



Fire Flow Acknowledgement

2022

Project Address: _____

Total Fire Area of Structure(s) _____ Sq. Ft.

Note: This includes combined living area, unfinished space, garage space and/or carport areas. Porches/Decks do not need to be included in the total fire area. If proposed structures are within 20 feet of other structures they are considered one fire area and you will need to include the total sq.ft. of all structures.

TABLE B105.1(1) - REQUIRED FIRE FLOW FOR ONE-AND TWO-FAMILY DWELLINGS, GROUP R-3 AND TOWNHOUSES

	FIRE-FLOW CALCULATION AREA (square feet)	Automatic Sprinkler System (Design Standard)	Minimum Fire –Flow (gallons per minute)	Flow Duration (hours)
	0-3,600	No Automatic Sprinkler System	1,000	1
	3,601 and greater	No Automatic Sprinkler System	See Table B105.1(2)	See Table B105.1(2)
	0-3,600	Section 903.3.1.3 of the IFC	500	1/2
	3,601	Section 903.3.1.3 of the IFC	1/2 value in Table B105.1(2)	1

EXCERPT FROM TABLE B105.1(2) REQUIRED FIRE FLOW STRUCTURES NOT UNDER B105.1(1). REFERENCE TABLE FOR TYPE V-B CONSTRUCTION

	TYPE V-B	FIRE-FLOW (gallons per minute)	FLOW DURATION (hours)
	0-3,600	1,500	2
	3,601-4,800	1,750	
	4,801-6,200	2,000	
	6,201-7,700	2,250	
	7,701-9,400	2,500	
	9,401-11,300	2,750	
	11,301-13,400	3,000	3

Automatic Fire Sprinkler System YES / NO (If yes, reduce Fire-Flow GPM by 1/2)

Fire-Flow Required: _____ GPM

Please select from the following options listed in the table on page 2. Each option selected is a credit/reduction towards the GPM required for your particular project.




 Adequate Source of Water Supply (Used as first priority in providing protection to a building or structure. Can be used in conjunction with both County Code and Wildland Urban Interface Code)	 Cowlitz County Code (Used when adequate water supply does not meet min. gallon/min necessary for fire flow AND property is located within fire district)	 Wildland Urban Interface Code (Used when adequate water supply does not meet min. gallon/min necessary for fire flow AND within Wildland Urban Interface)
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TABLE B105.1(3)

		Method	Credit/ Reduction
	1	Availability or extension of an existing public water system capable of supplying at least 100 GPM for 30 minutes . (Hydrant location must be shown on site plan.)	Quantity Actually Supplied _____ GPM
	2	In areas within Fire District but without adequate and reliable water supply, provision of NFPA 1142 dry hydrant	100% credit up to 2,750 gallon per minute
	3	Lot greater than 1 acre with minimum 20 ft setbacks provided to all property lines and from structure(s). This shall not be used in combinations with methods provided from the International Wildland-Urban Interface Code (IWUIC) (Options 5, 6, or 7).	500 gallon per min. fire flow credit
	4	Within a Fire District and within 5 road miles of a staffed fire station and access provide pursuant Sec 503 or Sec 403 of the International Wildland-Urban Interface Code. Distance _____ Station Address _____	500 gallon per min. fire flow credit
	5	Provision of Defensible Space per Wildland-Urban Interface Code. Distance provided is dependent on area classification (low, moderate, high)	500 gallon per min. fire flow credit
	6	Provision of additional Defensible Space per next higher level Wildland– Urban Interface area classification (IWUIC).	250 gallon per min. fire flow credit
	7	Provision of additional Defensible Space per next higher level Wildland– Urban Interface area classification (IWUIC).	250 gallon per min. fire flow credit
	8	Access per Section 403 Wildland-Urban Interface Code (IWUIC).	250 gallon per min. fire flow credit
	9	Provision of Spark Arrestors, where required per Section 605 of the Wildland-Urban Interface Code (IWUIC)..	250 gallon per min. fire flow credit
		Choice of one of the following methods of Ignition-Resistant Construction:	
	10	Class 3 Ignition-Resistant Construction per Sec. 506 Wildland-Urban Interface Code	500 gallon per min. fire flow credit
	11	Class 2 Ignition-Resistant Construction per Sec. 505 Wildland-Urban Interface Code	750 gallon per min. fire flow credit
	12	Class 1 Ignition-Resistant Construction per Sec. 504 Wildland-Urban Interface Code	1000 gallon per min. fire flow credit

I understand that all materials used must be as required by manufacturers listing, the Cowlitz County Building Code; as designed by a qualified designer; and as approved by the Fire Marshal. Any deviation from the approved plans may result in the suspension of any Building and/or Fire Code permit issued for the project until such time as the project can be brought into compliance with the code.

Applicant Name (Print): _____

Applicant Name (Signature): _____ Date: _____

Owner Name (Print): _____

Owner Name (Signature): _____ Date: _____

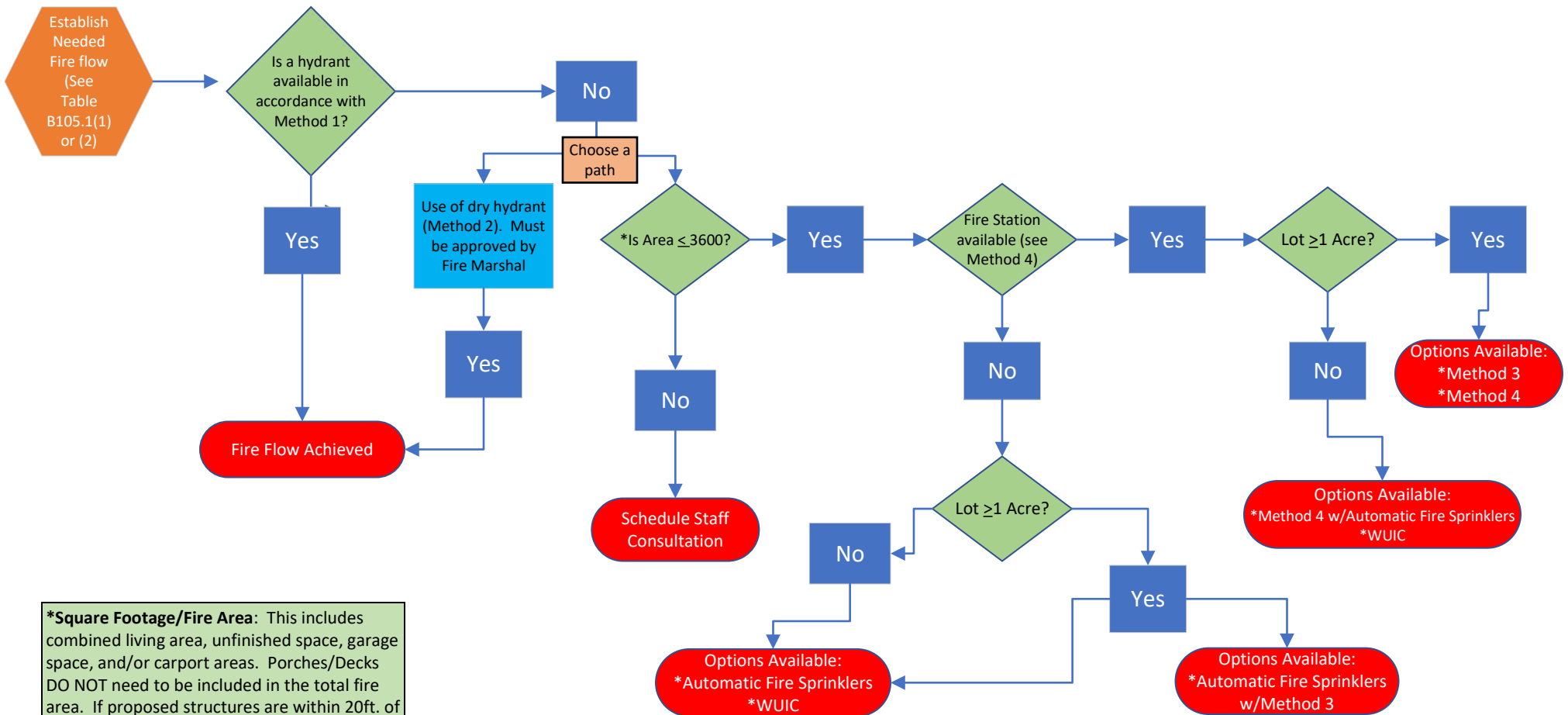
Fire Flow Credits Explanation

1	Availability or extension of an existing public water system capable of supplying at least 100 gpm for 30 minutes – Public Fire Hydrant	Quantity actually supplied
2	NFPA 1142 Dry Hydrant – Needs to be designed by an Engineer. Must be within fire district.	100% credit up to 2,750 gpm
3	Lot greater than one acre with minimum 20' setbacks provided to all property lines from structure(s)	500 gpm
4	Within Fire District and within 5 road miles of manned fire station	500 gpm
5	<p>Provision of Defensible Space - Identify wildland-urban interface area classification for subject site based on adopted County mapping. Call 360-577-3052 x6669 for assistance in determining your property's classification. Create and maintain defensible space as specified for the subject area classification:</p> <ul style="list-style-type: none"> • Low to Moderate = 30' • High = 50' • Extreme = 100' <p>In all classifications: Maintain specified distance around structure(s) free and clear of fire fuels. No trees within 10' of structure or overhead electrical facilities. Trees need to be limbed up 6' minimum from ground. Tree crowns 10' apart. Deadwood and litter regularly removed. Record covenant at time of permit, and submit annual certification of maintenance.</p>	500 gpm
6	Provision of Defensible Space – CREDIT – Create and maintain defensible space at the next higher level wildland-urban interface classification than that of the subject site.	250 gpm
7	Provision of Defensible Space – DOUBLE CREDIT – Create and maintain defensible space at the second next higher level wildland-urban interface classification than that of the subject site.	250 gpm
8	<p>Access per Section 403 Wildland-Urban Interface Code –</p> <p><u>Address Markers:</u> Permanently placed at driveway entrance and visible from both directions.</p> <p><u>Bridges:</u> Vehicle load limits posted on both entrances to bridge. Bridge must be accepted by County Code Official.</p> <p><u>Restricted Access:</u> Where access is secured, key box must be provided for emergencies.</p> <p><u>Driveways:</u> Limited to serving up to two dwelling units. Minimum 12' unobstructed width and 13'6" unobstructed height. If greater than 150' in length, provide turnarounds with inside turning radii not less than 28' and outside turning radii not less than 50'. If less than 20' in width and greater than 200' in length, provide 10' wide x 30' long all-weather surface turnouts.</p> <p><u>Roadways:</u> All-weather surface with minimum 20' width and 13'6" unobstructed height. Inside turning radii not less than 28' and outside turning radii not less than 50'. Turnarounds provided per code official. Grade not to exceed 15%. If over 12% must be paved. Road name identification signs provided and maintained. Fire protection equipment, such as hydrants, clearly marked.</p>	250 gpm
9	Spark Arrestor per Section 605 of the Wildland-Urban Interface Code – any chimney serving fireplace, barbecue, incinerator or decorative heating appliance using solid or liquid fuel will have a spark arrestor on it.	250 gpm

	IGNITION RESISTANT CONSTRUCTION – CHOOSE ONE	
10	Class 3 Ignition Resistant Construction – impacts design and construction of: Roof Covering (Class C) and Valley Flashing (metal), Underfloor Enclosure, and Gutters and Downspouts See Section 506 of the Wildland Urban Interface Code	500 gpm
11	Class 2 Ignition Resistant Construction – impacts design and construction of: Roof Covering (Class B) and Valley Flashing (metal), Protection of Eaves, Gutters and Downspouts, Exterior Walls, Underfloor Enclosure, Appendages and Projections, Exterior Glazing, Exterior Doors, Vents, and Detached Accessory Structures See Section 505 of the Wildland Urban Interface Code	750 gpm
12	Class 1 Ignition Resistant Construction – impacts design and construction of: Roof Covering (Class A) and Valley Flashing (metal), Protection of Eaves, Gutters and Downspouts, Exterior Walls, Underfloor Enclosure, Appendages and Projections, Exterior Glazing, Exterior Doors, Vents, and Detached Accessory Structures See Section 504 of the Wildland Urban Interface Code	1000 gpm

Fire Flow: Flow Chart

Please refer to the Fire Flow Acknowledgement Form for chart and option references below. For more project specific information, you can contact our permitting staff or schedule a free Staff Consultation. Please see our website at www.co.cowlitz.wa.us for more details.



***Square Footage/Fire Area:** This includes combined living area, unfinished space, garage space, and/or carport areas. Porches/Decks DO NOT need to be included in the total fire area. If proposed structures are within 20ft. of other structures, they are considered one fire area and you will need to include the total sq. ft. of all structures.

WUIC = Wildland Urban Interface Code

This flow chart is to be used as a resource only. Selections of Fire Flow will be reviewed by Building & Planning staff through the permitting process.