well, spring or community water service excluding commercial and industrial uses and approved subdivisions.

(53) "Secondary (Design) Water Supply" shall mean the estimated rate of flow (expressed in gallons per minute for a prescribed time period) that is considered necessary to control a major fire in a building or structure.

(54) "Shall" indicates a mandatory requirement.

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(55) "Should" indicates a recommendation or that which is advised but not required.

(56) "Single Water Point" shall mean the point or site at which a water supply, such as a pumper with portable folding tank connects to a dry hydrant/horizontal standpipe, etc., may be located to protect a cluster of buildings, such as a subdivision or an estate.

(57) "Water main" shall mean the piping used to deliver fire flows intended for fire protection in amounts as required by the Benton County Fire Marshal.

[Ord. 149 (1981) ' 1; Ord. 194 (1986) ' 1; Ord. 243 (1993) ' 1; Ord. 379 (2002) § 2; Ord. 401 (2004) § 1; Ord. 461 (2008) § 1]

3.18.020 GENERAL APPLICABILITY. Except as hereinafter exempted, the following shall be subject to the provisions of this chapter:

(a) New commercial and new industrial structures.

(b) proposed subdivisions or short plat subdivisions.

(c) Substantial alterations or additions to existing commercial or industrial structures.

(d) Existing formal subdivisions, commercial or industrial structures when water mains are replaced.

(e) Proposed mobile home parks and recreational vehicle parks.
[Ord. 149 (1981) ' 1]

3.18.025 GENERAL EXEMPTIONS. The following are exempt from BCC 3.18.030, BCC 3.18.035, BCC 3.18.036, BCC 3.18.037, BCC 3.18.038, BCC 3.18.039, BCC 3.18.040, BCC 3.18.041, and BCC 3.18.042.

(a) Low Density Exemption - Divisions of land which satisfy all the following requirements:

(1) Each lot created is at least one (1) gross acre or more in area; and

(2) The minimum permitted setback distance for all structures, from all lot lines, is twenty-five (25) feet unless greater distances are required by other county regulations (i.e., zoning, building, etc.); and

(3) The use of each lot created is limited by county regulations or plat covenant to a single family dwelling, duplex or other use which is not multi-family, commercial or industrial.

(b) Rural Areas.

(c) Existing lots of record as of March 26, 1981.

(d) Individual Wells - This chapter does not apply to an individual's use of a private well for domestic purposes.

(e) Recreational vehicle (as defined in BCC 3.20.030(n)) parks of four (4) spaces or less, and multiple detached dwellings permitted per the Benton County Zoning Code.

(f) Agricultural buildings not located within one thousand (1,000) feet of an approved accessible water supply capable of providing fire flow otherwise required by this chapter. Any agricultural building subject to this exemption shall not be used for storing combustible materials.

(g) Structures not exceeding two thousand five hundred (2,500) square feet in floor area and not located within a water district or within an area served by a state approved private water system capable of delivering the required fire flow required by this chapter.

(h) Structures classified as Group U occupancies pursuant to the International Building Code which conform to the standards for agricultural building in Appendix C of the International Building

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Code, provided that stables and riding arenas intended for public use or assembly of boarding of animals not belonging to the owner of the building are not exempt.

(i) Structures or additions classified as a Group U Occupancy by the International Building Code and to be built on a lot.

(j) Additions to existing structures classified as Group R, Division 3, by the International Residential Code.
[Ord. 149 (1981) ' 1; Ord. 194 (1986) ' 2; Ord. 276 (1996) ' 1; Ord. 379 (2002) ' 3; Ord. 401 (2004) § 2; Ord. 461 (2008) § 2]

3.18.028 EXEMPTION TO MINIMUM WATER FLOWS FOR SUBDIVISIONS.

(a) Proposed single family residential subdivisions and short subdivisions that will not be served by a water system with water flows adequate to provide the minimum water flow for fire purposes required by BCC 3.18.039(a) may be approved by the County if each single family residence will be served by fire hydrants with at least two hundred fifty (250) gallons of water per minute for thirty (30) minutes at twenty (20) psi residual pressure. Provided, no such approval may be granted unless all structures erected or installed on such lots are provided with:

(1) Fire sprinkler systems conforming to the National Fire Protection Association Pamphlet No. 13D, Sprinkler Systems for One and Two Family Dwellings, Manufactured Homes and Factory Assembled Structures; and

(2) Minimum setbacks from property lines of at least twenty-five (25) feet.

(b) With respect to subdivisions approved under this section, all required water mains and fire hydrants shall be installed in accordance with the requirements of this chapter.
[Ord. 379 (2002) § 4; Ord. 461 (2008) § 3]

3.18.029 VOLUNTARY HYDRANTS AND DISTRIBUTION SYSTEMS. All fire hydrants, dry hydrants, and water distribution systems

installed voluntarily by any person that are not required by this chapter shall be installed in accordance with BCC 3.18.030 through BCC 3.18.040.

[Ord. 461 (2008) § 4]

3.18.030 PROCEDURE FOR COMPLIANCE. The following shall be required for all subdivisions, short plat subdivisions, Manufactured Home/FAS parks, recreational vehicle parks, and commercial and industrial areas not exempt under the provisions of BCC 3.18.025:

(a) Subdivisions:

(1) Prior to preliminary plat approval, the applicant shall submit to the Benton County Fire Marshal a letter from the water purveyor addressing its willingness and ability to satisfy the requirements of this chapter.

(2) Prior to final plat approval, the following shall be required:

(i) Water system plans and specifications which comply with these regulations must be designed and stamped by a registered, professional engineer licensed in the State of Washington. Said plans shall be signed by the purveyor and shall be filed with the Benton County Fire Marshal and the Department of Health.

(ii) Water system plans shall be approved in writing by the Benton County Fire Marshal.

(iii) The approved water system shall be installed prior to final plat approval or a statement shall be placed on the plat indicating no building or Manufactured Home/FAS installation permit will be issued until the water system is installed, operating and approved.

(iv) Two (2) copies of the "as built" drawings must be filed with the Benton County Fire Marshal.

(3) When the distribution system is installed, said installation must be under the direction of a registered, professional engineer licensed in the State of Washington who shall certify the construction of the system is in accordance with the approved design.

(4) Written approval from the Benton County Fire Marshal that the system is operating to specifications shall be submitted.

(b) Short Plat subdivisions:

(1) Water system plans and specifications which comply with these regulations must be designed and stamped by a registered, professional engineer licensed in the State of Washington. Said plans shall be signed by the purveyor and shall be filed with the Benton County Fire Marshal and the Department of Health.

(2) Prior to approval of plat, the applicant shall submit to the Benton County Fire Marshal a letter from the water purveyor addressing its willingness and ability to satisfy the requirements of this regulation.

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

(4) The approved water system must be installed prior to the issuance of a building or Manufactured Home/FAS installation permit and so stated on the plat.

(5) Two (2) copies of the "as built" drawings must be filed with the Benton County Fire Marshal.

(6) When the distribution system is installed, said installation must be under the direction of a registered, professional engineer licensed in the State of Washington who shall certify the construction of the system is in accordance with the approved design.

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(c) Manufactured Home/FAS parks and recreational vehicle parks:

(1) Prior to approval, the applicant shall submit to the Benton County Fire Marshal a letter from the water purveyor addressing its willingness and ability to satisfy the requirements of this chapter.

(2) Prior to the special permit being issued, the following shall be required:

(i) Water system plans and specifications which comply with these regulations must be designed and stamped by a registered, professional engineer licensed in the State of Washington. Said plans shall be signed by the purveyor and shall be filed with the Benton County Fire Marshal and the Department of Health.

(ii) Water system plans shall be approved in writing by the Benton County Fire Marshal.

(iii) The approved water system shall be installed and approved prior to issuing the special permit to operate the Manufactured Home/FAS park or recreational vehicle park.

(iv) Two (2) copies of the "as built" drawings must be filed with the Benton County Fire Marshal.

(3) When the distribution system is installed, said installation must be under the direction of a registered, professional engineer licensed in the State of Washington who shall certify the construction of the system is in accordance with the approved design.

(d) Commercial and industrial areas:

(1) Prior to issuance of a building permit, the applicant shall submit to the Benton County Fire Marshal a letter from the water purveyor addressing its willingness and ability to satisfy the requirements of this chapter.

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(2) Prior to the building permit being issued, the following shall be required:

(i) Water system plans and specifications which comply with these regulations must be designed and stamped by a registered, professional engineer licensed in the State of Washington. Said plans shall be signed by the purveyor and shall be filed with the Benton County Fire Marshal and the Department of Health.

(ii) Water system plans shall be approved in writing by the Benton County Fire Marshal.

(iii) The approved water system shall be installed and approved prior to issuing the building permit.

(iv) Two (2) copies of the "as built" drawings must be filed with the Benton County Fire Marshal.

(3) When the distribution system is installed, said installation must be under the direction of registered, professional engineer licensed in the State of Washington who shall certify the construction of the system is in accordance with the approved design.

[Ord. 149 (1981) ' 1; Ord. 461 (2008) § 5]

3.18.035 WATER SYSTEM REQUIREMENTS--WATER MAINS. (a) New or replaced water mains shall be a minimum of eight (8) inches in diameter for deadends and six (6) inches in diameter for circulating mains (grid or loop systems), provided that for deadend cul-de-sacs a six (6) inch diameter main need only extend to the last required fire hydrant if the distance is three hundred (300) feet or less, otherwise, an eight (8) inch diameter main is required to the last required hydrant. Normal domestic lines may be installed thereafter to the remaining residences. Hydrant leads less than fifty (50) feet may be six (6) inches in diameter. A deadend main which extends across a street only for the purpose of serving a hydrant shall be of a size capable of providing the required fire flow, but it shall not be less than six (6) inches in diameter.

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All mains shall have hydrants and/or tees and valves installed to conform with this regulation.

(b) The water system shall be capable of delivering the required fire flow at a minimum hydrant pressure of 20 psi while maintaining normal system peak instantaneous demands. Higher minimum flows may be required by the Benton County Fire Marshal for multiple family residences and/or non-residential uses.

(c) Water mains shall conform to current A.W.W.A. specifications. [Ord. 149 (1981) ' 1; Ord. 243 (1993) ' 2]

3.18.036 WATER SYSTEM REQUIREMENTS--FIRE HYDRANTS--GENERAL STANDARDS. Fire hydrants shall meet the following standards.

(a) Fire hydrants shall conform to current A.W.W.A. Specifications for traffic model fire hydrants and shall have one hundred fifty (150) psi working pressure and three hundred (300) pounds hydrostatic test, 1 - 5 1/4" main valve opening, 1 - 4 2" NST pumper port that is fitted, when required by the respective Fire District, with a Storz adapter that complies with the Fire District requirements, two (2) - 2 2" NST hose port, and one (1)- 2" pentagon operating nut - open left. Compression type, opens against pressure main valve and will remain closed should the hydrant be broken off by a traffic accident. Hydrant shoe or inlet may be flanged, AC pipe or mechanical joint. Hydrant to be furnished with two (2) drain ports to insure rapid and complete drainage of hydrant barrel to eliminate all danger to damage by freezing.

(b) There shall be an auxiliary gate valve installed to permit the repair and replacement of the hydrants without disruption of water service. Gate valves shall be in conformance with the latest specifications of A.W.W.A. and be iron body, bronze mounted with two (2) inch square operating nuts that open left. End styles shall be flanged, mechanical joint or ring-tite. Valve boxes shall be sliding type with pick type lids.

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(c) Hydrants shall stand plumb and be set to the finished grade. The bottom of the lowest outlet of the hydrant shall be no less than twenty-four (24) inches above the grade. There shall be thirty-six (36) inches of clear area about the hydrant for operation of a hydrant wrench on the outlets and on the control valve. The pumper port shall face the street. Where the street cannot be clearly defined or recognized, the port shall face the most likely route of approach and the location of the fire truck while pumping, as determined by the Benton County Fire Marshal.

(d) Hydrants shall not be obstructed by any structure or vegetation, or have the visibility impaired for a distance of fifty (50) feet in the direction of vehicular approach to the hydrant.

(e) Hydrants are to be accessible at all times by fire department pumpers.

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

(g) All hydrants shall be subject to testing and inspection by the Benton County Fire Marshal, subject to reasonable notice and scheduling with the purveyor.

[Ord. 149 (1981) ' 1; Ord. 243 (1993) ' 2; Ord. 401 (2004) § 3; Ord. 461 (2008) § 6]]

3.18.037 WATER SYSTEM REQUIREMENTS--FIRE HYDRANTS--LOCATION AND SPACING. (a) Location of hydrants shall be determined by the Benton County Fire Marshal.

(b) The location of all water mains, fire hydrants, and valves to be installed shall be properly and accurately marked on identifiable plans or drawings. Two (2) copies of all plans or drawings shall be furnished to the Benton County Fire Marshal.

[**NOTE:** This section is continued on the following page.]

(c) Fire hydrant spacing. The table below specifies the maximum permissible spacing between hydrants:

<u>Type of Development</u>	<u>Hydrant Spacing**</u>
Subdivisions, short plat subdivisions - limited to one (1) family dwellings	600 feet
Multiple family dwellings - Eight (8) or less units per acre	600 feet
Manufactured Home/FAS parks and recreational vehicle parks	600 feet
Multiple family dwellings - Nine (9) or more units per acre, commercial, industrial, hospitals, schools	300 feet

**Spacing shall be measured along the pathway which a fire department would have to route a fire hose. This pathway shall be as determined by the Benton County Fire Marshal.

[Ord. 149 (1981) ' 1; Ord. 243 (1993) ' 2; Ord. 461 (2008) § 7]

3.18.038 WATER SYSTEM REQUIREMENTS--FIRE HYDRANTS--MAINTENANCE. (a) The Fire Marshal may, after notifying purveyor, test hydrants for flow capability.

(b) Purveyor will maintain working parts of hydrants above ground, including keeping brush and other physical obstructions from blocking access to, or operation of, hydrants.

(c) The Fire Marshal may check operation of hydrants and notify purveyor of any malfunction or leaking which will require correction.

(d) Purveyor will notify the Fire Marshal of any hydrant installation. Said notification will state whether or not they have minimum fire flow.

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(e) Purveyor will respond as expeditiously as possible when notified of a malfunction of a hydrant and will effect repair in a workmanlike manner.

[Ord. 149 (1981) ' 1; Ord. 243 (1993) ' 2]

3.18.039 WATER SYSTEM REQUIREMENTS--MINIMUM FIRE FLOW REQUIREMENTS. (a) The minimum fire flow requirements for single family residences shall be five-hundred (500) gallons per minute for 30 minutes at 20 psi residual pressure at all hydrants.

(b) The minimum fire flow for duplexes, multiple family residences, commercial, industrial, schools, hospitals, etc. will be determined by the Benton County Fire Marshal or designee. The Fire Marshal or designee may refer to NFPA 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting and other pertinent information in making such determination.

[Ord. 149 (1981) ' 1; Ord. 243 (1993) ' 2; Ord. 379 (2002) § 5; Ord. 401 (2004) § 4]

3.18.040 PURVEYOR REQUIREMENTS. All purveyors shall continuously supply water at or above the minimum flow requirements specified herein; provided that the purveyor need not comply with these requirements in the event of vandalism, acts of God, loss of power and temporary shutdown for repairs and/or replacement. The Benton County Fire Marshal shall be notified by the purveyor at least twenty-four (24) hours prior to any shutdown for repairs and/or replacement.

[Ord. 149 (1981) ' 1]

3.18.041 ALTERNATE WATER SOURCES. The water supplies for fire fighting purposes as required by the Benton County Fire Marshal or designee may be supplied from natural bodies of water and manmade sources of water.

In the event a natural body of water is being investigated as a water source for use in emergency fire protection, written permission must be obtained from the following parties prior to any

construction: all parties having ownership rights of any type in the property on which the water is located, the legal water rights owner (irrigation district, etc.), Corps of Engineers, Department of Ecology, and any other state or governmental agency that the Benton County Fire Marshal determines may have an interest in water usage for emergency fire protection. Upon receipt of such written permission and approval, information and assistance on delivery of water to the fire scene shall be provided by the Benton County Fire Marshal and the Local District Fire Chief.
[Ord. 243 (1993) ' 3; Ord. 461 (2008) § 8]

3.18.042 DRY HYDRANTS, DRAFT HYDRANTS, OR HORIZONTAL STANDPIPES. (a) Dry hydrants, draft hydrants or horizontal standpipes may be constructed of six (6) to eight (8) inch A.S.T.M. Schedule 40 steel, or A.S.T.M. Schedule 40 PVC with glued joints. All hose connections shall be National Standard Thread, and constructed from steel or metal alloy of an approved type, and must be capped. The size of the connection shall comply with the respective Fire District's requirements. The Fire Marshal shall determine if the connections will be male or female.

(b) A strainer must be installed on the water supply side of the system with three-eighths (3/8) inch openings and an adequate number of openings to permit required fire flow. A removable end cap shall be furnished on the end of the strainer to permit back flushing. This is recommended on a monthly basis or as needed to insure proper operation of the system.

(c) Once a system is installed and approved, it is the responsibility of the interested party to maintain such system at all times to insure proper fire protection. All dry hydrants that protect any Commercial, or Industrial property will be inspected yearly by the Benton County Fire Marshal.
[Ord. 243 (1993) ' 4; Ord. 461 (2008) § 9]

3.18.045 MINIMUM ROAD REQUIREMENTS. (a) Except as otherwise provided in this chapter, the minimum acceptable improved surface for a private road shall be twenty (20) feet in width that is

graded and with two (2) inches of compacted recycled concrete asphalt or two (2) inches of base course crushed surfacing in accordance with the specifications set forth in Standard Specifications for Road, Bridges and Municipal Construction published by the Washington State Department of Transportation, as now in effect or hereafter amended.

(b) The minimum improved surface of a private road may be twelve (12) feet in width surfaced with the materials set forth in subsection (a) above, if the private road serves six (6) or fewer dwelling units (a duplex constitutes two (2) dwelling units); provided, turnouts ten (10) feet wide and thirty (30) feet in length, surfaced in the same manner as the remainder of the private road, shall be placed every three hundred (300) feet from a public road unless the Fire Marshal makes a written determination that a greater spacing is allowable because such greater spacing would not endanger public health, safety or welfare.

(c) If a private road has any curves or turns, the required improved width of any such private road shall be as determined and set forth in writing by the Fire Marshal to a width deemed necessary to allow the appropriate fire fighting equipment to safely navigate such curves or turns. If no such written determination is requested of and made by the Fire Marshal, then a private road with curves or turns must be improved to a width of twenty (20) feet in accordance with the standards set forth in subsection (a) above.

(d) All private roads must terminate in a turnaround that shall not require more than one backing up motion for a fire truck of at least thirty-seven (37) feet in length from bumper to bumper to completely turn around.

(e) All private roads shall be constructed to applicable standards set forth above and all conditions of approval of an encroachment permit shall be satisfied prior to any certificate of occupancy being issued for that parcel.

(f) Bridges and Culverts. All private roads over any drainage, river, creek, etc. shall be traversed by a private bridge or culvert capable of supporting at least sixty thousand (60,000) pounds or such higher weight as deemed necessary and designated in writing by the Fire Marshal. Private bridges over twenty (20) feet

NOTE: This section is continued on the following page.

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long are not allowed. Private bridges and culverts shall be designed to handle a 25-year storm event; provided, if located in an area designated as a 100-year flood plain, then the design must meet the 100-year flood event. A letter stating that the private bridge or culvert design meets the requirements of this section must be submitted by a licensed Washington State Civil Engineer prior to construction and, for private bridges, every two (2) years thereafter.

(g) Access - Gradients.

(1) For all developments accessed by private road, access shall be by at least one private road with a maximum gradient of twelve (12) percent or less; provided, such maximum gradient may be exceeded under either of the following circumstances:

(i) A maximum gradient of no more than fifteen (15) percent shall be permissible if the private road is surfaced with two (2) inches or more of asphalt or concrete; or

(ii) Subject to the written approval of the Fire Marshal, a maximum gradient of fifteen (15) percent may be allowed for less than two hundred (200) feet if such gradient is followed by a gradient of zero (0) percent for a period of six hundred (600) feet and adequately satisfies the vertical curve alignment necessary for the appropriate fire fighting equipment. This design may be repeated as needed.

(2) Notwithstanding subsection (1) above, the maximum gradient of a private road providing access to a dwelling unit shall not exceed twelve (12) percent at any point within two hundred (200) feet of an intersection of such private road with another private road or with a public road.

(3) If requested, as-built drawings of each completed private road shall be submitted. The as-built drawing shall bear the stamp of a Washington State Registered Civil Engineer.

(h) A street within a new development will normally be continued as an extension of existing street, unless good site planning dictates a different solution. Street patterns must take into consideration access to adjacent properties. Sketches of a proposed street system for adjoining properties may be required if owned by the subdivider, or if the configuration of the large tracts make it necessary to provide future access through the property under consideration.

(1) A residential development exceeding sixteen (16) dwelling units that is served by a single access road over six hundred(600) feet in length and each lot is less than one (1) gross acre in size, must have a second entry street.

(2) All residential developments containing more than fifty (50) individual lots shall have a second entry street.

(3) Cul-de-sacs will be permitted where topography or other conditions justify their use. Without approval, they shall not exceed six hundred (600) feet.

(i) Access Identification - Uniform Address Posts. Address locator posts shall be installed and maintained in accordance with the standards adopted by Benton County. The owner of the property is responsible for maintaining and replacing address locator posts per the following requirements and standards:

(1) Address locator posts shall be perpendicular to the public right-of-way and shall be positioned off the road so as not to hinder the movement of traffic and road maintenance vehicles.

(2) The posts shall be located adjacent to the private easement point of encroachment and/or driveway.

(3) If the address posts initially installed by the County are damaged, replacement of the address signs can be obtained from Benton County Planning/Building Department by submitting a fee as set by resolution of the Board of County Commissioners. In lieu of the fee, owners may provide their own signs.

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(4) The posts must be at least four (4) and less than six (6) feet in height with reflective address numbers each at least four (4) inches in height on both sides.

(5) The address posts shall be flexible and shall not be hazardous to moving vehicles because of sign materials. Only posts approved by the County are allowed to be put on the public right of way.

(6) Address numbers shall be mounted on the structure in addition to the address locator posts. The address shall be placed on the side of the structure that faces the road. It should be placed near a doorway; if no doorway exists on the side of the structure facing the right-of-way, the numbers shall be placed four to six (4 - 6) feet above ground level. The numbers shall be a minimum of four (4) inches in height and shall contrast with their background.

[Ord. 149 (1981) § 1; Ord. 276 (1996) § 2; Ord. 379 (2002) § 6; Ord. 461 (2008) § 10; Ord. 531 (2013) § 1]

3.18.050 INDUSTRIAL AND COMMERCIAL AREA REQUIREMENTS. In all commercial and industrial areas when the required fire flow exceeds 2500 g.p.m. the fire hydrants shall be served on the property by a looped main capable of supplying the required flow.
[Ord. 149 (1981) § 1]

3.18.055 WAIVERS. Specific requirements of this chapter may be waived and/or alternate procedures approved by the Benton County Fire Marshal if the waiver or alternate procedure will not result in unreasonable risk to persons or property. All waivers and alternate procedure approvals must be in writing, the reasons given for each, and a copy must be placed in a waiver notebook, a copy mailed to the appropriate fire district chief, and a copy given to the Board of County Commissioners. Neither the Benton County Fire Marshal nor any other authority is authorized by this regulation to waive the requirements of the International Fire Code, the International Building Code, or the International Residential Code.
[Ord. 149 (1981) § 1; Ord. 379 (2002) § 7; Ord. 401 (2004) § 5]

3.18.065 ENFORCEMENT. (a) No final plat for subdivision shall be approved by the Board of County Commissioners until receipt of verification from the Benton County Fire Marshal that the provisions of this regulation have been satisfied. No building permit shall be issued for short plat subdivisions or commercial and industrial structures until the Building Department has received verification from the Benton County Fire Marshal that the provisions of this regulation have been satisfied.

(b) No permit to operate a mobile home park or recreational vehicle park will be issued until the Benton County Planning Department has received verification from the Benton County Fire Marshal that the provisions of this regulation have been satisfied.

(c) In the event a water purveyor has violated the terms of this regulation, the Benton County Fire Marshal shall issue a Violation Notice to the purveyor.

(d) In addition to the above, the Benton County Fire Marshal and the Building Official are authorized to issue cease and desist orders whenever any person, firm or corporation is taking any action which is in violation of this regulation. Such order shall specify each violation and shall state that a hearing may be requested by the affected party by sending a written request for the hearing to the Board of County Commissioners within thirty (30) days of receipt of said order.

[Ord. 149 (1981) ' 1; Ord. 379 (2002) § 8]

3.18.070 APPEALS. Decisions or orders of the Benton County Fire Marshal made pursuant to the authority herein may be appealed by an aggrieved party to the Board of County Commissioners by making a written request for a hearing to such Board within thirty (30) days of the receipt of such written order or decision. The Board of County Commissioners may uphold, modify, or reverse the decision of the Benton County Fire Marshal. All decisions by the Benton County Fire Marshal that are on appeal are stayed until final resolution by the Board of County Commissioners. No plat shall be approved, no building permit or special permit shall be

issued, nor development continue construction during this stated appeal period unless such is authorized by the Board of County Commissioners.

[Ord. 149 (1981) ' 1; Ord. 379 (2002) § 9]

3.18.073 VIOLATIONS - PENALTIES. (a) Upon a finding of a first violation of any provision of this chapter, any person or contractor shall be punished by a civil penalty not to exceed five hundred dollars (\$500) for said violation, shall be responsible for court costs, if applicable, and shall be ordered to pay restitution for any damages caused by said violation.

(b) Upon the court's finding of a second or subsequent violation of the same provision of this chapter, any person or contractor shall be found guilty of a misdemeanor.

[Ord. 194 (1986) ' 3; Ord. 304 (1997) ' 6]

3.18.075 INJUNCTIVE RELIEF. Notwithstanding the existence or use of any other remedy or means of enforcement of the provisions hereof, Benton County may seek legal or equitable relief to enjoin any acts or practices which constitute a violation of any of the provisions hereof and compel compliance with all provisions of this chapter. The costs of such action shall be taxed against the person violating the provisions of this chapter. The Building and Fire Prevention Department may accept a written assurance of discontinuance of any act in violation of this chapter from any person who has engaged in such act. Failure to comply with the assurance of discontinuance shall be a further violation of this chapter.

[Ord. 149 (1981) ' 1; Ord. 194 (1986) ' 4]

3.18.080 SEVERABILITY. If any provision of this chapter is declared unconstitutional, or the applicability thereof to any person or circumstance is held invalid, the constitutionality of the remainder of the chapter and the applicability thereof to other persons and circumstances shall not be affected thereby.

[Ord. 194 (1986) ' 5]

3.18.090 EFFECTIVE DATE. This ordinance shall take effect and be in full force upon its passage and adoption.
[Ord. 149 (1981) § 3; Ord. 401 (2004) § 7; Ord. 531 (2013) § 3]

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