



## Stormwater Management Plan Submission Guidelines (2016)

The District of West Vancouver requires a stormwater management plan (SWMP) be prepared for any new single-family home or duplex or redevelopment of a single-family home or duplex.

### Requirements

- Stormwater Management Plan must be prepared by a Professional Engineer (P.Eng.) specialising in stormwater management, who is registered with the Association of Professional Engineers and Geoscientists of British Columbia.
- The SWMP must be stamped, signed and dated by the P.Eng.
- The P.Eng. must also provide:
  - Schedule B (Assurance of Professional Design and Commitment for Field Review) from the British Columbia Building Code 2012
  - Schedule C (Declaration of Insurance Coverage for Registered Professionals) from the Permits and Inspections Department, District of West Vancouver
- The applicant is to provide two complete reports with all drawings prepared on suitably sized drawing sheets. Once the report is accepted by the District, applicant is to provide an electronic copy of the report, including all drawings, in PDF format.
- If the proposed stormwater management system requires pumping to discharge to the District storm system, then the following is required:
  - System must have an alarm system that sounds inside the home when pumps fail.
  - System must have backup power for the pumps (i.e., a generator) to provide power for pumps in the event of a power failure.
  - A Section 219 covenant must be placed on the lot, so that all current and future homeowners will be required to maintain the pump, generator and alarms in working order.
- Once the stormwater management system is installed, the P.Eng will be required to provide:
  - An as-built set of drawings
  - A Schedule C-B from the BC Building Code
  - An Operation and Maintenance Manual for the SWM system, including any pumps, generators and alarms if required.

The SWMP (report as well as any drawings) must include the following information:

- Legal address of the lot where SWM is to be installed.
- Name and contact information (address, telephone and email address) for the designer.
- Revision information including:
  - Date of revision
  - Revision number
  - Purpose of revision
  - Revision clouds to identify changes from previous revision
- Pre-development site plan showing current land use, including permeable and impermeable surfaces, as well as any current stormwater management facilities.

- Post-development site plan showing proposed land use, including permeable and impermeable surfaces, and proposed stormwater management facilities.

### **Guidelines for preparation of stormwater management plans:**

For redevelopment of single-family residential lots and duplex lots, there shall be no net increase in the rate and volume of rainwater runoff from existing conditions. Existing conditions are defined as state of the land prior to any alterations proposed or undertaken as part of a permit application. Existing conditions include mature forest cover, grass/gardens, and impervious and semi-impervious areas.

The SWMP submission shall include the list of items below.

- Calculation of volume (cubic meters) and rate of runoff (cubic meters / second or litres / second) from the existing site.
- Calculation of volume and rate of runoff from the proposed development on the site.
- Storage volume required complete with orifice dimensions (for discharge rate control) and calculations.
- All calculations will use the 1:10 year design storm events for durations ranging from 1-hour to 24-hours. Refer to attachment for six design storm events for West Vancouver.
- Description, drawing and sizing of the rainwater source controls to be used.
- Provide plans showing:
  - The existing or pre-development site use (current buildings, permeable and impermeable surfaces)
  - Proposed works (new buildings, driveways, etc) and proposed stormwater management features, including dimensions and offsets from buildings and/or property lines.
  - A profile drawing showing key features (including invert elevations) for the proposed stormwater management system, such as sumps, infiltration tanks, tie-in to existing District storm system.
  - Drawings should be based on the topographic survey of the lot.
  - Minimum drawing scale is 1:500 and minimum sheet size is 11x17. Larger size drawing sheets are encouraged if needed to provide necessary detail.
- Plans are to be prepared based on the topographical survey of the lot, prepared by a British Columbia Land Surveyor.
- The submission shall be sealed by a Profession Engineer registered in B.C. and specializing in stormwater management.
- All sites shall have a storage facility to assist in attenuating rainwater runoff flows for the 10-year event under six design storm durations ranging from 1-hours to 24-hours.

Please direct any questions to about stormwater management plans to the Development Services Engineer at 604-921-3494.