



POLICY

POLICY NO:	610	APPROVAL DATE:	February 25, 2008
TITLE:	Water Supply for fire Protection	REVISION DATE:	March 23, 2015
SECTION:	Lands, Roads and Buildings	PAGE	1 OF 2
DEPARTMENT:	Public Works		

POLICY STATEMENT

As far as practicable, to achieve adequate fire flows in Newly Developed Areas of the City and to eventually achieve similar fire flows in all other areas of the City, considering the existing infrastructure and the financial capabilities of the City and Aquatera Utilities Inc. (“Aquatera”).

REASON FOR POLICY

1. The *Municipal Government Act (Alberta)* provides that a council may pass bylaws for municipal purposes respecting the safety, health and welfare of people and the protection of people and property.
 2. It is a requirement of the Master Agreement dated June 7, 2004 between the City, the County of Grande Prairie No. 1, the Town of Sexsmith and Aquatera that the City adopts a Water Supply for Fire Protection Policy.
 3. It is the City's intent that the fire flow network (“Network”) within its boundaries provide an adequate and reliable supply of water for firefighting purposes at all times.
 4. The City, at all times and to the extent permitted by law, shall use its best efforts to ensure that the fire flow standards set out in Schedule “A” are achievable for all developments in Newly Developed Areas. The City may reduce fire flows to take into account the presence of sprinklers, other relevant factors and any applicable legislation.
 5. The City does not now have the financial resources to commit to any significant capital expenditures to upgrade the existing Network.
 6. This Policy does not apply to the portion of SW 28-71-6-W6 known as the Brochu Subdivision.
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RELATED INFORMATION

1. On November 2, 2002, Aquatera, a municipal utilities corporation in which the City, the County of Grande Prairie No. 1 and the Town of Sexsmith are currently all of the shareholders was incorporated.

2. Effective May 1, 2003, the City transferred to Aquatera its water, waste water and solid waste utilities.
 3. Aquatera commissioned a Water Distribution System Master Plan (“Master Plan”) dated January 2005, prepared by Infrastructure Systems Ltd. and TurnKey Management Consulting.
 4. The Master Plan identified deficiencies in fire flows in a number of areas within the City's boundaries.
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DEFINITIONS

“Newly Development Areas” means areas of the City which have not been previously developed and usually have been recently subdivided. Developments commonly known as “infill” developments are not included.

RESPONSIBILITIES

Aquatera
Community Safety
Chief Safety Codes Officer
Engineering Services
Fire Department
Council

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SCHEDULE “A”

Fire Flows for Various Land Uses

Fire Flows (L/s) without sprinklers at 20 PSI residual pressure everywhere in the system

Table A

Fire Flow Category	Minimum Fire Flow Required (L/s)
Low Density Residential (up to 25 units/ha)	95
Medium Density Residential (26 to 94 units/ha), Duplex	130
High Density Residential (95+ units/ha)	180
Townhouse, Row housing, Mobile Home Park	130
Commercial and Institutional	180
Industrial	225

Fire Flow Requirements

Water distribution systems shall be designed to ensure fire flows required by the Fire Underwriters’ Survey are available for required duration. The amount and duration of design fire flows shall be provided to the Engineering Department for approval prior to final design of the water distribution system.

Fire Flows

Fire flows should be determined in accordance with the requirements of the current edition of “Water Supply for Public Fire Protection - A Guide to Recommended Practice”, published by Fire Underwriters Survey.

Fire flows are also subject to the minimum requirements as per Table A.

Minimum residual pressure at any hydrant shall not be less than 140 KPa (20 PSI) under:

- a) maximum day domestic consumption plus fire conditions; or
- b) peak hour demand whichever is greater.

Reservoir levels shall be assumed at mid-point.

The Manager of Engineering Services jointly with the Chief Building Inspector will be the final Authority in case of discrepancies in the interpretation of Policy 610.

Fire Flow Verification before issuance of Building Permits

The Chief Safety Codes Officer may request the presentation of a “Fire Flows Calculation Sheet” as per the latest edition of the Water Supply for Public Fire Protection - A Guide to Recommended Practice, published by the Fire Underwriter’s Survey.