



COUNCIL REPORT

Report Date: October 15, 2024
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VanRIMS No.: 08-2000-20
Meeting Date: November 12, 2024
[Submit comments to Council](#)

TO: Vancouver City Council

FROM: General Managers of Development, Buildings & Licensing;
Planning, Urban Design and Sustainability; and Engineering Services;
and the Chief Building Official

SUBJECT: Rainwater Management to Facilitate New Housing

Recommendation

THAT Council approve, in principle, amendments to the Building By-law, as described in this report and as attached in Appendix A, to come into force and effect July 1, 2025;

FURTHER THAT the Director of Legal Services be instructed to bring forward for enactment the necessary amendments to the Building By-law, generally in accordance with Appendix A, immediately after enactment of the 2025 Vancouver Building By-law.

Purpose and Executive Summary

To maintain sewer system capacity while facilitating new low-density housing, and to meet regulatory obligations, staff recommend a city-wide requirement for rainwater management on all new low-density buildings effective July 1, 2025. This report proposes an easily implemented Building By-law regulation with minimal permit processing implications.

Council Authority/Previous Decisions

- To fulfill the City's requirements in the [Integrated Liquid Waste and Resource Management Plan](#) (approved by the Minister of Environment in 2011), Council has legislated rainwater management on private properties to address sewer system impacts on receiving waters (summarised in [RTS 15424](#)).

- Council adopted the 3-3-3-1 Permit Approval Framework in June 2023 to help increase the supply of housing ([meeting minutes](#)).
- Council approved streamlined, private property rainwater management requirements for complex buildings in the Building By-law in July 2023 ([RTS 15424](#)) and received an update in November 2023 ([memo](#)).
- With Council’s “missing middle” initiative and simplification of zoning regulations, staff were instructed to develop rainwater management requirements for multiplexes ([RTS 15854](#)). Subsequent legislation further expanded housing options ([RTS 16232](#)). To avoid piecemeal updates, the schedule for the extension of rainwater management regulations was adjusted to embrace *all* new building types ([memo](#)).
- The Vancouver Charter permits Council to regulate plumbing facilities in and about buildings and premises, including the means of connections with sewers ([Section 306](#)).

City Manager’s Comments

The City Manager concurs with the foregoing recommendations.

Context and Background

Housing redevelopment will increase rainwater runoff from private properties into the sewer system, escalating the risk of sewer back-ups, flooding, and untreated overflows into receiving waters.¹ To alleviate the stress on the City’s infrastructure, private property measures can be implemented to complement public sewer system improvements. The key measure proposed by this report is the requirement for a rainwater detention tank, which functions to temporarily hold rainwater and release it in a controlled manner into the sewer system (**Appendix B**).

Contributions to the sewer system

Engineering Services estimates that of the approximately 250 billion litres conveyed through the City’s sewer infrastructure in 2019, 28% was sanitary sewage, 30% was groundwater and 42% was rainwater.² While 56% of the sewer mains have been separated, the majority of the system is still functionally a combined sewer system, meaning that sanitary sewage, groundwater and rainwater are conveyed in the same pipe. The conveyance of rainwater in the same pipe results in system impacts when it rains.

The proposal is intended to reduce the impacts of rainwater on the sewer system by managing the release of rainwater from private properties into the system, allowing for sanitary sewage to be conveyed more safely. In areas with separate storm sewer mains, the proposal will help to mitigate the impacts of changing rainfall intensities.

¹ [Foundations of a Healthy Waters Plan](#) (August 2023) and Council Report [RTS 15731](#) (December 2023). 3-1-1 call statistics for the 2023 calendar year include 1,242 sewer back-up cases, 2,653 street surface water flooding cases and 325 catch basin concerns.

² Estimated proportions are from analyses completed as part of the ongoing Healthy Waters Plan.

a) *Sanitary sewage*

To lessen the volume of sanitary sewage, the Building By-law features some of North America's most effective water efficiency measures and facilitates the use of rainwater for non-potable applications, like toilet flushing.³ This has helped reduce Vancouver's daily water use to 341 litres per person in December 2023, the lowest level recorded in the City since such statistics have been kept.⁴ "Per person" use is anticipated to continue to decrease as older fixtures, appliances and mechanical equipment are replaced, and with the continued implementation of Engineering Services' Water Demand Management Strategy. However, efficiency measures will not fully offset population growth. This report does not propose amendments to the Building By-law's water efficiency regulations.

b) *Groundwater*

Groundwater infiltrates passively into the sewer system through cracks in pipes and is also drained into the sewer system by building foundations that intercept the water table.⁵ The Building By-law already places restrictions on geo-exchange systems to protect public sewer capacity and groundwater quality. Pending completion of Engineering Services' Groundwater Management Strategy, DBL can support advancement of groundwater re-use applications in the Building By-law to further assist in sewer volume reduction ([RTS 13842](#)). This report does not propose changes to the Building By-law that are related to groundwater.

c) *Rainwater*

Redevelopment generally increases the impervious area, reducing the space available for rainwater to soak into the ground. This increases runoff to the existing sewer system, which puts pressure on system capacity as it was not designed for the projected density. Additionally, predicted increases in rainfall intensity will exacerbate pressures on the sewer system. As most of the City's sewer system is still functionally combined, increasing the amount of rainwater runoff will reduce the capacity for sanitary sewage from existing and new developments.

Without costly upgrades, the City's existing sewer capacity is insufficient to manage these increased flows, potentially delaying development. Private property interventions to manage rainwater can help to bridge the gap, and in the City of Vancouver such requirements are already in place for most new, complex buildings.

³ Summarised at vancouver.ca/files/cov/water-efficiency-requirements.pdf. The U.S. EPA's update to its *WaterSense Specification for Tank-Type Toilets* (Version 2.0, July 1, 2025) will revise the maximum flush volume for dual-flush toilets in line with the City of Vancouver (epa.gov/watersense/residential-toilets).

⁴ Water use in December approximates indoor water use and what is delivered as sanitary sewage. Conversely, water use averaged through the calendar year includes irrigation. The average daily water use across 2023 was 410 litres per person, a 7% reduction from the 2019 baseline of 442 litres per person. The 2030 target is 376 litres per person.

⁵ The most dramatic example of this is the former Oakridge Mall site, which since 1958 has extracted groundwater and reduced the groundwater table by up to an estimated 6 metres. This artificially depressed level is to be roughly maintained by Oakridge in an agreement registered through the Land Title Office, to prevent damage to the Canada Line and other infrastructure. The new development will include a non-potable water system that will treat groundwater for use in toilets, cooling towers, clothes washers and a vehicle wash facility, and for irrigation.

This report therefore recommends the extension of rainwater management requirements to include simple (low-density) buildings. It is estimated that up to 32% of sewer upgrades may be avoided once implementation of this report's proposed "small site pathway" (described below) becomes widespread.⁶

Complex buildings: Compliance through the existing "engineered pathway"

Since January 2024, rainwater management requirements have applied to most new, complex buildings (so-called "Part 3 buildings" in the Building By-law). This is administered through a streamlined permitting process (vancouver.ca/rainwater). These requirements are referred to as the "engineered pathway," as they are predicated on professional reliance to meet two performance objectives: rainwater capture and runoff control.⁷

As of Q2 2024, 161 new developments have met these requirements, which in sum will manage 57 hectares and reduce peak rainwater runoff by $\approx 6,100$ litres per second (for comparison, this is four times the flow rate of the Capilano River on October 1, 2024).⁸ This report does not recommend amendments to the existing "engineered pathway" requirements, but does propose an update to the criteria by which a new development is assessed to require compliance by this pathway (see **Discussion**).

Simple buildings: Compliance through the proposed "small site pathway"

Presently, no rainwater management requirements exist for "simple" buildings such as houses, duplexes and multiplexes. Low-density properties occupy about 40% of the City's area, and impervious area is projected to increase with redevelopment (**Appendix C**). With Council's expansion of housing options, staff have been instructed to prepare rainwater management requirements for these building types to help preserve sewer capacity.

Effective July 1, 2025, a new "small site pathway" is proposed to control rainwater runoff from new low-density properties through the use of a detention tank. In response to Council's direction to facilitate the creation of housing supply, administration of this "small site pathway" would involve minimal applicant effort. Compliance is possible with off-the-shelf, locally available products, and unlike the "engineered pathway," the "small site pathway" does not require professional engineering expertise (see **Discussion**).

This report proposes rainwater management requirements for new low-density buildings, thereby extending requirements to *all* new building types as of July 1, 2025, facilitating the construction of housing while maintaining sewer capacity.

⁶ This is based on preliminary technical work comparing current, uncontrolled rainwater runoff to widespread use of detention tanks for low-density buildings. Reference: "Manitoba Catchment – Maximum Parcel Release Rate Assessment – *DRAFT*" (Engineering Services, Integrated Sewer & Drainage Planning, September 23, 2024).

⁷ A variety of strategies is available to meet "engineered pathway" requirements. Building By-law amendments to allow for the collection of additional sources of non-potable water became effective July 25, 2023 ([RTS 15424](#)). Building By-law amendments to improve vegetated roof assembly installations (also known as "green roofs") became effective July 1, 2024 ([RTS 16161](#)).

⁸ Additionally, a typical "condition of approval" for rezoning applications is that a development must manage 90% of the average annual rainfall from the right-of-way. These improvements include green infrastructure like street trees, bioretention curb bulges, infiltration trenches and porous pavement. Reference for Capilano River: metrovancover.org/services/water/seymour-and-capilano-river-levels

Discussion

Expanding rainwater management requirements from only new, complex buildings to all new buildings — including houses, duplexes and multiplexes — will be a step forward in maintaining sewer system capacity, deferring the need for sewer system upgrades. The rationale that undergirds this report’s proposal addresses three key concerns:

1. *Sewer capacity and cost management.* By managing existing sewer system capacity, the proposal allows for redevelopment to occur while reducing the need for sewer upgrades and mitigating flooding risk. Upgrading sewers in low-density areas due to redevelopment could require the replacement of sewers that have remaining asset life.
2. *Supporting increased development density.* The proposal is a practical and equitable way to manage increased rainwater runoff resulting from redevelopment, while managing sewer system capacity.
3. *Alignment with strategic plans and policies.* The proposal fulfills the requirements of the Integrated Liquid Waste and Resource Management Plan approved by the Minister of Environment in 2011 as well as the objectives of the City of Vancouver’s 2016 Citywide Integrated Rainwater Management Plan and the 2019 Rain City Strategy.

Applicability

The Building By-law currently requires the “engineered pathway” for rainwater management for most new complex buildings. This report proposes a new “small site pathway” for most new simple buildings effective July 1, 2025. Exempted from either pathway would be:

- temporary buildings,
- float homes and marinas,
- accessory buildings added to sites with an existing building, and
- laneway houses or infill added to sites up to 1,000 m² in area (about 10,760 sq ft) with an existing building.

The requirements would not apply to alterations to existing buildings and would not be retroactive. A process flow chart for the application of these requirements is in **Appendix D**.

The “small site pathway” would have almost universal applicability to low-density development. The criteria for determining “small site pathway” eligibility are *lot size* and *floor space ratio* (FSR). The “small site pathway” would apply to developments with an FSR not exceeding 1.0, on sites up to 1,000 m². To illustrate applicability, housing options in the R1-1 residential inclusive district are limited to an FSR of 1.0. Further, within the R1-1 zone, 97% of parcels are no larger than 1,000 m². For the smaller RT-7 and RT-9 residential districts, only three unconsolidated parcels are larger than 1,000 m².

All new buildings which exceed an FSR of 1.0 or are on a lot larger than 1,000 m² would follow the “engineered pathway.” This is a proposed change from the present criteria.⁹

⁹ The “engineered pathway” currently applies to all buildings except those to which Part 9 of the Building By-law applies, float homes, marinas, and Part 3 buildings for residential occupancy containing no more than 8 principal dwelling units. The latter was included for fairness, to exempt multiplexes built under

There will be occasions when site conditions preclude the installation of a detention tank. Excavation may not be possible, for example, due to archaeological resources, artesian groundwater conditions, contamination or geotechnical limitations. Existing documentation that an owner would have to validate such scenarios could be shared with staff, without the need for securing additional professionals. The proposal includes discretion by the Chief Building Official to relax the detention tank requirement, subject to alternate configurations first being considered, such as ground-level tanks to capture roof runoff.

Transition

For those new developments to which this proposal would apply, the report recommends “in-stream” protection for a development permit application or for a combined development permit (DP) / building permit (BP) application opened before January 1, 2025. Such applications would be sheltered from the new rainwater management requirements that would come into effect July 1, 2025. In the case of a DP application, a BP application would have to also be opened before January 1, 2026 to be sheltered from the new requirements.

Implementation & costs

The “small site pathway” proposes a detention tank, which controls the release of rainwater into the sewer system (**Appendix B**). Congruent with the capabilities of the skilled tradespeople already involved in low-density projects, an owner would only need to select a detention tank based on lot size (**Appendix A**). These tanks are available locally, and various configurations meet the proposed requirements. The approximate footprint would range from 7.5 to 12.5 m², with a depth of about 1.5 m.

No professional engineering expertise is required, with no need to submit engineered drawings or Letters of Assurance. There would be no new DP or BP requirements. Compliance would be verified at the existing plumbing permit application stage. Simple plumbing permits will continue to be issued in less than one day, with installations verified by district plumbing inspectors.

The cost to install a detention tank would be approximately \$15,000 to \$25,000 for a new building under the “small site pathway,” which can represent 1 to 2% of the project cost and will vary with site-specific factors. For citywide implications, had these requirements been in place in 2023, they would have applied to 289 new single detached houses and 313 duplexes (multiplex permits were first issued in 2024).

Stakeholder analysis

Through the wide-ranging 2023 public engagement process for the “missing middle” initiative, staff in Planning, Urban Design and Sustainability introduced the need for rainwater detention tanks to facilitate multiplex developments. This included workshops with small home builders and designers, and the publication of materials including site plans showing detention tanks.¹⁰

Part 3 when multiplexes built under Part 9 would have had no rainwater management requirements. With Council’s approval of this report, all new multiplexes will have rainwater management requirements effective July 1, 2025. Reference: VBBL Book II, Division B, [Article 2.4.2.5](#).

¹⁰ Slide 19 at re zoning.vancouver.ca/applications/mm-rs/multiplex-proposal-2023-05-17.pdf is an example.

Staff have contacted suppliers to verify that products meeting the specifications of Engineering Services are available off-the-shelf, to minimise construction cost and delays. Two consultation letters (January 30, 2024 and August 15, 2024) were distributed to and through industry groups such as the Architectural Institute of British Columbia (AIBC), the American Society of Plumbing Engineers – BC Chapter (ASPE-BC), the Homebuilders Association Vancouver (HAVAN) and the Urban Development Institute (UDI). These were shared through the City’s webpages and the Chief Building Official’s e-mail distribution list. Two webinars were hosted, on January 31, 2024 (attended by 50 people) and on September 19, 2024 (attended by 207 people).

Generally, stakeholders sought clarification on the proposed applicability and technical details. Staff also answered questions about related topics including rainwater use, green roofs and artificial turf. Within the technical community, the proposal was generally viewed favourably. Cost was a recurring theme for those concerned about the proposal.

Communications plan

The recommended implementation date of July 1, 2025 would provide staff with the necessary time to develop and implement a robust communications campaign to inform the development community and promote preparedness for the pending changes. This will include educating small home builders with leaflets distributed through on-site plumbing inspections and collaborating with industry associations to inform their membership. Staff will also host virtual “open office hour question and answer” lunch-time sessions in the lead-up to implementation.

Next steps

This report’s recommendation is a step forward in mitigating the impacts of small-scale redevelopment on the sewer system. In the future, Council will be asked to consider expanding on these private property requirements in a stepwise manner based on the technical recommendations from the Healthy Waters Plan and Groundwater Management Strategy. Future updates will target combined sewer overflow reduction, water quality improvement, and groundwater preservation through a holistic and cost-optimised approach.

It is noted that legacy rainwater management requirements are dispersed through various City instruments such as the First Shaughnessy District Schedule, the Southlands RA-1 District Schedule and specific CD-1 by-laws in the Nanaimo and Joyce-Collingwood areas. Additionally, contemporary rezoning applications are periodically conditioned with more restrictive rainwater management requirements than the “engineered pathway.” Responding to Council’s 3-3-3-1 Permit Approval Framework, staff are seeking to centralise these area-specific requirements and integrate them with the “engineered pathway” to further simplify permit issuance.

Financial Implications

There are no financial implications associated with this report’s recommendations.

Legal Implications

There are no legal implications associated with this report’s recommendations.

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APPENDIX A

**DRAFT By-law to amend Building By-law No. _____
Regarding Rainwater Management Regulations for Low-Density Development**

Note: An amending by-law will be prepared generally in accordance with the provisions listed below, subject to change and refinement prior to posting.

1. This by-law amends the indicated provisions of Building By-law No. _____.

2. In Section 9.14. of Book I, Division B, Council adds “(See Article 2.4.2.5. of Division B of Book II (Plumbing Systems) of this By-law.)” immediately below the existing Section title “Drainage”.

3. In Table 1.3.1.2. of Book II, Division B, Council:
 - (a) adds the following new rows in correct alphabetical order:

(i) “

BC	B.C. Reg. 133/2022	Contaminated Sites Regulation	A-2.4.2.5.(9)
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”;

(ii) “

BC		Heritage Conservation Act	A-2.4.2.5.(9)
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”; and

(iii) “

CoV		Zoning and Development By-law ⁽⁴⁾	2.4.2.5.(1) 2.4.2.5.(2) A-2.4.2.5.(1)
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”; and

- (b) in the row for “CoV / Engineering Design Manual”, strikes out the by-law reference to “2.4.2.5.(3)” and substitutes “2.4.2.5.(6)”.

4. In Section 2.4 of Book II, Division B, Council strikes out Article 2.4.2.5 and substitutes:

“

- 1) Except as provided in Sentence (2), all *buildings* shall manage rainwater on-site through one of the applicable compliance pathways in Table 2.4.2.5.-A, in which
- a) “small site pathway” means Sentence (4) applies, and Sentences (5) and (6), (7) and (8) do not apply, and
 - b) “engineered pathway” means Sentences (5), (6), (7) and (8) apply, and Sentence (4) does not apply.

(See Note A-2.4.2.5.(1).)

Table 2.4.2.5.-A
Compliance Pathways for On-Site Rainwater Management
 Forming Part of Sentence 2.4.2.5.(1)

Site Area (m ²)	Floor Space Ratio ⁽¹⁾	Compliance Pathway
No greater than 1000	No greater than 1.0	Small site pathway
	Greater than 1.0	Engineered pathway
Greater than 1000	Any	Engineered pathway

Notes to Table 2.4.2.5.-A:

(1) As computed according to the Zoning and Development By-law.

- 2) The requirements of this Article do not apply to
- a) “laneway houses” or “infill” as defined by the Zoning & Development By-law, when the site area is no greater than 1000 m²,
 - b) “accessory buildings” as defined by the Zoning & Development By-law,
 - c) *float homes*,
 - d) *marinas*,
 - e) retaining structures, or
 - f) temporary *buildings* approved according to Subsection 1.6.8. of Division C.
- 3) The *Chief Building Official* shall be provided with a document demonstrating that the *rainwater* management requirements of Sentence (1) have been satisfied, in the form prescribed by the *Chief Building Official*.

- 4) Except as provided in Sentence (9), a detention tank shall be installed with
- the minimum active storage capacity specified in Table 2.4.2.5.-B.,
 - an orifice plate with the diameter specified in Table 2.4.2.5.-B.,
 - overflow protection,
 - one or more *cleanouts* providing access to the outlet and overflow, and
 - for subsurface detention tanks, the capability of supporting the design depth of cover and surface loads.

(See Note A-2.4.2.5.(4).)

Table 2.4.2.5.-B
Detention Tank Specifications
 Forming Part of Sentence 2.4.2.5.(4)

Site Area (m ²)	Minimum Active Storage Capacity (L)	Orifice Plate Diameter (mm)
No greater than 400	3,400	30
Greater than 400 to no greater than 500	3,900	35
Greater than 500 to no greater than 750	4,600	45
Greater than 750 to no greater than 1000	7,200	50

- 5) Except as provided in Sentences (8) and (9), the first 24 mm of *rainwater* in a 24 hour period from the site area shall be detained, and the minimum detention volume requirement
- shall be calculated as the volume of water that would be present if water 24 mm deep covered the entire site, and
 - may be reduced by any combination of the retention or other practices listed in Table 2.4.2.5.-C, by the amounts in Column C of Table 2.4.2.5.-C.

Table 2.4.2.5.-C
Permitted Reductions to the Detention Volume Requirement
 Forming Part of Sentence 2.4.2.5.(5)

Retention or Other Practice	Reduction to the Detention Volume Requirement		
	Maximum Permitted Reduction Column A	Limit to Permitted Reduction Column B	Permitted Reduction Column C
Landscape feature ⁽¹⁾	Area of, and area routed to, the landscape feature multiplied by 24 mm	<i>Rainwater</i> capture potential, calculated as <i>rainwater</i> storage potential in the growing medium (%) multiplied by the growing medium volume, plus as applicable the storage volume within a subsurface reservoir layer and the volume infiltrated into the subgrade during a 24 hour period. ⁽³⁾	The lesser of Columns A and B
<i>Vegetated roof assembly</i> ⁽²⁾	Area of, and area routed to, the <i>vegetated roof assembly</i> multiplied by 24 mm		The lesser of Columns A and B ⁽⁴⁾
<i>Alternate water source system</i>	Area routed to the <i>alternate water source system</i> multiplied by 24 mm	Storage volume of the <i>alternate water source system</i>	The lesser of Columns A and B

Notes to Table 2.4.2.5.-C:

- (1) Or other *acceptable* ground-level or subsurface based practice, such as permeable pavement or an infiltration tank.
- (2) Or other *acceptable* roof-top based practice. For *vegetated roof assemblies*, see Article 3.1.14.4. and Article 5.6.1.2. of Division B of Book I (General) of this By-law.
- (3) “*Rainwater* storage potential in the growing medium”, “volume infiltrated into the subgrade during a 24 hour period” and “storage volume within a subsurface reservoir layer” shall be demonstrated by *acceptable* data or references.
- (4) For a *vegetated roof assembly* from which the runoff is directed to an *alternate water source system*, the permitted reduction in the volume requirement shall equal Column A.

- 6) Except as provided in Sentences (8) and (9), the peak flow rate discharged to the *combined sewer* or *storm sewer* under post-development conditions shall not be greater than the peak flow rate discharged to the *combined sewer* or *storm sewer* under pre-development conditions, and shall be calculated using
- a) the Rational Method,
 - b) the IDF curves in the City of Vancouver Engineering Design Manual, applying
 - i) for pre-development, the IDF curve prepared for pre development estimates with a 5 year return period,
 - ii) for post-development, the 2100 IDF curve with a 10 year return period, and
 - iii) the inlet time specified in the City of Vancouver Engineering Design Manual, and
 - c) a composite runoff based on the percentages of different surfaces of the site area, applying the runoff coefficients from the City of Vancouver Engineering Design Manual. (See Note A-2.4.2.5.(6).)
- 7) An operations and maintenance manual conforming to Article 2.2.1.9. is required for each of the *rainwater* management practices employed to satisfy the requirements of Sentences (5) and (6).
- 8) When there is an *existing building* on the same property, the site area used in Clauses (5)(a) and (6)(c) may be reduced to be proportional to the ratio of the *buildings'* greatest horizontal area within the outside surface of exterior walls.
- 9) The *Chief Building Official* may, relax the requirements of Sentences (4), (5) or (6) in accordance with Sentence 1.5.2.10.(2) of Division C if
- a) the *owner* demonstrates to the satisfaction of the *Chief Building Official* by a *subsurface investigation* that excavation is precluded or limited by soil contamination or other factors, and
 - b) it is impractical, in the opinion of the *Chief Building Official*, to meet the rainwater management requirements of Sentences (4), (5) or (6).

(See Note A-2.4.2.5.(9).)”.

5. In the Notes to Part 2 of Book II, Division B, Council:

(a) adds a new Note A-2.4.2.5.(1):

“A-2.4.2.5.(1) Rainwater Management Requirements. Area-specific rainwater management requirements exist within the [First Shaughnessy District Schedule](#) and the [RA-1 District Schedule](#) of the Zoning and Development By-law, and site-specific rainwater management requirements may apply as conditions of a rezoning approval or through a CD-1 by-law. Where such requirements differ from those of this Article, the *building’s* design must meet the more restrictive of the release rate requirement and the greater of the volumetric detention requirement.”;

(b) adds a new Note A-2.4.2.5.(4):

“A-2.4.2.5.(4) Small Site Pathway. The detention tank “minimum active storage capacity” excludes the volume below the orifice and above the emergency overflow. The overflow must bypass the outlet flow control mechanism. The orifice flow control should have appropriate debris protection to prevent blockages. The detention tank should be inspected and cleaned regularly following the manufacturer’s instructions.”;

(c) renumbers the existing note “A-2.4.2.5.(3) Peak Flow Rate Calculation” as “A-2.4.2.5.(6) Peak Flow Rate Calculation”; and

(d) adds a new Note A-2.4.2.5.(9):

“A-2.4.2.5.(9) Relaxation to Rainwater Management Requirements. When an *owner* ascertains that site conditions preclude compliance with the rainwater management requirements of this Article, the *Chief Building Official* may relax a portion or all of the requirements of the “Engineered pathway” or the “Small site pathway.” Generally, the *Chief Building Official* may:

- consult with the *City Engineer*,
- consider evidence provided by the *owner* (Table A-2.4.2.5.(9)), and
- determine whether the *owner* has made a reasonable attempt to meet a portion or all of the rainwater management requirements by installing infrastructure above-ground or as part of the *building*.

The decision to relax requirements shall be made by the *Chief Building Official*.

Table A-2.4.2.5.(9)
Examples of Documentation that may be Provided
by the *Owner* to the *Chief Building Official*
 Forming Part of Note A-2.4.2.5.(9)

Potential Site Condition Precluding Compliance with Rainwater Management Requirements	Examples of Documentation Provided by the <i>Owner</i> Regarding a Relaxation to Rainwater Management Requirements
Archaeological resources	<i>Archaeological Impact Assessment</i> , prepared in conformance with the Heritage Conservation Act.
Artesian groundwater conditions	Hydrogeological or geotechnical engineering report.
Contamination	<i>Notification of Likely or Actual Migration</i> , prepared in conformance with the Contaminated Sites Regulation.
Geotechnical limitations	Geotechnical engineering report.

6. In Table 2.8.1.1. of Book II, Division B, Council strikes the rows applicable to “2.4.2.5. Rainwater Management” and substitutes:

2.4.2.5. Rainwater Management	
(4)	[F40,F62,F80,F81-OP5,OE1.2]
(5)	[F40,F62,F80,F81-OP5,OE1.2]
(6)	[F40,F62,F80,F81-OP5]
(7)	[F80,F81,F82-OP5,OS3.4]

7. In Sentence 1.5.2.10.(2) of Book I, Division C, Council:

- (a) strikes “Sentences 2.4.2.5.(2) and (3)” and substitutes “Sentences 2.4.2.5.(4), (5) and (6)”; and
- (b) strikes “Sentence 2.4.2.5.(7)” and substitutes “Sentence 2.4.2.5.(9)”.

8. In Article 3.3.1.3. of Book I, Division C, Council adds a new Sentence:

“4) For a *building* to which Part 9 applies as described in Sentence 1.3.3.3.(1) of Division A of Book I (General) of this By-law or for a *building* used exclusively for *residential occupancy* containing no more than 8 principal *dwelling units*, where an *owner* has applied to the *City* prior to January 1, 2025 for a development permit, the requirements of Division B, Article 2.4.2.5. of Book II (Plumbing Systems) of this By-law do not apply if the *owner* has applied for a *permit* prior to January 1, 2026.”

9. A decision by a court that any part of this by-law is illegal, void, or unenforceable severs that part from this by-law, and is not to affect the balance of this by-law.

10. This By-law comes into force and takes effect on July 1, 2025.

ENACTED by Council this day of , 2024

Mayor

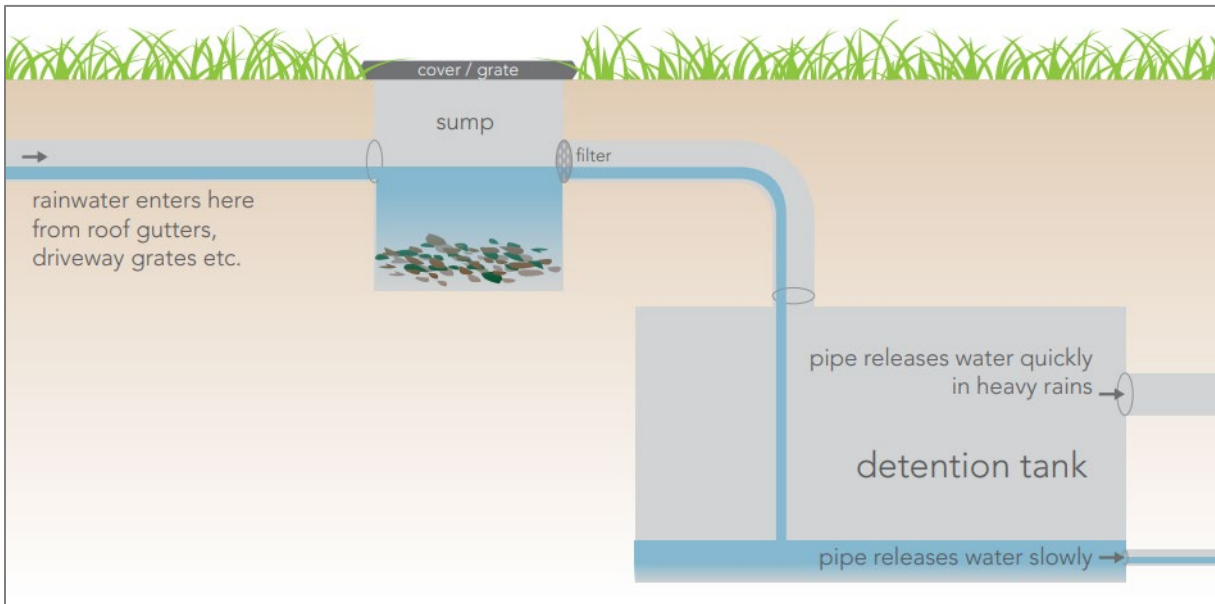
City Clerk

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APPENDIX B

Detention Tank Example

The schematic shows the rainwater path through a detention tank to the sewer (source: Metro Vancouver). Pictured is a detention tank being installed for a new low-density development (source: City of Vancouver).

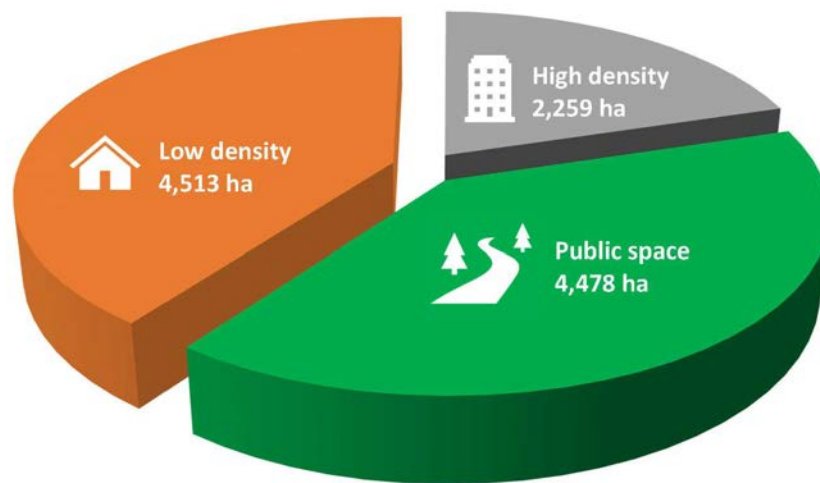


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APPENDIX C

City Area by Land Type

Low-density zoning in the City of Vancouver occupies about 4,513 ha (11,152 acres), accounting for approximately 40% of the city's land area.



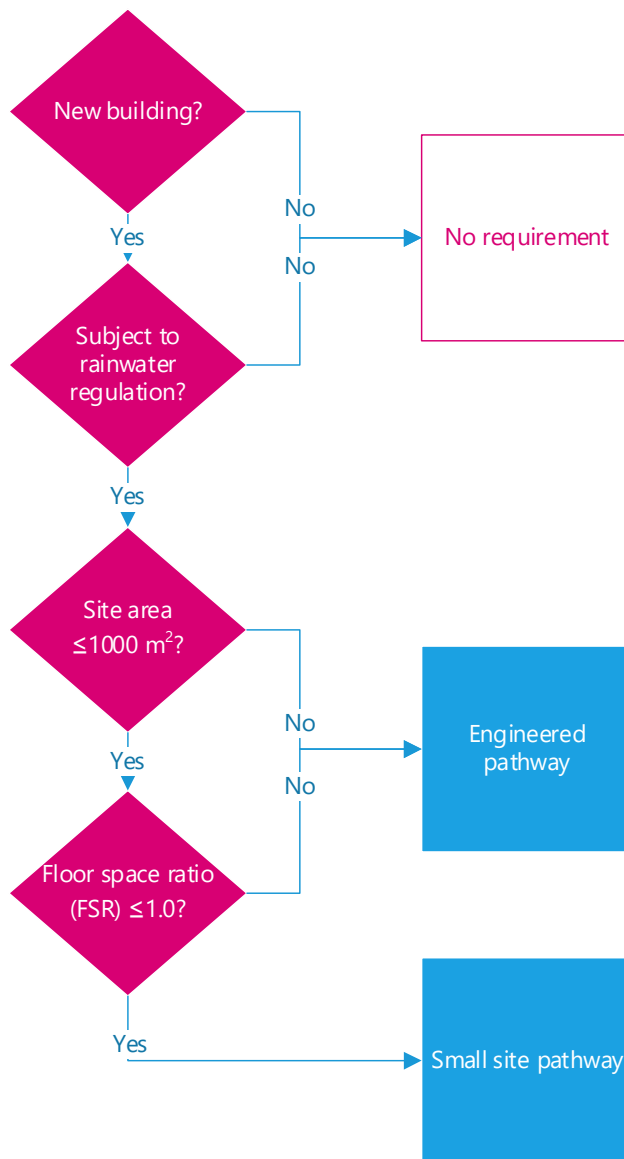
A typical low-density lot consists of about 54% impervious area. With redevelopment, this is expected to increase to about 73%.

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APPENDIX D

Proposed Compliance Pathways for Rainwater Management

With Council’s approval of this report’s recommendations, effective July 1, 2025 most new buildings would be subject to rainwater management requirements. No requirements would apply to alterations to existing buildings, or the buildings defined in the draft legal text of **Appendix A**. New buildings would follow either the “engineered pathway” or “small site pathway,” as described in the report.



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