

City of Coquitlam

RAINWATER MANAGEMENT – SOURCE CONTROLS

Design Requirements and Guidelines

March 2009

Rainwater Management – Source Control Guidelines

1.1 Areas of Application

Rainwater management – source controls will be implemented where they are recommended in Council Approved Integrated Watershed Management Plans (IWMP's). They can be located on public rights-of-way/easements (public land) and titled lands (private lands). This document provides minimum requirements unless otherwise stipulated or identified in the applicable IWMP.

1.2 Volume Reduction Targets

The volume reduction targets will be specified within the applicable IWMP. Techniques will be implemented to preserve the natural hydrologic regime to the greatest extent possible unless local conditions warrant otherwise. Detailed review and design at the site level will occur by the developer's civil engineering consultant with the objective to maximize the level of on-site capture while recognizing any associated site constraints established within the associated IWMP and Neighbourhood Area Plans.

1.3 General Provisions

- This document applies to subdivision and building permit applications in the areas where IWMP's have been adopted by Council and rainwater source controls have been established as a requirement within that watershed.

- Where no hydrogeological study establishing representative soil and ground water conditions for the application site has been conducted to the satisfaction of the City, then a hydrogeological study by a certified professional may be required to establish representative soil infiltration/retention rates.
- Alternative designs for source control works may be considered by the City, at its sole discretion, based on the recommendations of a hydrogeologic study, design criteria, and other constraints. Consistent with other provisions, alternative designs must be certified by applicable professionals, and by an alternative certification process approved by the City.
- Rainwater management source control requirements shall be designed and constructed to the satisfaction of the General Manager of Engineering and Public Works.

1.4 Neighbourhood Applicability

For All Developments, absorbent top soil layers shall be a minimum of 300 mm deep for all grassed and vegetated areas.

For Single Family Lots, the following measures shall be implemented:

- 300 mm absorbent top soils for all pervious areas.
- Grade hard surfaces (sidewalks, driveways, parking pads, patios) towards lawns, planted areas, and rain gardens.
- Connections for rain barrels connected to roof downspouts with soaker hoses to rain gardens and/or lawns are encouraged. The use of permeable materials for paved areas is also encouraged.

For Multi-Family Residential, Commercial, Institutional and Industrial Lots, volume reduction, water quality treatment, and onsite retention/infiltration systems will be required and will include all of the above-noted measures. Source controls shall be designed, certified and inspected by the applicant's Professional Engineer to maximize the applicable rainwater and stormwater management criteria established within the applicable IWMP. Site landscaping is also a significant component and the developer's Landscape Architect will be required to address landscaping requirements.

For City Roadways in Urban Residential Areas, techniques such as below grade retention systems, rain gardens, or biofiltration areas will be required. Roadside vegetated swales will provide volume reduction and water quality treatment and underlying retention trenches can provide additional seasonal retention volume. While area constraints will limit their implementation in the urban developed areas, locations within the subdivision and developments will be reviewed for applicability. Unobstructed boulevards greater than 15.0 metres, corner bulges, traffic circles and areas adjacent to parks and open spaces will be identified as locations for road drainage treatment facilities that utilize surface swales and biofiltration techniques. All other locations will utilize boulevard retention trenches.