



New Westminster Waterfront

Liquid Waste Management Plan

COLLECTIVE ACTIONS TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT

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City of New Westminster, Open Council Workshop, March 17, 2025

73313819

metrovancouver

PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT

The Journey

- Inter-municipal collaboration
- 1970 City joins GVS&DD



Joint New Westminster and Burnaby Glenbrook Trunk Sewer (1914)

PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT

The Journey

- Inter-municipal collaboration
- 1970 City joins GVS&DD
- 1974 Annacis Primary



Annacis Island Wastewater Treatment Plant (1974)

LIQUID WASTE MANAGEMENT PLANNING

The Journey

- 1986 LWMP process created
- 1989 LWMP
 - Secondary: Annacis & Lulu
- 1998 Annacis Secondary



Construction of Secondary Treatment Upgrades (1996)

LIQUID WASTE MANAGEMENT PLANNING

The Journey

- 1986 LWMP process created
- 1989 LWMP
 - Secondary: Annacis & Lulu
- 1998 Annacis Secondary
- 2001 LWMP
 - Focus on overflows
- 2002 LWMP Directives
 - Secondary: Lions Gate & Iona



The cover slide features a blue and purple gradient background. At the top left is the Greater Vancouver Regional District logo, a stylized yellow 'G' and 'V'. To its right, the text reads 'Greater Vancouver Regional District' and 'Liquid Waste Management Plan' in white, with 'February 2001' below it. The lower half of the slide contains six small images: a person's hands holding a red cup, a person in a yellow vest on a boat in a river, a circular logo for the 'STORM DRAIN MARKING PROGRAM' with a fish and a house, a heron standing in a field, a person cleaning a stream bank, and a close-up of a storm drain opening.

COMMITMENT ON COMBINED SEWERS

The Journey

- 2007 CSO Tank
- Sewer separation:
 - FSA by 2075
 - VSA by 2050
- 2011 LWMP: stay course



THE CURRENT LWMP UPDATE

Currently in Phase 3



Phase 1 – 2021

Vision and
Guiding Principles



Phase 2 – 2022 - 2024

Goals, Strategies, Actions,
and Draft Plan



Phase 3 – 2025

Plan Approvals

Sept - GVS&DD Board
Dec - Province

KEY CONSIDERATIONS

- Affordability for residents
- Partnerships and developing plans with First Nations



Annacis Island Wastewater Treatment Plant (2001)

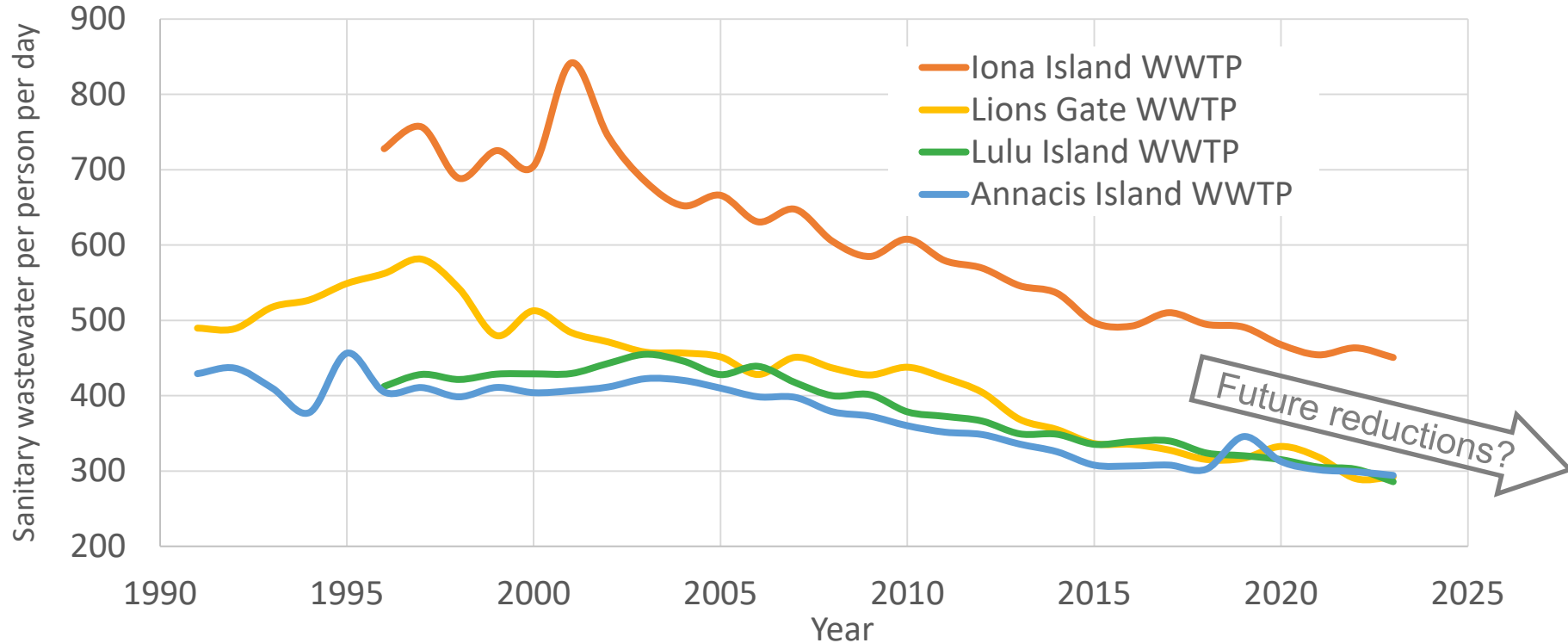
WWTP UPGRADE AND EXPANSION SCHEDULE

In Capital & Long Range Plans

| WWTP | Scope | Anticipated operation |
|-------------------|----------------------------|-----------------------|
| North Shore | Upgrade | 2030 |
| Northwest Langley | Growth expansion + upgrade | 2030 – 2035 |
| Annacis Island | Growth expansion | 2030 – 2035 |
| | Regional biosolids dryer | 2032 – 2037 |
| | Partial ammonia removal | 2038 – 2043 |
| Iona Island | Upgrade | 2035 – 2040 |

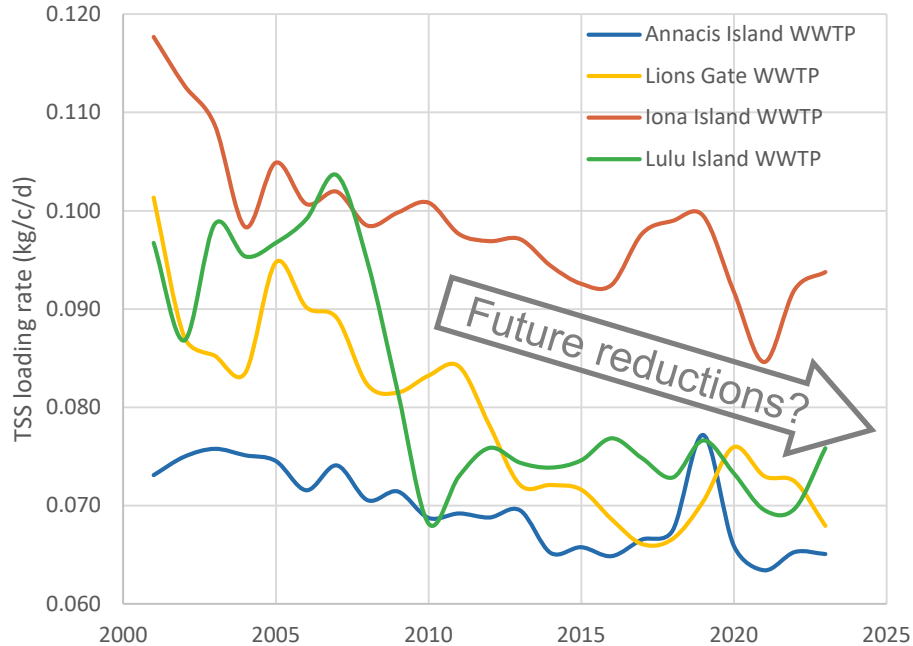
REDUCE DEMANDS ON SYSTEM

i) Dry Weather Flows



REDUCE DEMANDS ON SYSTEM

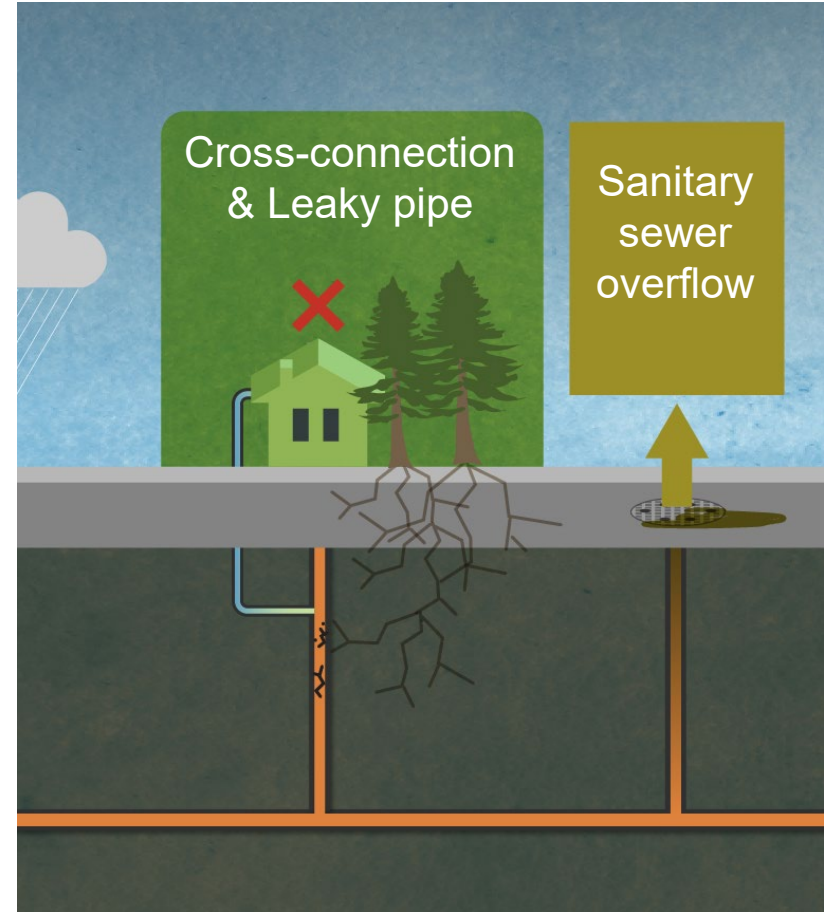
ii) Organic Loadings



REDUCE DEMANDS ON SYSTEM

iii) Wet Weather Flows

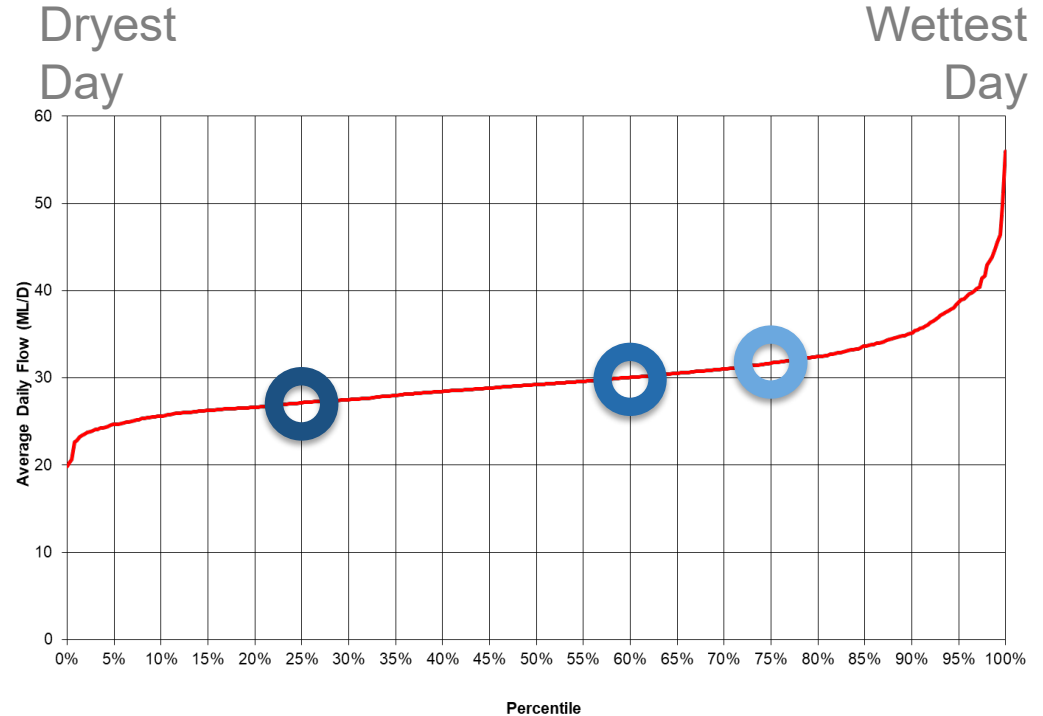
- Up to 80% of wet weather flow from leaky pipes on private properties
- Fixing leaky pipes costs **10 times less** than building bigger sanitary systems



PRICING BASED ON USAGE

Shift to Wet Weather Pricing

- Historical
 - ▶ 25 percentile
- Separated systems
 - ▶ 75 percentile
- Combined systems
 - ▶ 60 percentile
- 10-yr Phase-in
 - ▶ Commenced 2024



RAINWATER MANAGEMENT & WATERSHED HEALTH

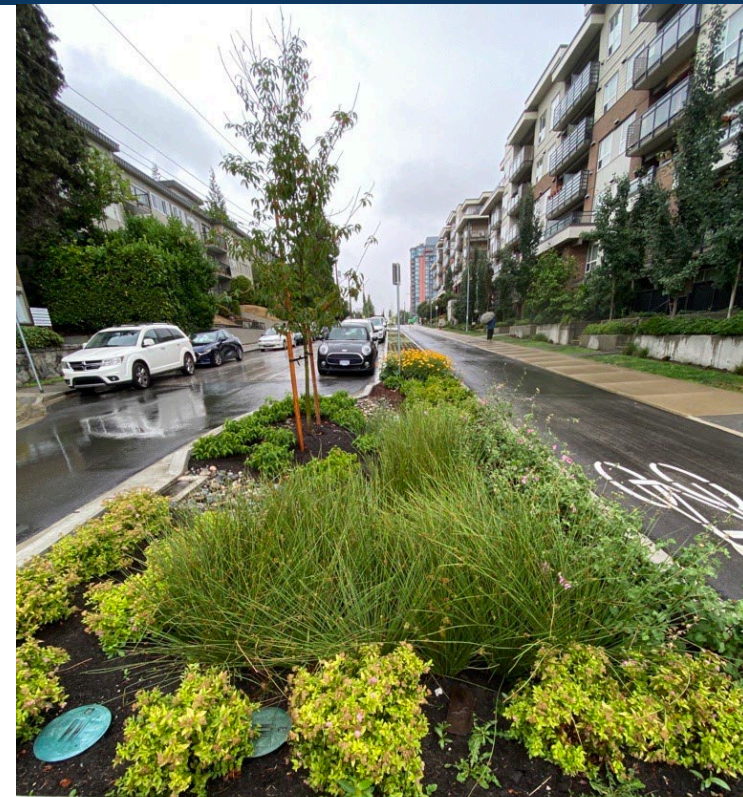
New and notable actions

Members will:

- Involve First Nations in developing Integrated Watershed Management Plans (IWMPs)
- Align IWMPs and land-use planning
- Expand green infrastructure
- Dedicate budget for rainwater management

Metro Vancouver will:

- Establish Advisory Comm. (REAC+RPAC)
- Supporting position.



Agnes Greenway Raingarden – New Westminster

SAVE BILLIONS, PROTECT THE ENVIRONMENT, AND RESTORE ECOSYSTEMS

This plan will reduce demands on the system to:

- Defer large costly expansions
 - ▶ 17 storage units removed from LRP
- Reduce overflows
- Reduce flooding and community impacts



Sapperton Pump Station – New Westminster

5 Goals



Prevent



Reduce



Recover



Restore

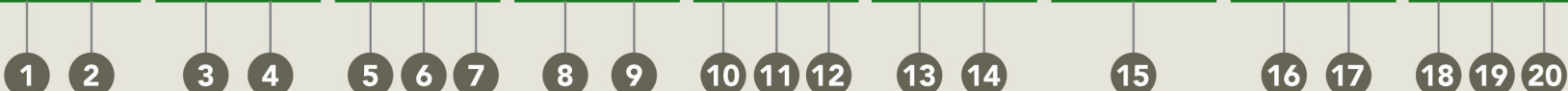


Reflect

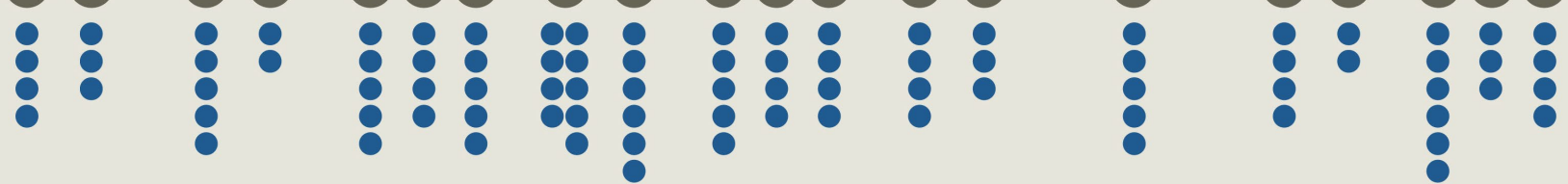
9 Topic Areas



20 Strategies



87 Actions



Scope of LWMP Update

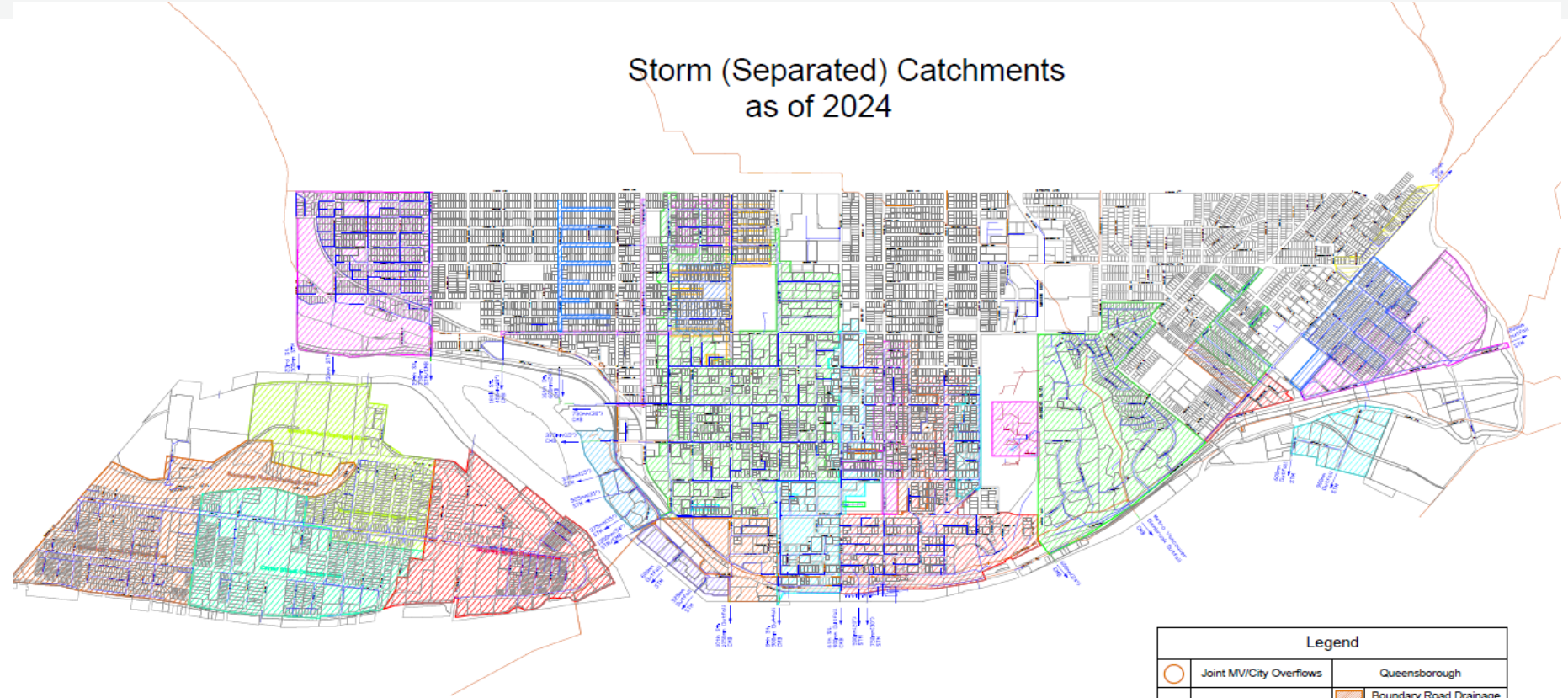
Additional information:
<https://metrovancover.org/services/liquid-waste/Pages/liquid-waste-management-plan-update.aspx>






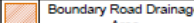
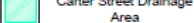


What the City is doing – Sewer Separation

The City is mandated to meet the LWMP objective – **ZERO** combined sewer overflows by 2075.

- ❖ Sewer separation is the City's best value for the investment to meet the mandate
 - ❖ Separating the sewers removes the most rainwater from the system to reduce the volume of the CSO to the Fraser River
- ❖ To date, public side combined sewers are 50% separated with an average separation rate of 1.5%/year.
- ❖ Currently working on sewer separation in the City's West End neighbourhood (present ~ 2027)
 - ❖ The West End neighbourhood sewers currently generate the greatest proportion of chronic municipal combined sewer overflows in the City

Storm (Separated) Catchments as of 2024



| Legend | |
|--|--|
|  | Joint MV/City Overflows |
|  | Storm Sewer Main |
|  | GVRD Sewer Main |
|  | Outfall |
|  | Separated Drainage Area (various colours) |
|  | Queensborough Boundary Road Drainage Area |
|  | Carter Street Drainage Area |
|  | Stanley Street Drainage Area |
|  | Wood Street Drainage Area |

Scale: 1: 10,000
March 2025

This drawing is provided as a convenience, for information purposes only. The City of New Westminster disclaims all responsibility for accuracy or completeness of information contained in this drawing. All map information should be confirmed in the field. Map information is derived from sources with varying levels of accuracy and may have changed since compiled. In no event will the City of New Westminster be liable for any indirect, special, consequential or other damages due to any inaccuracy or incompleteness of map information.

Rainwater Management

Under the LWMP – member municipalities are required to have Integrated Stormwater Management Plans as well as implement green infrastructure to improve watershed health – Brunette and Fraser River watersheds.

The City adopted its Integrated Stormwater Management Plan in 2017. Work is underway on implementation, with the focus on the public side.



Projects Completed:

- ❖ Queens Park Rain Garden
- ❖ City Hall Stormwater Feature
- ❖ 5th Street and 8th Avenue Rain Gardens

- ❖ Agnes Greenway Rain Gardens

Current Project:

- ❖ West End Rain Gardens
 - 24 Rain Gardens to be installed as part of the larger ICIP grant funded project for Sewer Separation and Green Infrastructure Program (~\$10.5M)