THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

SURFACE WATER MANAGEMENT PLAN BYLAW NO. 1606, 2010

A Bylaw to Regulate and Require the Disposition of Surface Water Run-off and Storm Water

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WHEREAS:

A. The Council of the District may require that owners who construct any paved or roof areas and areas covered by impermeable surfaces on land, must manage and dispose of surface water run-off and storm water.

B. The Council may regulate, prohibit and impose requirements in relation to polluting or obstructing or impeding the flow of a stream, creek, waterway, watercourse, waterworks, ditch, drain or sewer.

C. The District has prepared an integrated storm water management plan, the implementation of which includes the management of surface water run-off and storm water on private property.

D. Council considers that surface water run-off and storm water from impervious surfaces should, to the greatest extent possible, be returned to the soil on the land from which it originates or on which it falls.

NOW THEREFORE the Council in open meeting assembled enacts as follows:

1. This Bylaw may be cited as **"Central Saanich Surface Water Management Plan Bylaw No. 1606, 2010"**.

2. In this Bylaw,

   "Exempt Agricultural Building" means a seasonal farm building or structure having no permanent foundation, erected on an area of uncompacted earth used for the cultivation or storage of agricultural crops, livestock or machinery, and having wall and roof surfaces comprising tensioned fabric or plastic film or sheets;

   "Professional Engineer" means a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia;

   "Run-off Control Plan" means a surface water run-off and storm water management and disposal plan prepared by a Professional Engineer for the purposes of this Bylaw, and includes an operation and maintenance plan for on-site run-off control works and, in the case of a plan prepared in compliance with Section 7, a cost estimate for the purposes of Section 8.

   "Water Balance Model" means the Water Balance Model for British Columbia, a web-based proprietary modeling tool for which the Municipal Engineer shall provide a password to any Professional Engineer advising an owner of land in the District with respect to the requirements of this Bylaw.

3. Sections 6 and 7 of this Bylaw apply to all construction of roofed buildings and structures and to all new paved and improved areas covered by impermeable surfaces on all parcels of land in the District, other than:

   (a) construction resulting in the creation of less than 200 square metres of new roof areas or impermeable surface on any parcel of land;

   (b) construction of an Exempt Agricultural Building on a parcel of land on which Land Use Bylaw No. 1309 permits an agriculture use, if the total area of Exempt Agricultural Buildings on the parcel is less than 2 percent of the area of the parcel; and

   (c) construction located within the C-8 Zone established by Land Use Bylaw No. 1309.

4. For the purpose of calculating the area of impermeable surface proposed to be created on a parcel, all roof areas shall be measured to the drip line of the roof, and for the purpose of the exception to Section 3, all impermeable surfaces created on the parcel during the five-year period prior to the construction in question shall be included if those impermeable surfaces were created after the adoption of this Bylaw.

5. All surface water run-off and storm water on a parcel of land to which this Bylaw applies must be disposed of on the same parcel unless on-site works are installed under Section 6 or a Run-off Control Plan is prepared and approved under Section 7.

6. In the case of construction of a single-family or two-family dwelling, where the total area of roof areas and impermeable surfaces is less than 400 square metres, the Owner must install and maintain in perpetuity on-site works providing at least the minimum volume of water storage and not more than the maximum outlet diameter specified in Schedule A in respect of the roof areas and impermeable surfaces proposed to be constructed on the parcel, unless the Owner elects to provide alternative facilities for disposing of surface water run-off and storm water on the parcel and provides to the Municipal Engineer a Run-off Control Plan for such facilities, and the Municipal Engineer approves the plan.

7. In the case of construction other than that described in Section 6, the building permit application shall be accompanied by a Run-off Control Plan prepared by a Professional Engineer, who has certified in writing that installation and maintenance of the works identified on the Run-off Control Plan will on an ongoing basis provide:

   (a) a combined infiltration and retention capacity greater than or equal to the depth of 28 mm of water over the area of the parcel;

   (b) water storage capacity on the parcel equal to at least the depth of 15 mm of water over all impermeable areas of the parcel; and

   (c) a device limiting the stormwater flow from the parcel to the public drainage system to a maximum of 17.5 litres per second per hectare of parcel area.

   Run-off Control Plans prepared in accordance with this Section shall be submitted for review and approval by the Municipal Engineer prior to the issuance of the building permit authorizing the construction.

8. Every applicant for a permit for the construction of a building, structure or impermeable area for which a Run-off Control Plan has been prepared shall provide to the District, at the time of obtaining a building permit, security in the amount of 125 percent of the Professional Engineer's estimate of the cost of the works as approved by the Municipal Engineer, to secure the installation of the run-off control works.

9. Every applicant for an occupancy permit for a building or structure in respect of which a Run-off Control Plan has been prepared shall provide to the District, prior to the final inspection of the building or structure conducted under the Building Bylaw, the certification of the Professional Engineer who prepared the plan or another suitably qualified Professional Engineer, certifying that the run-off control works have been constructed and installed in accordance with the approved plan.

10. No owner of land to which this Bylaw applies shall fail to implement a Run-off Control Plan, and in particular the owner must construct all works required as part of such implementation before commencement of occupancy or use of any roofed building or structure for which the building permit was issued.

11. Every owner of land to which this Bylaw applies shall maintain every component of the works installed under Section 6 or Section 7 in good working order and in accordance with any applicable operating and maintenance plan, and without limiting the generality of the foregoing, shall clear all accumulated debris from detention facilities by September 30 of each year.

12. Upon the failure of any owner to construct or maintain the works required by this Bylaw, the District may construct or maintain the works, recover the cost incurred from any security being held under this Bylaw, and recover any outstanding balance as a debt, or under Division 14 of Part 7 of the *Community Charter* as taxes in arrear.

13. The owner of any parcel in respect of which a building permit was issued in accordance with Section 7, must upon any increase in impermeable surfaces including without limitation, additions of paved areas or new construction of buildings and structures on the parcel subsequent to the completion of construction authorized by the building permit, deliver a new and updated certification of a Professional Engineer stating that the Run-off Control Plan as implemented, will continue to meet the infiltration, retention, storage and runoff control objectives stated in Section 7.

14. In preparing surface water run-off and storm water management and disposal plans, professional engineers must use the Water Balance Model, in conjunction with any other hydrologic analysis methods approved by the Municipal Engineer, to demonstrate that the plan meets the requirements of this Bylaw.

15. No person shall construct any building, structure or impervious surface on any property within the District without implementing the construction measures set out in Schedule B for the duration of the work.

16. A Building Inspector or Bylaw Enforcement Officer or the Municipal Engineer may order that work stop on any premises that are subject to this Bylaw if works required by the Bylaw are not being installed in accordance with Section 6 or an approved Run-off Control Plan where such a plan has been prepared and approved, by posting a "Notice to Stop Work" that references this Bylaw.

17. A Building Inspector or Bylaw Enforcement Officer or the Municipal Engineer may order that work stop on any premises if the construction on those premises is not in compliance with section 15 of this Bylaw.

18. No person shall remove a stop work notice placed pursuant to this Bylaw without the authorization of the official who issued it or another official authorized to post such a notice, or undertake any construction other than the installation of run-off control works required by this Bylaw or other measures required by section 15, until such authorization has been given and the notice removed.

READ A FIRST TIME on this	**18th**	day of	**January,**	**2010**.
READ A SECOND TIME on this	**18th**	day of	**January,**	**2010**.
READ A THIRD TIME on this	**18th**	day of	**January,**	**2010**.

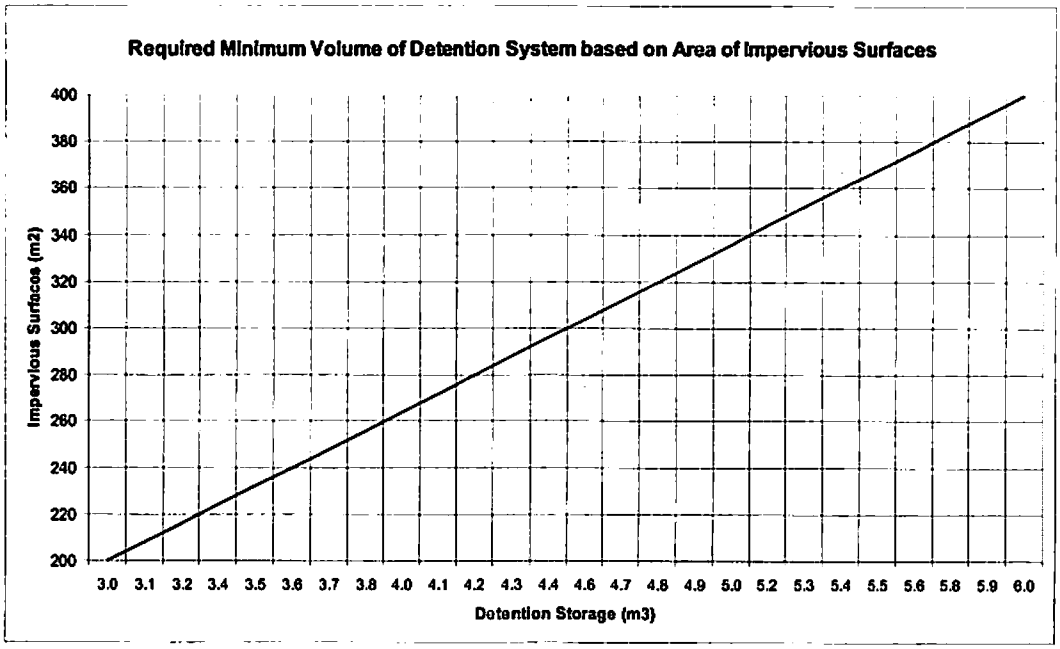
RECONSIDERED, FINALLY PASSED AND ADOPTED by the Municipal Council, signed by the Mayor and Municipal Clerk, and sealed with the Seal of the Corporation on this **1st** day of **February, 2010**.

Jack Mar
Mayor

Susan Brown
Municipal Clerk

Schedule A

1. A stormwater detention system shall be constructed to detain at least the minimum volume required for the area of impervious surfaces on site, as determined according to the following chart:



2. Any connection from a stormwater detention system to the municipal storm drainage system shall have a restricted outlet, sized according to the following table. The system may also have an overflow connection, located at the highest point possible to ensure the system detains its full capacity.

Detention System outlet sizing table	
Lot Area (m2)	Max. Orifice Diameter (mm)
less than 500	30
500 to 1,060	40
1,080 to 1,640	50
1,660 to 2,240	60
2,260 to 3,360	70
3,380 to 3,940	80
3,960 to 5,640	90
5,660 to 7,360	100
7,380 to 9,100	110
9,120 to 10,000	120

Schedule B

Stormwater Management Practices During Construction Activities

Controlling erosion and preventing the release of sediments from construction sites is an effective means of minimizing the discharge of sediments to fish-bearing watercourses and the storm sewer system. To reduce sediment discharges from a construction site, the following erosion and sediment control measures should be practiced:

Layout and clearing:

- Install runoff management systems prior to site disturbance and construction activities;
- Stabilize bare soils the same day that they have been disturbed;
- Avoid clearing vegetation from sites during snowmelt or heavy rains;
- Avoid clearing or grading soils within 15 metres of a stream or ditch;
- Install appropriate measures (straw bales, filter cloth, etc.) to prevent sediment from entering a watercourse;
- Store excavated soils away from watercourses, storm drains and paved surfaces;
- Install a site access pad (crushed gravel before driveway road access) to prevent tracking mud offsite.

Erosion Control:

- Encourage surface water to seep into the soil;
- Retain woody debris and organic matter on-site;
- Roughen or terrace slopes to prevent erosion;
- Cover soil stockpiles and bare slopes with mulch, tarps, etc.;
- Install an on-site rain water retention system as required (prior to backfill);
- Backfill foundations as soon as possible following approval of perimeter drainage;
- Remove excess soil from the site as soon as possible after backfilling;
- Revegetate or landscape the site as soon as possible. If areas of a site must be left incomplete during the rainy season, sow a temporary cover crop, apply mulch or lay geotextile to stabilize exposed soils;
- Keep machinery within specific access areas. Limit the extent of machine access areas to the minimum necessary to complete construction;
- Manage surface flows to control sheet, rill and gully erosion;
- Inspect the construction site daily to ensure erosion control measures are working.

Drainage and sediment Control:

- Use berms or swales to divert runoff from entering the site;
- Use silt fences around stockpiled and sloped areas;
- Install filter cloth, drain rock or straw bales to protect ditches and catch basins;
- Collect runoff for treatment in a sediment trap;
- Ensure containment and proper disposal of concrete wash water;
- Properly dispose of construction wastes (building materials, paints, etc.) off-site;
- Do not wash soils or sediments onto the street or into the storm sewer.