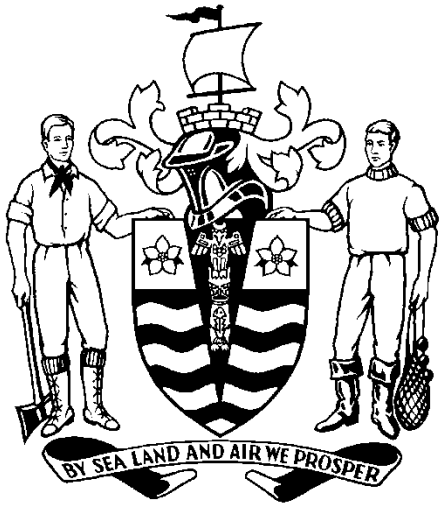
CITY OF VANCOUVER
BRITISH COLUMBIA



WATER WORKS BY-LAW NO. 4848

This By-law is printed under and by authority of the Council of the City of Vancouver

(Consolidated for convenience only to December 10, 2024)

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BY-LAW NO. 4848

A By-law respecting the Water Works system including the fixing of rates, charges and conditions for the supply of water by the City of Vancouver

[Consolidated for convenience only, amended to include By-law No. 14203 effective January 1, 2025]

THE COUNCIL OF THE CITY OF VANCOUVER in open meeting assembled, enacts as follows:

1. This By-law may be cited as the "Water Works By-law".

PART I
INTERPRETATION AND ADMINISTRATION

1.1 Interpretation

In this By-law, unless the context otherwise requires:

“AUTOMATIC SHUT-OFF DEVICE” means a device attached to a water hose that shuts off the supply of water automatically unless hand pressure is applied to operate the device;

“BACKFLOW” means a flow of water or other liquid, gas or solid from any source in a backward or reverse direction into the water system, caused either by back pressure or back siphonage;

“BACKFLOW PREVENTER” means an assembly, device or method used to prevent backflow from entering the water system and includes a backflow prevention assembly;

“BACKFLOW PREVENTION ASSEMBLY” means a backflow preventer assembled as a unit that includes shutoff valves and test cock(s);

"BUILDING SITE" means premises containing

(a) a building under construction and not previously occupied, or

(b) an existing building being renovated where the estimated value of the construction is more than the greater of $255,000 or 100% of the building’s latest assessed value according to the records of the British Columbia Assessment Authority;

“CERTIFIED BACKFLOW ASSEMBLY TESTER” means a person who holds current certification as a Certified Backflow Assembly Tester;

“CLEAR-WATER WASTE” means waste water with impurity levels that will not be harmful to health and may include cooling water and condensate drainage from refrigeration and air-conditioning equipment and cooled condensate from steam heating systems, but does not include storm water;

"COLLECTOR" means the Director of Finance of the City or an authorized representative of the Director of Finance;

"COMBINED SERVICE" or "COMBINED SERVICE PIPE" respectively means the service or the service pipe that is intended to supply water for fire protection combined with normal use;

“CROSS CONNECTION” means any actual or potential connection between a water system and any drain, piping, device, fixture, fitting, container, or appliance which may allow non-potable water, used water, wastewater or any solids, chemical, liquid, gas or other substance to enter the water system;

"CURB STOP" means the City-owned valve on a service pipe located on a City street or lane or within an easement at or near the customer's property line, or easement line;

"CUSTOMER" means the owner of real property or an agent acting on behalf of the owner. The Collector may require an agent to be authorized by the owner in a manner satisfactory to the Collector;

"DUAL SERVICE" means a private service pipe which branches on private property to provide two service connections, one of which is a metered line and the other of which is a fire line;

"DWELLING UNIT" means one or more rooms constituting a unit of living accommodation used or intended to be used for living and sleeping purposes and containing a sink and cooking facilities;

"ENGINEER" means the City Engineer or an authorized representative of the City Engineer;

"FIRE LINE" means a pipe that is intended for the purpose of providing a stand-by supply of water for fire protection purposes;

"FIRE SERVICE PIPE" means that portion of a fire line that is a service pipe;

“FIXTURE ISOLATION” means a method of preventing backflow from a fixture or appliance into the water system by installing a backflow preventer in compliance with this By-law;

“GVWD” means the Greater Vancouver Water District;

“HIGH HEALTH HAZARD” means that the potential backflow from a particular fixture or premises is capable of causing contamination to the water system that could result in illness or death;

"INSPECTORS" means those persons designated by the City to carry out the necessary inspections for the enforcement of this By-law;

“INTERCONNECTED SERVICE PIPE” means two City water services connected on private property, one of which is deemed to be a fire line;

“LANEWAY HOUSE” means a detached dwelling unit constructed in the rear yard of a site on which is situated a single detached house or single detached house with secondary suite;

“LOW HEALTH HAZARD” means that the potential backflow from a particular fixture or premises is capable of causing pollution in the water system that could result in discoloration or an unusual smell or taste, but is unlikely to cause illness or death;

"NORMAL USE" means the use of water for normal residential, commercial, or industrial purposes, including residential lawn sprinkling, but not including fire protection or other uses which the Collector or Engineer deems to be special or extraordinary;

"PREMISES" means real property and may include buildings thereon;

“PREMISES ISOLATION” means a method of preventing backflow from a premises into the water system by installing a backflow preventer in compliance with this By-law;

“PRESSURE REDUCING VALVE (PRV)” means a type of safety valve used to control or limit the pressure in a system;

"PRIVATE SERVICE PIPE" means the pipe and appurtenant fittings intended to distribute water within the premises and connected to the service pipe;

"SERVICE PIPE" means the City-owned pipe and appurtenant fittings, either on a street or within an easement, intended to carry water from the City's water main to the farthest downstream City-installed fitting, with City ownership extending to the downstream face of the City fitting, such face to be located, unless otherwise approved by the Engineer pursuant to this By-law, no less than 0.3 metre and no more than 1.0 metre from the property line on City property, or the boundary of an easement within such easement.

"SHUT DOWN" means a temporary interruption to service by a shut-off and turn-on of a service pipe;

"SPECIAL READING" means a meter reading which occurs other than on the scheduled reading date at the request of the customer.

"TWIN SERVICE PIPE" means a service pipe that branches on the street to provide two service connections, one of which is a fire line;

"UNIT" means 2,831.6 litres of water;

"WATER" means treated drinking water supplied directly or indirectly by GVWD or the city;

"WATER SYSTEM" means a piping system which contains drinking water and includes the City's water system and a private water system;

1.2 Authority of the Collector and the Engineer

The Collector and the Engineer are authorized to administer the provisions of this By-law.

1.3 Power of Entry and Inspection

The Collector and the Engineer are authorized to:

(a) enter any premises at any reasonable time for the purpose of administering or enforcing this By-law; and

(b) inspect any part of any premises, expose piping and do tests on any piping or fixtures on the premises, to determine compliance with this By-law.

1.4 Notice of Contravention

If, in the opinion of the Collector or the Engineer, a person is contravening the provisions of this By-law, the Collector or the Engineer may issue a notice requiring that the contravention cease by the date specified in the notice.

1.5 Service of Notice

A notice issued in accordance with By-law is deemed to have been received:

(a) four days after mailing, if sent by ordinary prepaid mail to the address of the premises which are the subject of the notice, and to the owner's address as it appears on the records of the British Columbia Assessment Authority if the owner's address differs from the address of the premises;

(b) 24 hours after sending, if sent by electronic mail to the electronic mail address of the customer or other person; and

(c) upon delivery, if delivered by hand to the customer or other person.

1.6 Remedies for Non-compliance

If a person fails to comply with a notice issued pursuant to this By-law, the Collector or Engineer may:

(a) shut off the water supply to any part of the premises, and bill the costs to the property owner in accordance with Schedule H;

(b) reduce the water supply to the premises to a maximum flow of one litre per minute, until the necessary repairs have been completed, and bill the costs to the property owner in accordance with Schedule H;

(c) in the case of an un-metered service, install a meter, and bill the costs to the property owner in accordance with Schedule G;

(d) in the case of a metered service, install an additional meter on city property, and bill the costs to the property owner in accordance with Schedule G; or

(e) carry out such repairs, either on or off the premises as, in the opinion of the Engineer, are necessary to repair any defective apparatus, fitting or fixture, or to prevent or eliminate excessive noise, pressure surges, or damage to a private water system or the City's water system, and bill the costs to the property owner in accordance with Schedule H.

1.7 Insertion of Costs on Tax Roll

If the Collector or Engineer takes steps to reduce or shut off water service, install a meter or an additional meter, or carry out repairs pursuant to this By-law, the costs so incurred may be recovered by insertion on the real property tax roll.

PART II
ESTABLISHMENT AND DISCONTINUANCE OF METERED SERVICE

2.1 Required Meter Service

A meter is required, and the applicable fees must be paid by the customer in accordance with Schedules A and G of this By-law, for:

(a) new premises;

(b) a building site;

(c) existing commercial premises;

(d) City and Vancouver Board of Parks and Recreation premises; or

(e) any premises where, in the opinion of the Collector or the City Engineer, the volume of water being used is at least 50% greater than the average volume of water typically used by similar premises, as calculated by the City Engineer in setting the flat rate service charges in Schedule B.

2.2 Connection to Metered Service

A metered water service must be installed by means of a new connection to the City's water system, or a connection to an existing service pipe.

2.3 Application for Metered Service

A customer who wishes to establish a metered water service must submit an application in a form satisfactory to the Engineer, together with the applicable fees in accordance with Schedules A and G of this By-law.

2.4 Extraordinary Work Outside of Fee Schedules

Despite the provisions of Schedules A and G of this By-law, the installation of a metered service to a building site must be billed to the customer on an "at cost" basis in accordance with section 5.4 if, in the opinion of the Engineer:

(a) the installation cost will be greater than 1.5 times the combined total of the flat rate connection fee in Schedule A plus the water meter installation fee in Schedule G; or

(b) the City water main must be replaced due to the size of the requested service pipe.

2.5 Application for Connection to Existing Service Pipe

A customer who wishes to reconnect to an existing service must submit an application in a form satisfactory to the Engineer and must submit the applicable fees in accordance with the provisions in section 2.8.

2.6 Reconnection for Building Sites

The Engineer may approve reconnection to an existing service pipe to provide water service to a premise that is a building site, if the existing service pipe:

(a) measures no more than 50 mm in diameter and is no more than 24 years old; or

(b) measures more than 50 mm in diameter, is no more than 50 years old, and is made of cement-lined ductile iron.

2.7 Reconnection for Premises other than Building Sites

The Engineer may approve reconnection to an existing service pipe to provide water service to a premise that is not a building site, if, in the opinion of the Engineer, such a reconnection would be effective and sound given the size and condition of the existing service pipe.

2.8 Reconnection Fees

A person applying for reconnection to an existing service must pay the following fees:

(a) for an existing water service for which a connection fee has never been paid to the city, the service pipe connection fee set out in Schedule A;

(b) for an existing water service for which a connection fee has been paid to the city, a fee which is 20% of the service pipe connection fee set out in Schedule A; and

(c) for an existing service described in section (a) or (b) above, which is not metered, the additional meter installation fee set out in Schedule G.

2.9 Location of Service Pipe

The location of a service pipe shall be at the discretion of the Engineer. If a customer requests that a service pipe be installed at a location other than that proposed by the Engineer, and if the Engineer approves such location, the customer shall pay the service pipe connection fee set out in Schedule "A" of this By-law.

At the point of connection between the "private service pipe" and the "service pipe" the minimum and maximum depths of cover shall, unless otherwise specified by the Engineer, be 0.6 metre and 1.5 metre respectively.

A service pipe shall not be located in line with a sidewalk vehicular crossing.

Where in the opinion of the Engineer a City-owned retaining wall, sewer pipe or other structure interferes with the installation of a service pipe in the customary manner and location, the service pipe shall be installed to a point 0.3 metres beyond the structure, at the depth of cover provided for in this section. The Engineer may authorize the payment by the City of the additional costs for the installation of such service pipe which are attributable to the crossing of the City-owned structure, provided that the service pipe is the only service to the premises.

2.10 Permitted Connection Device

The connection between a private service pipe and a service pipe must be secured by a flexible rubber joint connector.

2.11 Prohibited Connection Devices

A person must not use a wedge action restraint, tie rods, restrained coupling or similar device capable of transferring pressure or force, to connect a private service pipe to a service pipe.

2.12 Type and Arrangement of Meters and Service Pipes

For any application for establishment of water service the Engineer may determine and specify the type, size, number and arrangement of meters, piping and flow-detecting devices. Should the Engineer consider the size or number requested to be improper for the flows and use desired, the City Engineer may require that the application be amended accordingly.

A customer who wishes to apply for both a fire line connection and a connection for normal use that can be installed concurrently may apply either for combined service, dual service or separate service connections. The Collector may require that the applications for the two types of service to a new structure are made concurrently, and the Engineer may require that in the case of separate service pipes they be installed concurrently and in the same location in order to minimize the disturbance to traffic, pavements and utilities. A separate fire service shall not be permitted for a single detached house or a duplex.

If a combined or dual connection is approved by the Engineer, the connection fee that is applicable under Schedule "A" shall be the fee for the size of the combined service pipe, or in the case of a dual service, for the size of the part of the pipe to be installed in the street.

For the purpose of levying the respective rates and charges in Schedules "C" and "E", each connection or branch for separate service, twin service, dual service or interconnected service shall be deemed to be a separate service connection.

2.13 Temporary Water Service During Construction

An owner or contractor who requires temporary water service:

(a) for construction of a building containing no more than two dwelling units or a single detached house with a laneway house on a site with an existing unmetered water service, shall continue to be supplied water at the applicable flat rate set out in Schedule “B” ending on the date that the required metered water service is installed;

(b) for construction of a building containing no more than two dwelling units or a single detached house with a laneway house on a site with an existing metered water service, shall continue to be supplied water at the applicable rate set out in Schedule “D”; and

(c) for any construction purpose other than that set out in subsections (a) or (b), shall be supplied water at the applicable flat rate set out in Schedule "F" commencing on the date that the initial building permit is issued and ending on the date that a new metered water service is installed, or reconnection of the existing metered water service has been approved and carried out.

For clarity, once the construction period described in subsection (c) above has commenced, any charges for the supply of water under Schedule “B” or Schedule “D” will no longer apply, and once the construction period described in subsections (a) or (c) above has ended, water shall be supplied at the metered rate set out in Schedule “D”.

All charges for the installation, maintenance and abandonment of a water meter or temporary service pipe shall be in accordance with section 5.4 herein.

2.14 Location of Meters

The customer may normally choose the location of a meter, provided, however, where in the opinion of the Engineer installation of a meter and the appurtenant chamber is not practicable, the Engineer shall specify the location of the meter, and if the meter is located on private property, the customer shall provide access for installing and maintaining the meter and the appurtenances for meter reading. The pipes, valves and other appurtenances to the meter shall be installed in accordance with standards specified by the Engineer. Any application to install a meter shall be accompanied by a fee as specified in Schedule "G".

A meter shall not be located in line with a sidewalk vehicular crossing.

Any customer served by a privately located meter which meter or an appurtenance thereof has, in the opinion of the Engineer or Collector, become inaccessible or is deemed inaccessible for reading or maintenance, may be billed an additional charge added to their utility bill for metered water service charges at the rate as specified in Schedule H, while the said meter or appurtenance remains inaccessible.

If a customer served by a privately located meter fails to respond to the City’s request to schedule an appointment to provide access to the meter or an appurtenance thereof for reading or maintenance, or fails to schedule an appointment within a reasonable amount of time, or fails to provide access on the scheduled date or at the scheduled time, the meter or appurtenance shall be deemed to be “inaccessible”.

The Engineer or Collector may order the installation of a remote meter register. If there is a delay in the installation of such register, the meter shall be deemed to be an “inaccessible meter”.

Where in the opinion of the City Engineer a privately-located meter or an appurtenance is situated in an unsafe area or its location creates a dangerous situation to a reader, the meter or appurtenance shall be deemed to be “inaccessible”.

The Collector may order the service pipe "shut off" if a meter or appurtenance thereof remains inaccessible for reading and maintenance for a period longer than four months.

2.15 Discontinuing Water Service

A customer who wishes to discontinue water service must apply to the Engineer in a form satisfactory to the Engineer.

PART III
RESPONSIBILITIES OF THE CUSTOMER AND OTHER PERSONS

3.1 Obligation to Maintain Plumbing

A customer must maintain at their expense pipes, fittings, pressure reducing valves (PRVs), meter chambers, meter supports and fixtures in proper repair and free from leakage.

3.2 Prohibition against Damage to Meter

A customer must not remove, damage or tamper with a meter, or suffer, permit or allow removal of, damage to or tampering with a meter.

3.3 Requirement to Protect Meter

A customer must protect any meter on the customer’s property from damage caused by rainfall, irrigation water, storm water, snow, ice, or freezing.

3.4 Access to City Valve or City Meter

A customer or other person must provide unobstructed access to the city valve or city meter that controls or measures the water supply to the customer’s or other person’s premises.

3.5 Access for Inspection

A customer or other person must allow the Collector, the Engineer, or any person authorized to act on behalf of the Collector or the Engineer, to enter any premises at any reasonable time for the purpose of administering or enforcing this By-law.

3.6 Prohibition Against Sale and Certain Uses

A customer or other person must not:

(a) sell, convey or transport or permit, suffer or allow the sale, conveyance or transport of water beyond the property line of the property to which water service is provided;

(b) use or permit, suffer or allow the use of water to power machinery; or

(c) use water from a fire hydrant;

without first having obtained a permit to do so from the Engineer.

3.7 Prohibition Against Wasting Water

A customer or other person must not waste water, or suffer, permit or allow waste of water, including but not limited to:

(a) the free discharge or flow of water from premises, on or into a sanitary sewer, watercourse, storm drain, street or adjacent premises;

(b) leaking of water from appliances, devices, machines, equipment, systems (including irrigation systems), ponds, fountains or water features;

(c) the use of water features, fountains or swimming pools, which do not have a water recirculation device;

(d) the use of an irrigation system which applies water to an impervious surface; or

(e) the use of a water hose, which is not equipped with an automatic shut-off device.

3.7A Exception for Certain Water Features or Fountains

Despite section 3.7(c), the following Vancouver Board of Parks and Recreation water features or fountains, which do not have a water recirculation device, may be used:

(a) Helmcken Park Fountain;

(b) Haro and Bute Street Fountain;

(c) Barclay Heritage Square Fountain;

(d) Davis Fountain; and

(e) Laurel Street Landbridge Fountain.

For clarity, all other sections of this by-law continue to apply, including the other subsections in section 3.7.

3.8 Prohibition Against Using Water in Non-Recirculating Applications

A customer or other person must not use, or permit, suffer or allow the use of water in the following non-recirculating uses, equipment, or systems:

(a) thermal conditioning of building surfaces or roofs, or ancillary use of water to supplement building mechanical systems or equipment, except that this does not apply to emergency fire protection of buildings;

(b) running water as a form of freeze protection, through piping, hoses, fixtures, or building equipment or systems, except that this does not apply to City of Vancouver and Metro Vancouver water quality sampling stations; or

(c) use of water for melting or thawing, except that this does not apply to food preparation applications.

3.9 Defective Apparatus, Fitting or Fixture

A customer or other person must not connect, or permit, suffer or allow connection to the city's water works system, of any apparatus, fitting or fixture that, in the opinion of the Engineer, causes or is likely to cause:

(a) excessive noise;

(b) pressure surges;

(c) damage to a private water system; or

(d) damage to the city's water works system.

3.10 Tampering with the City's Facilities

No person shall tamper with the City's waterworks system, including but not limited to any pipe, by-pass, meter, meter register, meter transmitter, hydrant or any other part of the City's waterworks system, except as authorized by the Engineer or the Collector.

3.11 Change In Use, Occupancy or Property Served

The customer must notify the Collector in writing of any change in the use, occupancy, site served, or any similar matter which may affect the fees, rates, meter charges or other charges payable under this By-law.

3.12 Frozen Service Pipes

In the event of frozen pipes on private property, the customer must pay the cost of any investigation by the Engineer on an "at cost basis" in accordance with Section 5.4.

PART IV
CROSS CONNECTION CONTROL

4.1 Prohibition Against Cross Connection

No person shall create, permit, suffer or allow a cross connection, unless the cross connection is protected in compliance with the provisions of this By-law and the Building Bylaw.

4.2 Cross Connection Control - Authority of the Engineer

If, in the opinion of the Engineer, there is evidence of an actual or potential cross connection, the Engineer may:

(a) conduct a cross connection control inspection of the customer's premises pursuant to Section 1.3 and this By-law;

(b) order that any existing backflow prevention assembly that is overdue for testing, be tested by a certified backflow assembly tester in accordance with this By-law;

(c) order:

(i) the installation of a backflow preventer on the water system on all actual or potential sources of contamination, or
(ii) the removal of actual or potential sources of contamination,

within the time period specified in the order; and

(d) shut off the water service until any order has been complied with to the satisfaction of the Engineer.

4.3 Responsibilities of Customer or Other Person

A customer or other person must:

(a) notify the Engineer promptly upon discovery of a cross connection that is contaminating the water system;

(b) notify the Engineer promptly upon discovery of a cross connection that has the potential to contaminate the water system;

(c) install a backflow preventer that complies with this By-law, in all circumstances in which there may be a cross connection;

(d) install backflow preventers if ordered to do so by the Engineer;

(e) test backflow preventers if ordered to do so by the Engineer;

(f) comply with the requirements in this By-law regarding installation of backflow preventers; and

(g) comply with the requirements in this By-law regarding testing of backflow prevention assemblies.

4.4 Responsibilities of Certified Backflow Assembly Tester

A certified backflow assembly tester must:

(a) notify the Engineer promptly upon discovery of a cross connection that is contaminating or has the potential to contaminate the water supply; and

(b) comply with the requirements in this By-law regarding testing of backflow prevention assemblies.

4.5 Backflow Preventer Installation – General Requirements

A person who installs a backflow preventer must comply with the following:

(a) where two or more backflow preventers are installed in parallel, a backflow preventer of the same size and type must be installed on the bypass;

(b) a backflow preventer must be installed in accordance with its CSA approved orientation;

(c) test cocks on a backflow prevention assembly must:

(i) be easily accessible,
(ii) face upwards or to one side,
(iii) not face a wall, and
(iv) have a waterproof cover or cap;

(d) a backflow preventer installed outdoors or in an unheated space within a building, structure, chamber, or enclosure must be protected from freezing, flooding, vandalism and theft;

(e) a backflow preventer with a relief vent or port must be provided with drainage capable of handling the full discharge rate in accordance with manufacturer specifications;

(f) a backflow preventer equipped with a relief vent or port must have a minimum clearance of 300 mm between the outlet for the relief vent or port and the floor, drain, or grade;

(g) a control valve must not be installed downstream of an Atmospheric Vacuum Breaker (AVB);

(h) an AVB must not be pressurized for more than 12 hours in any 24 hour period;

(i) a backflow preventer that is installed to provide premises isolation must be installed immediately downstream of the City water meter, water meter bypass and spool piece, or in any other location with the prior approval of the Engineer;

(j) protection against thermal expansion must be provided where:

(i) a backflow preventer is installed to provide premises isolation, or

(ii) a backflow preventer is installed on an inlet that acts to create a closed system to any type of pressure vessel;

(k) an approved plumbing fixture must not be modified; and

(l) installation of a backflow preventer to a premises or fixture water connection must allow for pressure loss, calculated in accordance with manufacturer specifications.

4.6 Backflow Preventer - Premises Isolation

Backflow preventers for premises isolation must comply with the premises isolation requirements in Schedule “I”.

4.7 Backflow Preventer - Fixture Isolation

Backflow preventers for fixture isolation must comply with the fixture isolation requirements in Schedule “J”.

4.8 Removal of Backflow Preventer

A person who removes a backflow preventer must:

(a) obtain the prior written consent of the Engineer; and

(b) ensure that a test report is prepared and signed by a certified backflow assembly tester and submitted to the Engineer within 15 days of the removal.

4.9 Modifications or Alterations to Backflow Preventer

A person must not modify or alter an approved backflow preventer except in accordance with the provisions of section 4.10.

4.10 Repair of Backflow Preventer

A defective backflow preventer must only be repaired:

(a) with manufacturer-approved parts; and

(b) by a journeyman plumber or an indentured apprentice plumber.

4.11 Testing Backflow Prevention Assemblies

A customer or other person must ensure that:

(a) every backflow prevention assembly on the premises is tested by a certified backflow assembly tester;

(b) every backflow prevention assembly on the premises is tested:

(i) upon installation,

(ii) annually,
(iii) after any cleaning or repair, and
(iv) upon request by the Engineer;

(c) the results of all backflow prevention assembly tests are recorded by a certified backflow assembly tester on a test report form that is approved by the Engineer, signed by the tester, and submitted within 15 days of the test;

(d) a completed test verification tag is attached to each backflow prevention assembly; and

(e) in the event that a backflow prevention assembly test indicates a need for repair or replacement, the assembly is repaired or replaced and retested within of the time specified by the Engineer.

4.12 Certified Backflow Assembly Testers and Testing Equipment

A Certified Backflow Assembly Tester must:

(a) ensure that backflow assembly testing equipment is calibrated and certified annually by a laboratory that is accredited by Measurement Canada; and

(b) provide a current calibration certification report to the Engineer upon request.

4.13 Incorrect or False Test Report

A Certified Backflow Assembly Tester:

(a) must not provide incorrect, false or misleading information on a backflow assembly test report; and

(b) must only sign a backflow assembly test report if the certified backflow assembly tester is the person who conducted the backflow assembly test to which the report refers.

4.14 Backflow Prevention Assembly Test Report Administration Fees

Every backflow prevention assembly test report that is submitted must be accompanied by an administration fee, as specified in Schedule H.

PART V
OPERATION AND INSPECTION

5.1 Deleted.

5.2 Pressure, Supply and Quality

The City does not guarantee pressure nor continuous supply of water, nor does it accept responsibility at any time for the maintenance of pressure on its lines nor for increases or decreases in pressure. The City reserves the right at any and all times, without notice, to change operating water service for the purposes of making repairs, extensions,

alterations or improvements, or for any other reason, and to increase or reduce pressure at any time. Neither the City, its officers, employees or agents shall incur any liability of any kind whatever by reason of the cessation in whole or in part of water pressure or water supply, or changes in operating pressures, or by reason of the water containing sediments, deposits, or other foreign matter.

Customers depending on a continuous and uninterrupted supply of water or having processes or equipment that require particularly clear or pure water shall provide such emergency storage, over-size piping, pumps, tanks, filters, pressure regulators, check valves, additional service pipes, or other means for a continuous and adequate supply of water suitable to their requirements.

5.3 Removal, relocation or alteration of city owned water facilities

Unless otherwise provided for in this By-law, a person who applies to the city for removal, relocation or alteration of city owned water facilities, including meters, valves, chambers, hydrants or other fittings, must:

(a) obtain the consent of the Engineer to the proposed removal, relocation or alteration; and

(b) reimburse the city for the costs of such removal, relocation or alteration in accordance with the provisions of section 5.4.

5.4 Work Done "At Cost"

Where work is done "at cost", the cost will include the amount expended by the City for gross wages and salaries, employee fringe benefits, materials, equipment rentals at rates paid by the City or set by the City for its own equipment, or any other expenditures incurred in doing the work, plus administration charges. The City will supply an estimate of cost and may require an advance payment prior to commencement of the work. Any additional cost shall be paid to the City and any surplus will be credited to the customer’s account. Where the "at cost" work is for new water service connection, the advance payment shall be based on an estimate provided by the City. If the “at cost” amount is less than 1.5 times the flat rate, the flat rate charge shall apply instead and the surplus will be credited to the customer’s account.

5.5 Replacement of Old Service Pipes

Where a customer has replaced a private service pipe, the City will, at the customer's request, replace at no charge, an old service pipe with a new service pipe equal in size to the old pipe, or in the standard size for the capacity and use of the original installation if the service pipe has deteriorated to the point of leaking or significantly losing capacity.

5.6 Ownership of Service Pipes

Every service pipe, meter and appurtenant fittings thereof shall remain the property of the City.

5.7 Ownership of Private Service Pipes

Every private service pipe, whether on private property or on the street, shall remain the property of the customer and the customer shall be responsible for its maintenance. If, in the installation, maintenance or removal of any private service pipe, it is necessary for any person to occupy or excavate in the street or to remove or re-lay any sidewalk or other street improvement, that person shall do so in a manner satisfactory to the Engineer and shall obtain any permits required and pay the appropriate fees or charges.

5.8 Power of Entry and Inspection

The Collector and the Engineer are authorized to enter premises, conduct inspections, expose piping and carry out tests in accordance with section 1.3 of this By-law.

5.9 Basement Under Street

When a basement or other structure extends under a street, the property line will be deemed to be the outside surface of the basement or structure. After removal of a basement or other structure that extended under a street, the Engineer may require that pipes, valves, curb stop or meter be placed or relocated at the customer's cost to conform with standard service pipes.

5.10 Overloaded Meters

Wherever excessive flow or consumption periodically overloads the capacity of a meter used to supply services to any premises, the Inspector may so notify the customer. The customer shall apply for a replacement service pipe and/or meter in accordance with this By-law.

5.11 Shutdown or Service Request

The fee for a shutdown or service request shall be in accordance with SCHEDULE H.

5.12 Interconnected Service Pipes

The Engineer may require that the water piping within premises served by two or more service pipes for similar uses shall be interconnected. Where premises are supplied by two or more services and these services are interconnected within the premises, the customer shall install and maintain automatic check valves of a type approved by the Engineer on all private service pipes in such locations so as to prevent backflow from any private service pipes into the City's water system.

5.13 Frozen Service Pipes

If, in the opinion of the Engineer, service pipes may be frozen, the Engineer may:

(a) carry out an investigation to determine the location and condition of the service pipes; and

(b) if the service pipes are frozen and on private lands, order the customer to pay the costs of the investigation in accordance with section 5.4.

PART VI
BILLING AND COLLECTION

6.1 Un-metered Water Rate

An un-metered property will be assessed an annual flat rate service charge in accordance with the provisions of Schedule B.

6.2 Metered Water Rate

A property with a metered water service will be assessed a meter service consumption charge in accordance with Schedule D and a meter service charge in accordance with Schedule E.

6.3 Water Service to Un-metered Fire Service Pipes

The Collector or Engineer may provide water service for un-metered fire service pipes at the applicable annual flat rate service charge set out in Schedule C.

6.4 Installation of Meter on Unmetered Service Pipe

The Collector or the Engineer may install a meter on an unmetered service pipe and levy metered water service rates in accordance with this By-law.

6.5 New Application Fees and Charges

Fees and charges for a new water service will commence on the earliest of the date that the water service is activated, or 14 days after the installation of a meter.

6.6 Annual Flat Rate Service Billing

The annual flat rate service charges in Schedules “B” and “C” of this By-law are due and payable on the 1st of January in each year and must be entered by the Collector on the tax roll for that year against the parcel of land to which water service is supplied, except that:

(a) for a parcel of land that is exempt from taxation, the charges must be due and payable by the occupier of the land, in advance, on the 1st of January in each year; and

(b) for new premises, the charges listed in Schedule “C” for un-metered fire service pipes must commence on the date of installation of the service pipe.

6.7 Meter Rate Service Billing

The Collector must issue bills for the meter rate service charges at the intervals listed in Schedules “D” and “E” of this By-law and the meter rate service charges are due and payable on the due date specified on the bill issued by the Collector.

6.8 Single-Metered Multiple Dwelling Billing

In the case of a building or premises that contains three or more dwelling units serviced by a single meter, the Collector must issue a single bill for the meter rate service charges for the entire building or premises.

6.9 Single-Metered Duplex Billing

In the case of a duplex that contains two separate legal parcels serviced by a single meter, the Collector must calculate the total meter rate service charges for the building and issue a bill to each customer for one half of the total, except that the Collector may alter the apportionment of the bill with the consent of the owners of both parcels.

6.10 Special Readings

Where a customer requests a special reading of any meters servicing the premises, a fee as specified in Schedule H for each meter will be charged in addition to the normal water and meter charges for the special reading period.

6.11 Miscellaneous Charges

All water service accounts and all requests for detailed information concerning water services shall be subject to the miscellaneous applicable charges set out in Schedule "H".

6.12 Penalty for Non-Payment

Fees, rates, meter charges and other water rates which are due and owing under this by-law and remain unpaid on the due date are subject to a loss of discount or a penalty of 5%, calculated on the balance outstanding on the close of day on the day the payment is due.

6.13 Shut-off for Non-payment

If fees, rates, meter charges and other charges are unpaid on a date 30 days after the due date:

(a) The Collector may serve notice on the customer demanding payment within 10 days of the date of the notice; and

(b) If the customer fails to pay in accordance with the notice, the Collector may cause the water service to be shut off until the customer has paid:

(i) the amount owing plus any penalty,

(ii) the amount specified in the by-law for crew call out or water service shut off, and

(iii) any additional costs incurred by the city for capping the water service.

6.14 Insertion of Outstanding Water Rates on Tax Roll

Fees, rates, meter charges, meter installation charges, repair or shut off rates and other water rates that remain unpaid on the due date:

(a) may be inserted by the Collector in the property tax roll as charges imposed with respect to the parcel upon which the water was used or to which it was made available for use; and

(b) once entered on the property tax roll in accordance with this by-law, are subject to any applicable property tax penalty and interest by-laws as if such charges were general taxes within the meaning of such penalty and interest by-laws.

6.15 Application for Turn-on or Shut-off

All applications for either the shutting off or turning on of water service to any premises shall be made in writing by the customer to the Collector in such form as may be prescribed by the Collector.

6.16 Charges for Shut off Service Pipes

Charges for shut off service pipes shall be as follows:

(a) The charge for service pipes shut off for 120 days or less is:

(i) for metered services, the charge for metered services set out in Schedule E,

(ii) for unmetered fire lines, the charge for unmetered fire lines set out in Schedule C, and

(iii) for unmetered services, the charge set out in Schedule B for unmetered services; and

(b) The charge for services pipes shut off for more than 120 days is:

(i) for metered services, one half of the charge for metered services set out in Schedule E,

(ii) for unmetered fire lines, one half of the charge for unmetered fire lines set out in Schedule C, and

(iii) for unmetered services, the charge set out in Schedule B.

6.17 Meter Tests

Meter tests may be conducted, subject to the following provisions:

(a) If a customer requests a meter test and pays the meter test fee in accordance with this by-law, the Collector may cause a meter to be tested for accuracy;

(b) If a meter test indicates that the meter has an accuracy within 2% more or less of actual water consumption, the Collector must retain the meter test fee; and

(c) If a meter test indicates that the meter does not have an accuracy of 2% more or less of actual water consumption, the Collector must:

(i) if the meter is under registering by more than 2%, retain the meter test fee and adjust the billing in accordance with this By-law, and

(ii) if the meter is over registering by more than 2%, return or credit the meter test fee to the customer and adjust the billing in accordance with this By-law.

6.18 Adjustment for Inaccurate Meter Record

If, in the opinion of the Collector, the water consumption rate is inaccurate as the result of a malfunctioning, damaged or broken meter, the Collector must:

(a) estimate actual water consumption based on:

(i) an average of the water consumption for the same meter reading period in the three previous years, except that if, in the opinion of the Collector, one or more of those years appears to have a water consumption rate that is not reasonably representative of the usual water consumption pattern, the Collector may calculate the average using any three previous years, or

(ii) if there is no consumption history, median consumption rates for similar properties; and

(b) issue an amended bill for the estimated water consumption:

(i) from the actual date of the damage, or

(ii) if the actual date of damage cannot be determined, for a period up to the current year plus the previous year.

6.19 Adjustment for Tampering

If, in the opinion of the Collector, the water consumption rate is inaccurate due to tampering, the Collector must:

(a) estimate water consumption based on:

(i) an average of the water consumption for the same meter reading period in the three previous years, except that if, in the opinion of the Collector, one or more of those years appears to have a water consumption rate that is not reasonably representative of the usual water consumption pattern, the Collector may calculate the average using any three previous years, or

(ii) if there is no water consumption history, the median water consumption rate for similar properties; and

(b) issue an amended bill for:

(i) estimated water consumption for the entire period of the tampering, as determined by the Collector, and

(ii) all costs incurred in estimating water consumption and repairing the City's waterworks system.

6.20 Adjustment for Underground Leak

If, in the opinion of the Engineer, an underground leak that is between the service pipe and the main buildings on the premises has resulted in an increase in water consumption and has, in the opinion of the Engineer, been repaired by the customer in such a manner as to effectively prevent future leaks of a similar nature, which might include replacement of the entire private service pipe if it is more than 24 years old or, if it is made of cement-lined ductile iron, more than 50 years old, the Collector may:

(a) estimate the water consumption based on:

(i) an average of the water consumption for the same meter reading period in the three previous years, except that if, in the opinion of the Collector, one or more of those years appears to have a water consumption rate that is not reasonably representative of the usual water consumption pattern, the Collector may calculate the average using any three previous years, or

(ii) if there is no water consumption history, median consumption rates for similar properties; and

(b) issue an amended bill for the period between the end of the meter reading period in which the leak was fixed, and the beginning of the meter reading period containing the unusual increase, as determined by the Collector, to a maximum adjustment of three meter reading periods, if the customer took reasonable steps, in the opinion of the Engineer, to address the issue within 14 days of either the meter billing date on which the meter bill indicated an unusual increase in water consumption, or the date of notification from the City regarding an unusual increase in water consumption, whichever is dated earlier.

6.21 Adjustment to Fees or Charges Previously Billed

In the case of an adjustment to fees or other related charges that have previously been billed, the Collector:

(a) must adjust for the current year;

(b) may also adjust for up to two calendar years prior to the current year; and

(c) must not pay interest on any overpayment.

6.22 Billing For Fees or Charges Not Previously Billed

In the case of billing a fee or other charge that has not previously been billed, the Collector:

(a) must issue a bill to the customer for the fees or charges not previously billed from the date that it was discovered that the fee or charge ought to have been billed, as determined by the Collector, and

(b) must not back bill for a period greater than the current year plus the previous calendar year, except as provided in section 6.19.

6.23 Adjustment of Charges for Partial Period

Where any meter charge, charge or fee is prescribed by the month, year or other period, the amount payable for a partial period shall be calculated on a proportionate basis, unless otherwise provided in this By-law.

6.24 Service Pipes Shut Off for Five Years Deemed to be Discontinued

Where a service pipe remains shut off for a period of five years and where no fees have been paid pursuant to this By-law, the service shall be deemed to be discontinued.

6.25 Metered Water Used to Fight Fires

Where water from a metered service is used to fight a fire, charges for the appropriate billing period will, at the request of the customer, be adjusted so that the customer does not pay for the water so used.

PART VII
OFFENCES AND PENALTIES

7.1 Violation of By-law

(a) Every person who violates any of the provisions of this By-law or who suffers or permits any act or thing to be done in contravention or in violation of any of the provisions of this By-law, or who neglects to do or refrains from doing anything required to be done by any of the provisions of this By-law, or who does any act which violates any of the provisions of this By-law is guilty of an offence against this By-law and liable to the penalties hereby imposed. Each day that a violation is permitted to exist shall constitute a separate offence.

(b) Every person who commits an offence against this By-law is liable to a fine and penalty of not more than $10,000.00 and not less than $250.00 for each offence.

(c) Every person who commits an offence of a continuing nature against this By-law is liable to a fine not less than $250.00 and not more than $10,000.00 for each day such offence continues.

7.2 Repealed

By-law No. 4157 is repealed.

7.3 This By-law shall come into force and take effect on and after the date of the final passing hereof.

DONE AND PASSED in open Council this 28th day of January, 1975.

(Signed) "A. Phillips"
Mayor

(Signed) "D.H. Little"
City Clerk

SCHEDULE A
Flat Rate Connection Fees
And Service Pipe Removal Fees

Flat Rate Connection Fees

Service Pipe Size	*Single Detached House with or without a Laneway House and Duplex*
20 mm (3/4")	$ 9,592.00
25 mm (1")	9,931.00
40 mm (1 1/2")	11,941.00
50 mm (2")	13,241.00

Service Pipe Size	*Other Connections*
20 mm (3/4")	$ 12,285.00
25 mm (1")	12,781.00
40 mm (1 1/2")	16,040.00
50 mm (2")	16,040.00
100 mm (4")	23,187.00
150 mm (6")	26,375.00
200 mm (8")	28,802.00
300 mm (12")	40,535.00

Service Pipe Removal Fees

Service Pipe Size	
20mm (3/4") to 50mm (2") inclusive	$ 1,428.00
100mm (4") to 300mm (12") inclusive	4,286.00

SCHEDULE B
Annual Flat Rate Service Charges for Residential Properties

The following charges apply to unmetered single detached houses and dwellings comprising not more than two separate dwelling units:

Single detached house	$ 867.00
Single Detached House with secondary suite or laneway house	1,176.00
Single Detached House with secondary suite and laneway house	1,486.00
For each strata title duplex	587.00
Parking Lot	$ 265.00

Water Service - Turned Off	198.00
Other Property	198.00

SCHEDULE C
Annual Flat Rate Service Charges for Unmetered Fire Service Pipes

Fire Service Pipe Size

50 mm (2") or smaller	$ 272.00
75 mm (3")	407.00
100 mm (4")	564.00
150 mm (6")	651.00
200 mm (8")	762.00
250 mm (10")	811.00
300 mm (12")	868.00

SCHEDULE D
Charges for Metered Water Service

Four Month Period		*Rate In Dollars per Unit (2,831.6 Litres)*
Rate for all metered uses		
October 16 - April 30	Per unit	$3.936
May 1 - October 15	Per unit	$4.934

SCHEDULE E
Meter Service Charge

The following schedule shows the meter charge based on the size and type of meter, payable on each service, in addition to water consumption charges:

Per Four Month Period
Services with Standard Type Meters

17 mm (1/2") and 20 mm (3/4")	$ 40.00
25 mm (1")	40.00
40 mm (1 1/2")	87.00
50 mm (2")	117.00
75 mm (3")	268.00
100 mm (4")	325.00
150 mm (6")	421.00
200 mm (8")	654.00

250 mm (10")	801.00
300 mm (12")	951.00

Services with Low Head Loss Meters/Detector Check Valves

100 mm (4")	$ 376.00
150 mm (6")	549.00
200 mm (8")	737.00
250 mm (10")	918.00
300 mm (12")	1,095.00

SCHEDULE F
Charges for Temporary Water Service During Construction

Building Size in Square Meters of Gross Floor Area	*Rate in Dollars of Gross Floor Area Per Building*
Up to an including 500 sq.m	$ 606.00
Over 500 but not exceeding 2,000	1,187.00
Over 2,000 but not exceeding 9,000	1,784.00
Over 9,000 but not exceeding 24,000	3,001.00
Over 24,000 but not exceeding 45,000	4,490.00
Over 45,000	5,958.00

SCHEDULE G
Fees for Installation of Water Meters

Fees for Installation of Water Meters for Single Detached House with or without a Laneway House and Duplex

Size of Standard Meter

20 mm (3/4") meter assembly and box	$1,314.00
25 mm (1") meter assembly and box	$1,434.00
40 mm meter assembly and box	$1,952.00

Fees for Installation of Water Meters on Other Connections

Size of Standard Meter	*Meter on City Property*	*Meter on Private Property*
20 mm (3/4")	$ 4,122.00	$ 652.00
25 mm (1")	4,310.00	1,057.00
40 mm (1 1/2")	4,696.00	1,736.00
50 mm (2")	4,855.00	2,085.00
75 mm (3")	16,944.00	5,907.00

100 mm (4")	18,527.00	6,269.00
150 mm (6")	60,510.00	12,815.00
200 mm (8")	62,235.00	15,553.00
250 mm (10")	84,082.00	23,732.00
300 mm (12")	92,968.00	32,624.00

SCHEDULE H
Miscellaneous Fees and Charges

Additional charge for inaccessible meter or appurtenance (per incident)	$ 94.00
Special meter reading (per occurrence)	124.00
Customer requested meter test (deposit)	247.00
Charges for Returned Cheques	43.00
Residual Water Pressure Estimate Fee	
Original calculation	44.00
Additional copies for same location	11.00
Miscellaneous water information requests (per hour)	56.00
City Crew call out fee (normal working hours) (per hour or portion thereof)	124.00
City Crew call out fee (outside normal working hours) (per hour or portion thereof)	247.00
Frozen pipe thawing	At cost (Section 5.4)
Backflow Prevention Assembly Test Report Fee	21.00

SCHEDULE I
Backflow Preventer - Premises Isolation

Type of Facility or Premises	Health Hazard Classification	Type of Backflow Preventer
Abattoir/Slaughter House	High	RPBA
Animal Hospital	High	RPBA
Auto Body Shop	High	RPBA
Auto Dealership	Low	DCVA

Type of Facility or Premises	Health Hazard Classification	Type of Backflow Preventer
Auto Dealership w/Repair and/or Car Wash Facility	High	RPBA
Auto Detailing Facility (Not Automatic Car Wash)	Low	DCVA
Automotive/Motorcycle Repair Facility	High	RPBA
Battery Manufacturing/Repair Facility	High	RPBA
Beverage Processing Plant Including Distillery and/or Brewery	High	RPBA
Building Higher than 10 Meters Above Water Connection	Low	DCVA
Building with Auxiliary Water Supply	High	RPBA
Building with Chemical Treatment System on Domestic Supply (Whole or Part)	High	RPBA
Building with Rainwater Harvesting or Greywater Reuse System	High	RPBA
Car Wash, Automatic	High	RPBA
Chemical Manufacturing, Processing, Bulk Storage and/or Distribution	High	RPBA
Cold Storage Facility	High	RPBA
Concrete Processing or Distribution Facility	High	RPBA
Docks - Commercial	High	RPBA
Dye Plant	High	RPBA
Extended Care Facility, Retirement or Nursing Home	Low	DCVA
Extended Care Facility, Retirement or Nursing Home - With Hazard Diagnostic or Treatment Equipment	High	RPBA
Fire Hall	Low	DCVA
Fish Processing Plant	High	RPBA
Food Processing Plant	High	RPBA
Funeral Home	High	RPBA
Garbage Transfer Facility	High	RPBA
Hospital	High	RPBA
Ice Manufacturing Plant	High	RPBA
Machine Shop	High	RPBA
Manufacturing Facility	High	RPBA
Marina	High	RPBA
Meat Packing Plant	High	RPBA
Metal Plating Facility	High	RPBA
Paint Manufacturing Plant	High	RPBA
Pharmaceutical Manufacturing Facility	High	RPBA
Plastic Manufacturing/Mold Injection Facility	High	RPBA
Plating Shop	High	RPBA
Radiator Manufacturing and/or Repair Facility	High	RPBA
Rail Yard and Trackside Facilities for Trains	High	RPBA
Recycling Facility	High	RPBA
Rendering Facility	High	RPBA
Research Facility	High	RPBA

Type of Facility or Premises	Health Hazard Classification	Type of Backflow Preventer
Restricted Access	High	RPBA
School	Low	DCVA
Sewage Dump Station	High	RPBA
Sewage Pumping Station	High	AG/RPBA
Steam Plant	High	RPBA
Veterinary Clinic With Lab or Operation Facility	High	RPBA
Veterinary Clinic w/o Lab or Operation Facility	Low	DCVA
Waste Disposal Facility	High	RPBA
Wastewater Facility	High	RPBA

SCHEDULE J
Backflow Preventer –
Fixture Isolation

Type of Facility or Premises	Health Hazard Classification	Type of Backflow Preventer
Acid Wash or Hot Tank	High	RPBA
Air Compressor – Commercial or Industrial	High	RPBA
Air Conditioning Systems	High	RPBA
Animal Cage Washer	High	RPBA
Animal Wash	High	RPBA
Animal Watering	High	RPBA
Aquarium Make up	High	RPBA
Aspirator	High	RPBA
Autoclave	High	RPBA
Autopsy/Mortuary Equipment	High	RPBA
Auxiliary Water	High	RPBA/AG
Baptismal Fountain	High	RPBA
Beverage Dispenser - Carbonated	High	DCAPc
Beverage Dispenser – Non Carbonated	Low	DuC
Bidet	High	AVB
Boiler – All Commercial Installations	High	RPBA
Boiler - Residential Greater than 400,000 btu	High	RPBA
Boiler - Residential w/o Chemical Addition and less Than 400,000 btu	Low	DCAP
Bottle Washer	High	RPBA
Bread Making Equipment	Low	DCVA
Brewery Equipment	High	RPBA
Brine Tank	Low	DCVA
CO_2 Injection	High	DCAPc
Chemical Cleaning Tank	High	RPBA
Chemical Feed/Mixing Station	High	RPBA
Chemical Holding/Storage Tank	High	RPBA

Type of Facility or Premises	Health Hazard Classification	Type of Backflow Preventer
Chilled Water System	High	RPBA
Chlorinator	High	RPBA
Clothes Washer or Laundry Machine – Commercial with Chemical Feed	High	RPBA
Commercial Kitchen Equipment – Coffee Urn	Low	DuC
Commercial Kitchen Equipment – Commercial Dishwasher with Chemical Feed Downstream of Backflow Preventer	High	AVB
Commercial Kitchen Equipment – Commercial Dishwasher with Chemical Feed Upstream of Backflow Preventer	High	RPBA
Commercial Kitchen Equipment – Espresso Machine	Low	DCVA
Commercial Kitchen Equipment – Dipper Well	Low	AG
Commercial Kitchen Equipment – Food Steamer	Low	DCVA
Commercial Kitchen Equipment – Food Waste Disposer	High	RPBA
Commercial Kitchen Equipment – Glass washer (Hot and Cold Feed)	High	RPBA
Commercial Kitchen Equipment – Hood Wash Down	High	RPBA
Commercial Kitchen Equipment – Hot Chocolate or Hot Water Dispenser	Low	DuC
Commercial Kitchen Equipment – Ice Cream Machine	High	RPBA
Commercial Kitchen Equipment – Ice Machine – Condenser Cooling	High	RPBA
Commercial Kitchen Equipment – Ice Machine – Water Feed[1,2]	High	AG or RPBA
Commercial Kitchen Equipment – Juice Machine	Low	DuC
Commercial Kitchen Equipment – Rotisserie Oven	Low	DCVA
Commercial Kitchen Equipment – Pot Washer	High	RPBA
Commercial Kitchen Equipment – Potato Peeler	Low	DCVA
Commercial Kitchen Equipment – Steam Cooker	Low	DCVA
Commercial Kitchen Equipment – Steam Table	Low	DCVA
Commercial Kitchen Equipment – Steamer Oven	Low	DCVA
Commercial Kitchen Equipment - Waste Food Tray Line/Trough	High	RPBA
Commercial Kitchen Equipment – Waste Pulper	High	RPBA
Condensate Cooling/Receiver/Tank	High	RPBA
Cooling Condenser - AC unit	High	RPBA
Cooling Tower	High	RPBA
Dental Equipment – Cuspidor	High	RPBA
Dental Equipment – Film Processor	High	RPBA
Dental Equipment – Model Trimmer	High	RPBA
Dental Equipment – Sterilizer and Instrument Washer	High	RPBA
Dental Equipment – Vacuum Pump	High	RPBA

Type of Facility or Premises	Health Hazard Classification	Type of Backflow Preventer
Dental Equipment – Water Supply to Dental Chair – For Multiple Chairs on One Dedicated Water Connection[1]	High	RPBA
Dental Equipment – X-ray Machine	High	RPBA
Descaling Equipment	High	RPBA
Detergent/Soap Dispenser	High	RPBA
Dishwasher (Commercial) with Chemical Feed Downstream of Backflow Preventer	High	AVB
Dishwasher (Commercial) with Chemical Feed Upstream of Backflow Preventer	High	RPBA
Distiller	High	RPBA
Dockside Water Connection – For Multiple Connections to a Dedicated Water Connection[1]	High	RPBA
Dry Cleaning Equipment	High	RPBA
Dye Equipment	High	RPBA
Engine/Genset Cooling System	High	RPBA
Film Processor	High	RPBA
Fire Hose Cabinet (Connected to Domestic Piping)	Low	DCVA
Fire Service Connection w/o Chemical Addition	Low	DCVA
Fire Service Connection with Chemical Addition	High	RPBA
Floor Drain with Flushing Rim	High	RPBA
Food Waste Disposer	High	RPBA
Fountain/Ornamental Water Feature	High	RPBA
Frozen Carbonated Beverage (FCB) Maker	High	RPBA
Fume Hood Scrubber	High	RPBA
Garbage Chute Washdown	High	RPBA
Garbage Disposal Unit	High	RPBA
Geothermal	High	RPBA
Glass Rinser	Low	DuC
Heating System - Residential w/o Chemical Addition and less than 400,000 btu	Low	DCAP
Hot Tub/Spa - Direct Feed	High	RPBA
Humidifier w/o Chemical Addition	Low	DCVA
Humidifier with Chemical Addition	High	RPBA
Hydronic Heating System – Commercial	High	RPBA
Hydronic Heating System – Residential w/o Chemical Addition and less than 400,000 btu	Low	DCAP
Ice Machine – Condenser Cooling	High	RPBA
Ice Machine – Residential Refrigerator-type w/o Built-in Filter	Low	DuC
Ice Machine – Water Feed[1,2]	High	AG or RPBA
Ice Making/Resurfacing Equipment	Low	DCVA
Irrigation System with Chemical Addition – Commercial	High	RPBA
Irrigation System w/o Chemical Addition	Low	DCVA
Janitor Sink with Hose Connection	High	AVB

Type of Facility or Premises	Health Hazard Classification	Type of Backflow Preventer
Jug Rinser	Low	DuC
Laboratory Equipment – Air compressor	High	RPBA
Laboratory Equipment – Animal Cage Washer	High	RPBA
Laboratory Equipment – Animal Water Bottle Filler	High	RPBA
Laboratory Equipment – Animal Watering System	High	RPBA
Laboratory Equipment – Aspirator	High	RPBA
Laboratory Equipment – Autoclave	High	RPBA
Laboratory Equipment – Electron Microscope	High	RPBA
Laboratory Equipment – Equipment Cooling	High	RPBA
Laboratory Equipment – Fume Hood Scrubber	High	RPBA
Laboratory Equipment – Pipette Washer	High	RPBA
Laboratory Equipment – Serrated Faucet	High	RPBA
Laboratory Equipment – Specimen Tank	High	RPBA
Laboratory Equipment – Spray Hose	High	RPBA
Laboratory Equipment – Vacuum Pump	High	RPBA
Laundry Tub with Hose Bibb Connection	Low	HBVB
Lens Cutting/Grinding Equipment	High	RPBA
Medical Equipment – Air Compressor	High	RPBA
Medical Equipment – Angio/MRI Cooling	High	RPBA
Medical Equipment – Aspirator	High	RPBA
Medical Equipment – Autoclave/Sterilizer	High	RPBA
Medical Equipment – Bedpan Macerator	High	RPBA
Medical Equipment – Bedpan Washer/Sterilizer	High	RPBA
Medical Equipment – Blood Analysis Equipment	High	RPBA
Medical Equipment – Burn Shower	High	RPBA
Medical Equipment – CT Scan	High	RPBA
Medical Equipment – Cart Washer	High	RPBA
Medical Equipment – Dialysis Equipment – For Multiple Dialysis Machines on One Dedicated Water Connection[1]	High	RPBA
Medical Equipment – Dye Slide Table	High	RPBA
Medical Equipment – Endoscope	High	RPBA
Medical Equipment – Film Processor	High	RPBA
Medical Equipment – Hydrotherapy Bath	High	RPBA
Medical Equipment – Laser Cooling	High	RPBA
Medical Equipment – MRI Cooling	High	RPBA
Medical Equipment – Patient Tub with Flexible Hose	High	RPBA
Medical Equipment – Renal Processor	High	RPBA
Medical Equipment – Steris Washer	High	RPBA
Medical Equipment – Ultrasonic Washer	High	RPBA
Medical Equipment – Vacuum Pump	High	RPBA
Medical Equipment – Washdown Station	High	RPBA
Medical Equipment – X-ray Equipment	High	RPBA
Non-potable Water System – Potable Make-up Water	High	AG or RPBA

Type of Facility or Premises	Health Hazard Classification	Type of Backflow Preventer
Paint Booth	High	RPBA
Pedicure Spa/Bowl – For Multiple Pedicure Spa/Bowls on one Dedicated Water Connection[1]	High	RPBA
Photo Developing Equipment	High	RPBA
Photo Lab Sink/Tank	High	RPBA
Plating Tank	High	RPBA
Pressure Washer w/o Chemical Aspirator - Commercial	Low	DCVA
Pressure Washer with Chemical Aspirator - Commercial	High	RPBA
Produce Misting System	High	RPBA
Proofer Oven	Low	DCVA
Pump Primer Line - Non-toxic	Low	DCVA
Pump Primer Line - Toxic	High	RPBA
Pump Primer Line for Auxiliary Water Source Pump	High	AG
Radiator Flushing Equipment	High	RPBA
Refrigeration Unit – Industrial	High	RPBA
Restricted Area	High	RPBA
Reverse Osmosis Equipment - Inlet 25mm or Larger	High	RPBA
Reverse Osmosis Equipment - Inlet less than 25mm	Low	DCVA
Rock Polisher	High	RPBA
Sanitary Equipment	High	RPBA
Sewage Ejector	High	AG&RPBA
Sewage Lift Station Standpipe	High	RPBA
Sewage Pump	High	AG&RPBA
Sewer Connected Equipment	High	AG&RPBA
Shampoo Sink	Low	AVB or DuC
Steam Generator – w/o Chemical Addition	Low	DCVA
Steam Generator – with Chemical Addition	High	RPBA
Storm Sewer	High	RPBA
Sump	High	RPBA
Swimming Pool – Direct Feed	High	RPBA
Tanning Booth	High	RPBA
Trap Primer	High	AG
Vacuum Pump	High	RPBA
Vehicle Washing Equipment	High	RPBA
Vending Machine (No Carbonator)	Low	DCVA
Wash Rack	High	RPBA
Washdown Equipment	High	RPBA
Wastewater Treatment Process	High	RPBA
Water Filter – Inlet less than 25mm	Low	DCVA
Water Filter – Inlet 25mm and Larger	High	RPBA
Water Softener	High	RPBA
X-ray Equipment	High	RPBA
Yard Hydrant	Low	HBVB

NOTE 1: Check with Plumbing Inspections for zone isolation requirements for multiple (identical) fixtures serviced by one dedicated water connection.

NOTE 2: The water supply to a commercial ice machine must be protected by an Air Gap, verified by a City Inspector. Commercial ice machine water connections without a verifiable Air Gap must be protected by a Reduced Pressure Backflow Assembly.