

MAINTENANCE MATTERS



Managing Internal Water Systems

Water leaks are often the source of damage and insurance claims in multi-family buildings. Routine inspections, maintenance, renewals and resident notices will reduce the frequency of claims and losses.



This bulletin covers the life cycle management of water systems in multi-unit residential buildings, including strata housing, rental buildings, and co-operative housing. It provides an overview of key water systems and their associated maintenance requirements, with additional tables summarizing who is generally responsible for maintenance and at what frequency it occurs. The term “Responsible Party” refers to the person, company, building manager, or any other party designated by the building owner to complete routine inspection and maintenance tasks with a prescribed schedule of duties and reporting obligations. The term “Contractor” refers to a person or company hired to complete a specialized task.

Maintenance Matters

This series of bulletins and companion videos is designed to provide practical information on maintaining residential buildings. Produced by BC Housing, this bulletin was prepared by RDH Building Science in collaboration with the Condominium Home Owners Association and the Office of Housing and Construction Standards, Building and Safety Standards Branch.

Water leaks are often referred to as “water escapes” by insurance companies. Buildings with low claims related to water management and a proven history of maintenance will be a lower risk for insurers, and impact cost and renewal conditions.

The key audience of this bulletin is multi-unit building owners, strata councils, and property managers. However, many of the insights are applicable to single-family homeowners, unit occupants, as well as owners of homes in bare land strata corporations. The focus of this publication is about common or shared water systems. Bulletin No. 21 Preventing Water Leaks in Your Home, provides guidance to unit owners and residents on how to prevent leaks within dwelling units.

Communicating with Residents

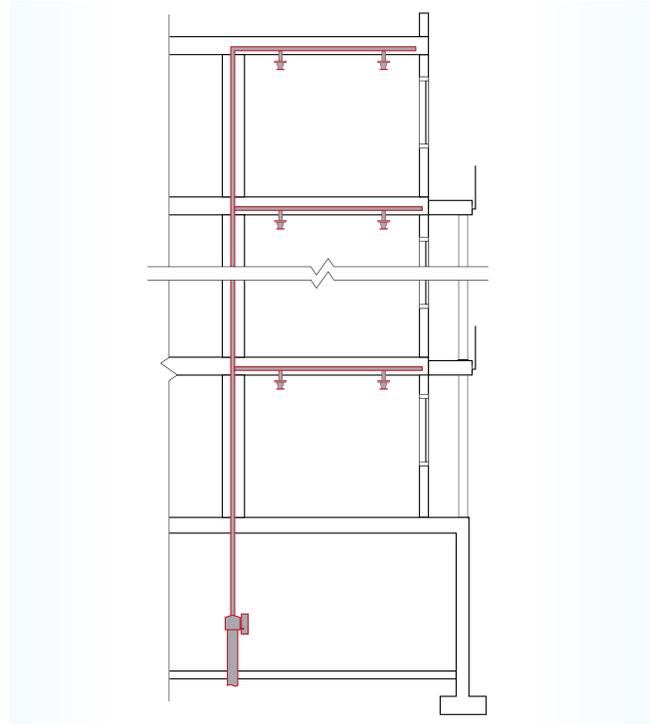
It is critical for residents in multi-unit buildings to understand their responsibilities in preventing water leaks. Residents must quickly report maintenance issues or potential concerns to the party responsible for building maintenance or the strata council. While owners and residents are responsible for their units, strata councils are expected to update occupants on annual building maintenance and guidelines as applicable. New residents need to be verbally briefed and receive informational materials or be directed to a website with information that is easy to understand.

Water Systems and Maintenance

It is important for multi-unit building owners, strata councils, and cooperative boards to be diligent in budgeting, contracting repairs, maintenance and capital renewals. Many building systems are extensive and complicated. They require a clear understanding of the cycles and methods of inspection, maintenance and repairs.

This bulletin provides an overview of proper maintenance protocols including inspection frequencies and treatments to help identify aging systems due for renewals. It offers options for replacement that may extend the life of water systems.

Fire Suppression Systems



Buildings may have fire suppression systems that are wet, which is water based, or dry, which uses CO2 or another non-reactive gas instead of water. Wet fire suppression systems can be a source of water leaks. Most new buildings use dry systems, although wet systems are still common in older buildings and parking areas.

Maintenance and inspection of fire suppression systems are carried out annually by a trained technician who will ensure the fire protection system complies with the National Fire Code, B.C. Fire Code, municipal bylaws and NFPA (National Fire Protection Association) standards.



Example of a pipe mounted sprinkler head in a dry fire suppression system in the garage of a multi-unit residential building

Exposed sprinkler heads have a high risk of damage from impact or misuse as hangers. If your building has exposed sprinkler heads, installing cages is a small cost to prevent catastrophic failures.



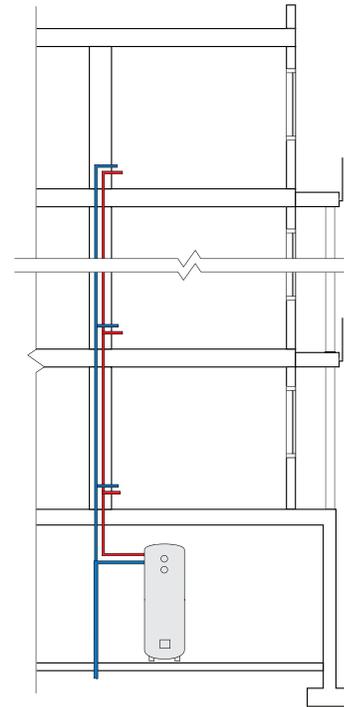
Example of a ceiling mounted sprinkler head in a wet fire suppression system

Wet systems are typically pressurized, so if the technician detects a pressure drop, it indicates a leak. The party responsible for building maintenance can determine what type of fire suppression system a building has. It doesn't matter if the system is wet or dry, residents must be informed to never hang anything off the sprinkler heads or lean anything against them.

Water Storage Tanks and Circulation Systems

Residential buildings have cold water delivery and hot water circulation systems for potable water and/or hydronic heating and cooling systems. A summary of the recommended maintenance procedures including who is responsible for completing them, is included in a table at the end of this section.

Hot water is typically managed in **storage tanks**, sometimes integrated with hot water heaters. It is most common for hot water tanks to be located centrally with piping distribution to each unit. However, hot water tanks within units are part of the strata lot and are the responsibility of the owner to maintain and repair. This makes it difficult for the strata corporation to control.



A strata corporation can conduct routine inspections of the equipment even in strata units, to ensure they are being effectively maintained. Also, a bylaw may be adopted to shift the responsibility of tank maintenance and repair to the strata corporation. This ensures the work is done and reduces risk. It also allows cost savings and ensures qualified contractors are hired. Check the water temperature settings, pressure and pressure relief valve quarterly. Conduct annual checks for hairline cracks in the insulators and signs of corrosion that may weaken the structural integrity of the tanks. Inspect pipe connections to tanks and pumps for any signs of leaks, as part of regular quarterly mechanical checks. The following are common fittings to check:

- Corner sections
- Valves
- Connectors
- Clamps
- Crimp rings

Plan for a contractor to replace tanks and pumps within the projected life cycle of the product (every 8-15 years),

while components such as burners, controls, motor bearings, and pump bearings may need to be replaced every 5-7 years.

Recirculation pumps typically run 24/7, which adds wear and tear on the pipes. Adding a programmable timer and schedule on the recirculation pump for domestic hot water can help add service life and reduce energy consumption. The effectiveness however, is dependant on the type of building and water usage patterns. It should be properly commissioned when installed to reduce the need to reset the timers.

Recirculation pipes for domestic hot water are generally the first pipes to start leaking, followed by space heating hot water pipes, then cold water pipes since constant water flow and high temperatures speed up corrosion. Sources of water leaks in water circulation systems are generally the result of aging pipes, failed pipe connections (for example, to tanks or pumps), or frozen pipes.

Copper is a common material for water piping in buildings, however it does not last indefinitely. Replacement or re-lining of copper pipes will typically be necessary during the service life of multi-unit buildings in B.C. Copper pipes can last up to 50 years, but they thin out as they age, leading to pinhole leaks. Some municipalities have water quality that will speed up

the corrosion of copper. Consider hiring a contractor to replace copper pipes if the hot and cold domestic water systems are more than 30 years, or there are indications the life cycle of the piping is ending. Develop a plan to schedule the replacement of the water systems. There are alternatives to full replacement of copper pipes, such as epoxy pipe lining and water management systems. See Builder Insight No. 16, Alternatives to Domestic Water Re-Piping, available at bchousing.org for more information.

Protective pipe coatings can mitigate the risk of Legionella by minimizing surface area for the bacteria to grow, although water management systems can also pose a risk by allowing water to sit idle in the treatment tanks. In July 2019, City of Vancouver Council approved the 2019 Vancouver Building By-law, with the phased implementation of new plumbing and building mechanical systems requirements for cooling towers and decorative water features.¹ These include routine testing to validate maintenance practices, mandatory corrective actions and notifications when anomalies occur, and basic operator qualifications to mitigate the risk of Legionella.

When inspecting copper pipes, look for blue stains that the oxidized copper leaves on sinks, tubs, and fixtures to identify copper corrosion. Corrosion can be caused by several factors including low pH (acidic water), high



Pipe-mounted domestic hot water circulation pumps recirculating hot water from system



Example of natural gas fired water heaters for domestic hot water use



Example of domestic cold water and hot water piping wrapped in insulation

¹ vancouver.ca/files/cov/consolidation-legionella-prevention-changes.pdf

levels of dissolved salts, bacteria, high water velocity, or electrochemical causes such as improper or accidental grounding of electrical appliances to the copper piping. If the water is acidic,² consider installing a water treatment system such as a calcite neutralizer tank or a soda ash feeder to raise the pH and increase the longevity of copper pipes. A phosphate feeder can also help by coating the pipes to protect them from this particular type of wear and tear.

Polybutylene, a grey plastic pipe material, was used for cold and hot water distribution in some residential buildings in the 1980's and 1990's in B.C. The plastic compression fittings on polybutylene pipes have been known to fail prematurely and introduce air into heating systems, causing issues with pumps and heat distribution, in addition to leaks. At a minimum, hire a contractor to replace the polybutylene fittings with metal fittings in multi-unit buildings. Consider hiring a contractor to replace polybutylene pipes with a more durable plastic such as cross-linked polyethylene (PEX) or copper pipes, which are more temperature resistant than plastic. If using PEX, specify low-zinc brass fittings or use engineered plastic fitting components to reduce the risk of dezincification of the fittings. Only use PEX in dark areas to minimize sunlight exposure or recessed indoor

lighting as UV light can break down the material.

When the air temperature drops below freezing, the water inside pipes can freeze and cause the pipe and connections to burst. This occurs because ice expands and takes up more volume than liquid water.

- Multi-unit buildings that serve as secondary homes or those that are unoccupied for extended periods of time are more vulnerable to leaks from frozen pipes since they are more likely to have their heating system turned off. Water can leak undetected if no one is home. To prevent this, owners and residents need to set the heat at a minimum of 12°C while away to ensure that the pipes in the home and common areas do not freeze. Insurance companies may require someone to periodically inspect the vacant home; homeowner policies typically require home checks every seven days for vacant homes.
- Pipes in parking garages and other outdoor spaces are typically heat-traced to prevent freezing. Inspect and confirm that the heat-trace system is on when outside temperatures begin falling below 0°C. Heat-tracing is often connected to building control systems in newer buildings, though older buildings may have manual switches or plugs.



Example of un-insulated copper piping



Example of polybutylene piping used for in-suite water distribution

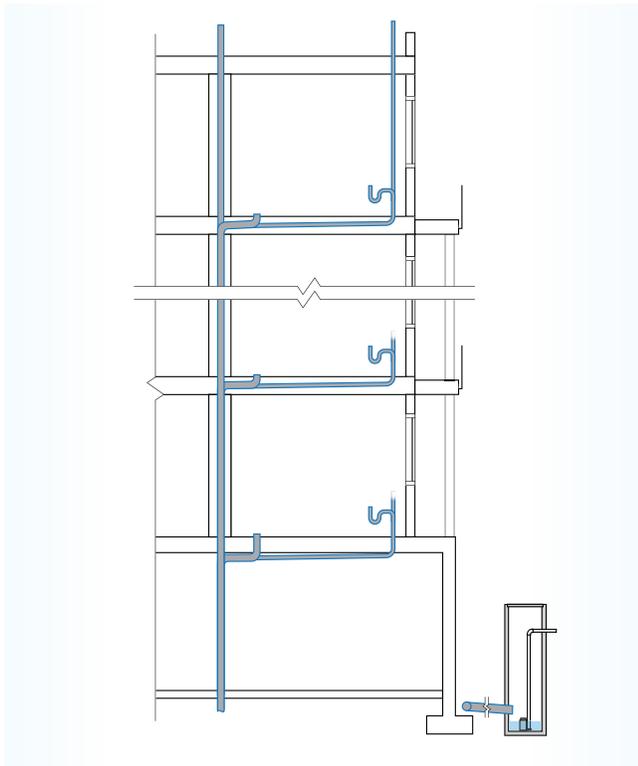
² A known issue in some municipalities. Acidity can be tested using a pH meter.

System	Who	What	Where	When ³
Water Storage Tanks	Responsible Party	Inspect	Water temperature settings	Every 3 months
	Responsible Party	Inspect	Pressure and pressure relief valves	Annually
	Responsible Party	Inspect	Pipe connections to tanks and pumps (corner sections, valves, connectors, clamps, crimp rings); Inspect for leaks	Annually
	Responsible Party	Inspect	Insulators; Inspect for hairline cracks and signs of corrosion	Annually
	Contractor	Replace	Tanks and pumps	Every 12-15 years
	Contractor	Replace	Burners, controls, motor bearings, pump bearings	Every 5-7 years
	Responsible Party	Install	A programmable timer; Schedule the recirculation pump for domestic hot water	Optional
Recirculation Pipes	Contractor	Replace	Copper pipes	If they are over 30 years old, or sooner if you have corrosive water
	Responsible Party	Inspect	Copper pipes; Inspect for corrosion (look for blue stains that the oxidized copper leaves on sinks, tubs, and fixtures)	Annually
	Contractor	Replace	Polybutylene fittings; replace with metal fittings	When possible
	Contractor	Replace	Polybutylene pipes; replace with a more durable plastic such as cross-linked polyethylene (PEX) or copper pipes	Optionally when possible, or at time of a pipe replacement project
	Responsible Party	Inspect	Temperature setpoints; Ensure that hydronic heat is set to a minimum of 12°C	If units are vacant
	Responsible Party	Inspect	Heat-trace system; ensure it is on	When outside temperatures fall below 0°C
	Responsible Party	Inspect	Chilled water pipes; ensure they are adequately insulated	Every 2-3 years

³ These are suggested timelines for a typical building.

It is more common for newer buildings to have chilled water serving fan coil units for cooling. If these cold pipes are not insulated properly, it can lead to condensation on the outside of pipes, which can drip and cause damage. Therefore, ensure chilled water pipes are adequately insulated.

Drains and Sewage Lines



The pathway for water and sewage leaving a building needs to be maintained in addition to ensuring unwanted water does not damage units and buildings through leaks. This includes interior drains, sump pumps, sewer lines, and perimeter drains. A summary of the recommended maintenance procedures, including who is responsible for completing them, is included in a table at the end of this section.

It is essential that building owners educate their occupants on best practices to prevent drainage back-ups and potential overflows. These include keeping the kitchen sink clog-free, properly disposing of dairy, grease and fat in green bins for composting, and not

flushing non-flushable items even if the item is labeled as biodegradable. Proactive strata councils and building owners will ensure that unit owners and residents are informed of these actions, which can be found in Maintenance Matters No. 21: Preventing Water Leaks in Your Home.

Grease traps and separators are common in restaurants and commercial applications, but they can also be installed in residential buildings to intercept grease and solids before they build up. Clean out grease traps as required before they reach 25% capacity (the frequency will depend on the building).

Sump pumps are located in the lower level of residential buildings, often in the parking garage or basement areas. These help clear storm water away from the building. Check the operation of sump pumps after heavy rainfall. An ideal time to clean and inspect sump pumps is when the parking garage is being maintained and cleaned.

Plan to hire a contractor to replace sump pumps and their control panels every 15 years. Include planning for major maintenance of operable parts including bearings every five years and coating with anti-seize compound every two years. Inspect and clear debris quarterly and ensure the alert alarm for the sump pump is functioning properly and that there is no debris affecting the operation of the float switches. These inspections should also be completed during storm events that may increase the



Example of a multichambered flow through grease trap suspended from the structure above

risk of back-ups or clogs. Some properties are located in inter-tidal zones where salt water intrusion is possible. Check these sump systems annually for operation and corrosion.

To prevent sewage backflow, a qualified plumber can install a **backwater prevention valve**, which is a fixture installed into a sewer line (and sometimes into a drain line) in the basement or parkade of multi-unit buildings. A properly installed and maintained backwater valve allows sewage to go out, but not to come back in. Contact your local municipality as the installation of backflows is mandatory for many regions of the province.

For preventative maintenance on drain and sewer lines, have a qualified technician use a mechanical auger or jet flushing equipment every five to ten years (depending on local practices) to clear the lines of any accumulated debris. Check roof drains annually to clear debris. Hire a contractor every five years to insert a camera into main sewer lines to conduct pipe inspections.

High-rise, and high density properties with a large number of residential units funneling discharge water through the building's drainage system, requires stack flushing at least every three years. Grease and debris build-up from cooking oils and fats can quickly accumulate in a building's drainage system. Flushing is necessary to prevent sewer back-ups into units on the lower floors. Properties that don't contain food services, kitchens or laundry facilities may be extended to 5-7 years.

Monitor tree and plant growth in the proximity of buried drains and remove trees or vegetation that can interfere with the lines. Inspect drainage piping, fittings, and joints for leaks semi-annually. Ensure that the inlets to perimeter drain lines are cleaned twice a year to prevent water back-up from occurring. It is better for the strata corporation to undertake this work than leave it to the strata owner or residents.



Example of a downspout leading to a perimeter drain

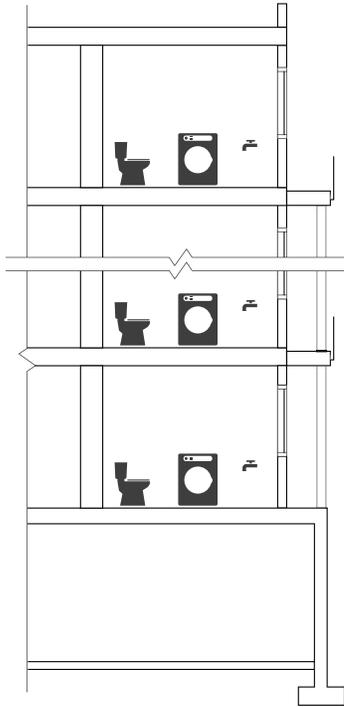


Example of a drain on a roof deck

System	Who	What	Where	When ⁴
Drains	Occupants	Comply	Grease, dairy and fat from cooking should be disposed of in a green bin for composting	Continually
	Occupants	Comply	Non-flushable items must not be flushed even if labelled biodegradable	Continually
	Responsible Party	Maintain	Clean grease traps	As required before they reach 25% capacity
Sump Pumps	Responsible Party	Inspect	Sump pumps; Ensure they are operational	After heavy rainfall
	Contractor	Replace	Sump pumps and their control panels	Every 15 years
	Contractor	Maintain	Operable sump pump parts including bearings	Every 5 years
	Contractor	Maintain	Sump pump coating with anti-seize compound	Every 2 years
	Responsible Party	Inspect	Alert alarm and float switches; Ensure the alert alarms are functional and that there is no debris affecting operation of float switches	Every 3 months
Sewage and Drain Lines	Contractor	Install	Backwater prevention valve	If not present
	Qualified Technician	Maintain	Flush drain stacks in mid-rise and high-rise buildings to prevent sewer back-ups	Every 3 years (residential), every 5-7 years (non-residential) depending on use
	Responsible Party	Maintain	Clear roof drains	Annually
	Contractor	Inspect	Main sewer lines; Inspect with a camera	Every 5 years
	Responsible Party	Inspect	Tree and plant growth in the proximity of buried drain lines. Remove trees or vegetation that may can interfere with the lines	Annually or as needed
	Responsible Party	Inspect	Heat-trace system; Ensure it is on	Twice a year
	Responsible Party	Maintain	Chilled water pipes; Ensure they are adequately insulated	Twice a year
	Responsible Party	Maintain	Clear outside drain lines and gutters	As required, depending on season
	Occupants	Comply	Clear drains on their property (e.g., patio or balcony)	As required

⁴ These are suggested timelines for a typical building. Assess the individual needs of each building.

Appliances, Plumbing Fixtures, and Connections



Home fixtures and appliances with connections to a water line have the potential to malfunction, develop blockages, or develop leaks that can result in significant water damage. Common household fixtures include refrigerators, dish washers, ice makers, water coolers, coffee makers, washing machines, sinks, tubs, and toilets. There are several maintenance best practices that minimize the risk of water damage from these fixtures. Proactive strata councils will ensure that unit owners are informed of these best practices, which can be found in Maintenance Matters No. 21: Preventing Water Leaks in Your Home. A summary of the recommended maintenance procedures including who is responsible for completing them is included in a table at the end of this section.

Regular inspection of **common area appliances** that use water will decrease the risk of water leaks. Check fixtures of communal kitchen appliances, icemakers, and laundry rooms annually for leaky joints and hoses, and check

appliances for cracks or corrosion. The connections are the most frequent failure points. Perform annual bearing and auger inspections on extruded icemakers and check their inlet water valve screens semi-annually. Replace or repair any joints, pipes, gaskets, and hoses that show signs of damage or mineral buildup (identified by a crusty white layer).

Pay closer attention to older appliances in common rooms, pipes, and hoses as they are more likely to need repair. Even new appliances may be at risk if they are installed improperly or with sub-par connections. If a dishwasher or washing machine becomes unlevel over time, use shims to re-adjust its position. Catastrophic leaks may occur from these appliances if there is a blockage in the drain line, if the pump fails, or if the water inlet is disconnected. Educate occupants on appropriate behaviour. For example, don't leave the premises when a washing machine, dishwasher or any other appliance is running.

Use Braided Metal Hose

Confirm all appliances (fridges, dishwashers, washing machines, etc.) are connected to a water line with **braided metal hoses**, as they are far more resistant to leaks compared to standard rubber hoses. At about \$20 each, buying and installing braided metal hoses is a simple and inexpensive step that can help prevent costly water damage. Good quality braided metal hoses, connections, crimps, and gaskets are important. Obtain these from reputable suppliers.

Install a drain pan beneath communal washing machines to catch leaks due to washing machine overflow or hose failure. In some cases, the drain pan can be connected to a drain pipe to move water away from the area. It is common to have a floor drain built into the communal laundry room. Be aware of existing drain pans' condition. Replace them at the first signs of breaking or cracking since they can deteriorate over time. Similar to washing machines, drain pans may be installed under Heating Ventilation and Air Conditioning (HVAC) equipment.

An HVAC safety switch or float switch on the water pan, underneath the unit will automatically stop the system from operating when an overflow is detected. While newer equipment may have a safety switch, older equipment is less likely to have these devices.

Dryer exhaust vents need to be cleaned and maintained otherwise condensation in ducts can leak and cause water staining and damage. Consult Maintenance Matters No. 14 Avoiding Exhaust Duct Problems for more information.

Monitoring devices (ranging from \$10-\$150) can help with the early detection of water leaks in both shared communal areas and individual units. Install water leak detection sensors on individual appliances (dishwashers and washing machines for example) prone to water loss. This includes underneath or nearby dishwashers or washing machines, and below refrigerators with water connections and water coolers. Simple battery powered leak detection devices will sound a high-pitched alarm when triggered by a leak. More advanced Wi-Fi connected devices can detect and notify building management of a water leak either by sending a notification via email or through an app. More information on these sensors

for individual appliances can be found in Maintenance Matters No. 21: Preventing Water Leaks in Your Home.

Automatic water shut off devices go a step further by automatically turning off the unit or building's water supply when a leak is detected to mitigate the size of leak. These devices are typically installed on a building's water main though they can be adopted at the unit level as well. This depends on the desired functionality and affordability.

Interior water damage can also be caused by exterior water fixtures. Check the outside spigots and faucets for leaks and damage annually, in addition to interior plumbing. Leaking exterior features can cause damage to interior pipes by wearing them down more quickly or leaking into the space where the spigot meets the building. Install frost-free hose bibs for exterior faucets. Regular hose bibs can freeze, which can lead to cracked pipes and water damage. The pipe on a frost-free hose bib is longer than a regular one, and the shut-off valve is further inside the house where the temperature is warmer to prevent freezing.



Example of a communal laundry room with a built-in drain in case of washing machine back-up, overflow or leaks

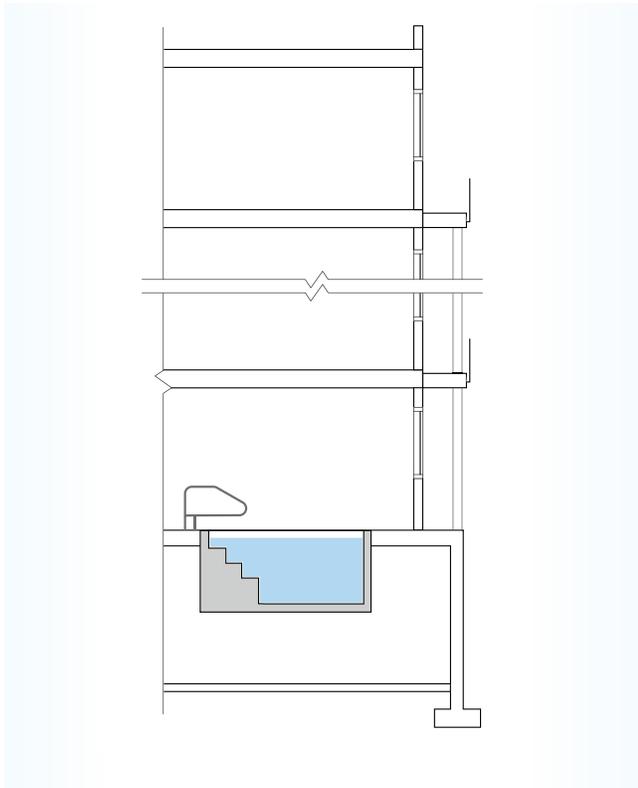


Cleaning and maintaining dryer exhaust vents

System	Who	What	Where	When ⁵
Communal Appliances	Responsible Party	Inspect	Fixtures of communal kitchen appliances, icemakers, and laundry rooms; Inspect for leaky joints and hoses; Inspect for cracks or corrosion	Annually
	Responsible Party	Inspect	Bearings and augers on communal extruded icemakers	Annually
	Responsible Party	Inspect	Communal icemaker inlet water valve screens	Semi-annually
	Responsible Party	Repair/ Replace	Joints, pipes, gaskets, and hoses of communal appliances	If they show signs of damage or mineral buildup
	Responsible Party	Maintain	Use shims to readjust communal dishwasher or washing machine position	If the appliance becomes unlevel over time
Connections	Responsible Party	Replace	Standard rubber hoses; Replace with braided metal hoses, use good quality connections, crimps, and gaskets	As soon as possible
Plumbing Fixtures	Responsible Party	Install	Drain pan; Install beneath communal washing machines (and HVAC equipment)	At earliest convenience
	Responsible Party	Install	Water leak detection sensors; Install on individual appliances with water connections.	At earliest convenience
	Responsible Party	Inspect	Outside spigots, faucets, and interior plumbing. Inspect for leaks	Annually
	Responsible Party	Install	Frost-free hose bibs on exterior faucets	At earliest convenience

⁵ These are suggested timelines for a typical building. Assess the individual needs of each building.

Building Amenities



Amenities such as **indoor pools, saunas, hot tubs (spas)** and **water features** can be sources of water leaks and require careful maintenance. A summary of the recommended maintenance procedures including who is responsible for completing them is included in a table at the end of this section. In B.C., pools in multi-family

properties are regulated by the Pool Regulation Act of BC, and all regulations apply.

Mop the pool/spa deck as required, checking daily if possible. Check that drains on the deck and in the equipment room are kept clear on a weekly basis. To minimize water damage resulting from pool and spa leaks, inspect their tanks/liners semi-annually to check for signs of distress such as cracks, delamination, spalling and discoloration. Repair as needed. Check the filtration system semi-annually for signs of leaks, misaligned parts, and corrosion. Clean the area around the pumps and filters monthly, and plan on hiring a contractor to replace the pool and spa heating equipment every 15 years. Plan on hiring a contractor to replace the water circulation system every 15 years, with component repair/replacement occurring every five years. Liners for pools and spas must be inspected annually for leaks and fissures.

Saunas and steam rooms can impart a great deal of humidity to the surrounding part of the building if not well maintained. Check the gaskets on the doors weekly to ensure they have proper fit and air seal for heat and steam containment. This will minimize the amount of moisture escaping to the rest of the building, reducing the risk of moisture damage to the building components and unhealthy indoor living environments. Check the operation of the floor drain semi-annually.



Example of a hot tub or “spa” in a residential building



Example of a steam room in a residential building

System	Who	What	Where	When ⁶
Pools and Spas	Responsible Party	Maintain	Pool/spa deck; Mop as required	Daily
	Responsible Party	Maintain	Clear drains on the deck and in the equipment room	Weekly
	Responsible Party	Maintain	Clear area around pumps and filters	Monthly
	Responsible Party	Inspect	Pool and spa tanks/liners; Inspect for signs of distress such as cracks, delamination, spalling and discolouration; Repair as needed	Semi-annually
	Responsible Party	Inspect	Filtration system; Inspect for signs of leaks, mis-aligned parts, and corrosion; Repair as needed	Semi-annually
	Contractor	Repair/ Replace	Water circulation system components	Every 5 years
	Contractor	Replace	Pool and spa heating equipment	Every 15 years
	Contractor	Replace	Water circulation system	Every 15 years
	Contractor	Replace	Interior surface of the pool and spa tank	Annually
Saunas and Steam Rooms	Responsible Party	Inspect	Gaskets on doors; Inspect they have a proper fit and air seal for heat sealing and steam containment	Weekly
	Responsible Party	Inspect	Floor drain; Ensure it is operational	Semi-annually

Depreciation Reports for Water System Maintenance

Multi-family buildings have the framework for identifying their building assets and planning routine maintenance. Strata corporations with more than four units are required to obtain depreciation reports in British Columbia.⁷ These reports can be used for maintenance and renewal planning of water system assets.

What is a Depreciation Report?

In British Columbia, a Depreciation Report is a long-range financial planning tool required in strata housing, applied over 30 years. It consists of two components: a physical and a financial analysis. The physical analysis identifies

all physical assets that the strata corporation is responsible for the major, predictable maintenance activities (those that occur less frequently than once per year), and renewal projects (replacement of assets at the end of their service lives). It includes estimates of when these activities will be needed. Examples of such projects are the pressure flushing of sanitary drain lines, or the replacement of roof membranes when the risk of a roof leak is high.

The financial analysis estimates the costs associated with major maintenance and renewals projects. It identifies the funds in the contingency reserve fund (CRF) that may be available to pay for these costs, and other funding models.

⁶ These are suggested timelines for a typical building.

⁷ More details can be found at www2.gov.bc.ca/gov/content/housing-tenancy/strata-housing/operating-a-strata/repairs-and-maintenance/depreciation-reports/depreciation-report-requirements

By identifying projects and developing a reasonable prediction of future costs, owners can make informed decisions about how and when to implement work, prepare for future costs, and potentially avoid unexpected special levies.

Identifying Water System Assets

A strata council may use the most recent depreciation report to identify water system assets in the building. A detailed depreciation report will list all common building assets along with the projected renewal schedules for the equipment and systems. If a depreciation report is not available, develop a common area maintenance plan and building inventory to identify all common components.

Under the Home Warranty Insurance Program in B.C., and as required by the Strata Property Act, the owner developer is required to provide the strata corporation with copies of warranties, maintenance and service documents relating to building systems and components. These documents are essential in supporting the development of a depreciation report and understanding your warranty obligations and the operations of your property.

Planning Maintenance and Inspections

Ensure there are plans in place for maintaining and inspecting all water system assets at scheduled intervals. Water leaks can be minimized by the institution of a strong maintenance and capital renewals program.

More Information

- › Builder Insight No.16: Alternatives to Domestic Water Re-Piping, available at www.bchousing.org
- › Maintenance Matters No.14: Avoiding Exhaust Duct Problems, available at www.bchousing.org
- › Maintenance Matters No. 21: Preventing Water Leaks in Your Home available at www.bchousing.org
- › Province of British Columbia: Strata Repairs and Maintenance, available at www.gov.bc.ca
- › Condominium Home Owners Association (CHOA), visit www.choa.bc.ca
- › Vancouver Island Strata Owners Association (VISOA), visit www.visoa.bc.ca
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About BC Housing's Research Centre

BC Housing's Research Centre works in collaboration with housing sector partners to foster excellence in residential construction and find innovative solutions for affordable housing in British Columbia. Sharing leading-edge research, advances in building science, and new technologies encourages best practice. The Research Centre identifies and bridges research gaps to address homelessness, housing affordability, social housing challenges and the needs of distinct populations. Mobilizing knowledge and research expertise helps improve the quality of housing and leads to innovation and adoption of new construction techniques, Building Code changes, and enhanced education and training programs. Sign up to receive the latest news and updates from BC Housing's Research Centre at www.bchousing.org/subscribe.