

## City of Hamilton Watermain Fire Flow Requirement Design Guidelines Policy

**Table 1 - City of Hamilton Watermain Fire Flow Requirement Design Guidelines Policy Table**

Policy No.	Policy Area	Policy Statement	Best Practices and Criteria
2019-FF-1	Development Application Approach	“The City of Hamilton endeavours, through this policy, to provide a water distribution network with a system Available Fire Flow (AFF – water available for fighting a fire) that meets the greater of the Required Fire Flow calculated using the Ontario Building Code (OBC) water supply flow rate method or the City’s Target AFF based on land use. Developers shall be responsible for providing the system AFF appropriate for the development being proposed.”	<ul style="list-style-type: none"> <li>• Shorter approvals times with fewer submissions</li> <li>• Potential reduced construction, maintenance and replacement costs</li> <li>• Clarity and consistency in the calculations approach</li> <li>• Reasonable sizing of local watermains</li> <li>• Aligns with established Ontario Building Code-OBC practice</li> </ul>
2019-FF-1a	Development Application Approach	“Developers are required to meet OBC standards for building construction. No credits will be considered for reducing required fire flow outside of any provisions contained within the <i>Ontario Building Code Act</i> or regulations under the <i>Act</i> .”	
2019-FF-1b	Development Application Approach	“OBC required fire flow calculations will be required as part of any development application submission. The required fire flow will be determined using the OBC water supply flow rate method (OBC section A-3.2.5.7). This methodology will be applied to all buildings falling under Part 3 and Part 9 of the Building Code (OBC sections 1.1.2.2 and 1.1.2.4). “	
2019-FF-1c	Development Application Approach	“System available fire flow calculations will be required as part of a development application submission and will be based on field testing and/or hydraulic modelling (as directed by the City). System available fire flow shall meet or exceed the greater of OBC required fire flow or the target AFF for the land use being proposed. For mixed use developments the target available fire flow	

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		<p>will be based on the proposed land-use with the highest target available fire flow. The target available fire flow will be as defined in Table 1: Target AFF”</p> <p>Table 1: Target AFF</p> <table><tr><th>Land Use (L/s)</th><th>Target AFF</th></tr><tr><td>Commercial</td><td>150</td></tr><tr><td>Small ICI (&lt;1,800 m3)<sup>1</sup></td><td>100</td></tr><tr><td>Industrial</td><td>250</td></tr><tr><td>Institutional</td><td>150</td></tr><tr><td>Residential Multi<sup>2</sup></td><td>150</td></tr><tr><td>Residential Medium (3 or less units)<sup>3</sup></td><td>125</td></tr><tr><td>Residential Single</td><td>75</td></tr><tr><td>Residential Single (Dead End)</td><td>50</td></tr></table> <p>1 1800m3 represents a maximum building volume that qualifies as “Small ICI”</p> <p>2Residential Multi is defined as a residential dwelling with &gt; 3 units</p> <p>3Residential Medium is defined as a residential dwelling with ≤ 3 units</p>	Land Use (L/s)	Target AFF	Commercial	150	Small ICI (<1,800 m3) <sup>1</sup>	100	Industrial	250	Institutional	150	Residential Multi <sup>2</sup>	150	Residential Medium (3 or less units) <sup>3</sup>	125	Residential Single	75	Residential Single (Dead End)	50	
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2019-FF-1d	Development Application Approach	“System upgrades required to achieve the greater of the OBC required fire flow or the target available fire flow (Table 1) will be the responsibility of the developer subject																			

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		to local servicing policy and subject to the City’s state of good repair program.”	
2019-FF-2	Master Plan Approach	“The City of Hamilton will establish acceptable trunk infrastructure levels of service for fire flow and storage through consideration of land use and the Ministry of Environment, Conservation and Parks Design Guidelines”.	<ul style="list-style-type: none"> <li>• Robust and reliable trunk network and infrastructure from which local sub-networks are serviced</li> <li>• Offers flexibility in growth options and GRIDS2 growth strategies</li> </ul>
2019-FF-2a	Master Plan Approach	“The City’s Master Plan process will continue to establish system level of service for fire flow (trunk system and facilities)”.	
2019-FF-2b	Master Plan Approach	“The City’s Master Plan process, which will be based on Growth Related Integrated Development Strategy (GRIDS2) and the City’s Official Plan, will proactively develop intensification programs that will identify development related upgrades that can address both growth and fire flow deficiencies”.	
2019-FF-3	State of Good Repair Approach	“The City will be setting minimum available fire flow targets based on the recommendations of this study. The City will upgrade watermains to achieve target available fire flows, where practically feasible, through its ongoing state of good repair program”.	
2019-FF-4	Conformity with Legislation	As required this policy will be reviewed and amended to align with changes in related legislation.	