Managing Stormwater Discharges: An Owners Guide to Codes of Practice Compliance

The City's Storm Water Pollution Abatement Program

The City of Victoria, in cooperation with the Capital Regional District (CRD), neighboring regional municipalities, local businesses and institutions, is continuing to examine methods to reduce the amount of contaminants discharged to the municipal stormwater drainage system; a key component to preserving our local watersheds and marine receiving environment. Controlling what contaminants are allowed to enter the municipal stormwater drainage system at the source is extremely important.

What is storm water?

In very simple terms, storm water is all water resulting from natural precipitation from the atmosphere. Stormwater can become contaminated as it flows over impervious (paved and hard surface) areas picking up oil, grease, silts and anything else that it comes into contact with prior to entering the municipal drainage system, which will eventually be discharged into a local watercourse or ocean.

Regulating stormwater discharges

The management of stormwater lies within individual municipalities. This is different than the management of sanitary sewer discharges, which are regulated by the CRD. Under the CRD's Liquid Waste Management Plan, the CRD has committed to assisting municipalities in the overall management of stormwater. To assist municipalities, the CRD has worked with municipalities, local businesses and institutions to develop a stormwater bylaw and stormwater codes of practice (COP), which have been provided to member municipalities for adoption under their own regulatory framework.

Important note: This document outlines the basic requirements that have been included in the Codes of Practice as adopted by The City of Victoria on August 11th 2005. If you are an owner/operator of a business outside of the City of Victoria, you will need to check with that municipality to determine the exact regulatory requirements for your business.

What is the difference between a code of practice and a best management practice?

A Code of Practice (COP) is a regulatory list of business practices and prohibitions that a business must adhere to, to remain compliant with the applicable bylaws. Non-compliance of the Code of Practice is a fineable offense at the discretion of the regulator.
A Best Management Practice (BMP) is a list of suggested practices that a business would follow to minimize their impact to the environment. A BMP is voluntary and failure to meet the intent is not a fineable offense.

What business sectors currently have codes of practice in place?

There are currently five (5) model stormwater codes of practice that have been adopted by the City of Victoria. These include:

- Construction and Development
- Automotive and Parking Lot Operations
- Recreation Facilities
- Recycling Operations
- Outdoor Storage Operations

Three more model codes of practice are planned for development over the next few years:

- Concrete (Ready Mix) Plants
- Asphalt Plants
- Landscaping, Golf Courses and Playing Fields

These eight (8) sectors have been identified as having the potential to contribute to contaminated stormwater runoff if source control measures are not in place.

There are also two sectors that are currently operating under a voluntary Best Management Practice (BMP). Each is a list of rules developed by the industry to help minimize negative impacts to the environment caused by poor business practices. These sectors are Power Washing and Painting.

Why are the identified businesses a major concern?

Stormwater from construction activity, automotive service and parking lot operations, recreation facilities and storage/recycling operations can contain large quantities of solids, heavy metals, paints, oils, grease, and other hydrocarbon (fuel) compounds.

Some of these contaminants can also cause structural damage and capacity issues to the storm drains or cause obstruction of drainage systems, which can cause flooding.

Excessive solids in the storm water discharges can clog fish gills, smother spawning beds, and damage aquatic habitat. Metals, oils and hydrocarbons can be highly toxic to aquatic life even in very low concentrations. Metals and hydrocarbons have been found to accumulate in marine sediments.

Treating storm water – Storm Water Rehabilitation Units

Several of the Codes of Practice requires that runoff (with the exception of roof and perimeter drains) from the site that exceeds the parameters contained in Schedule 'A' of Bylaws 01-154 and 05-80, be directed through a Storm Water Rehabilitation Unit (SWRU). A new business must have the required SWRU in place at the time of opening, whereas an existing business has three years from the time of adoption to install.

A Storm Water Rehabilitation Unit (SWRU) is a generic term for any system designed to remove targeted contaminants. In general, any system that removes solids (such as gravel, sand and silt) and floating materials (such as oils and trash) should be adequate. A properly maintained existing catch basin might even work if correctly sized for the impervious area of the property.

Maintaining Storm Water Rehabilitation Units

In the Codes of Practice, maximum allowable levels of settled solids and floating oil and grease and other materials are specified for stormwater rehabilitation units. Maximum levels for both settled solids and floating oils and grease and other material are set at 75% of design capacity. Visual inspections to determine these levels are also required at a frequency of no less than once per year. You will need to check with the appropriate municipality to determine if there are different maintenance and or inspection requirements for businesses outside the City of Victoria. The City of Victoria has developed a printable Inspection and Maintenance Log for use by those businesses required keeping records.

Do I need to install a sampling tee?

This depends on when your SWRU was installed. Newly installed units (installations that occur after August 11th, 2005) must be installed with a sampling tee that permits a representative sample to be taken of what is being discharged into the municipal

drainage system. If your unit was already installed at the time of adoption of the Code of Practice, you may be required to install a sampling tee within two years of the date of adoption of the Code of Practice.

Prohibited discharges

Under Schedule A of the Storm Water Bylaws, businesses must not discharge any of the following into a municipal storm sewer or drainage system:

- Corrosive water or corrosive materials
- Sediment or suspended solids in excess of 75 mg/L
- Visible oil (in excess of 15mg/L)
- Water from any storage tank, other than water tanks or other tanks that have been properly cleaned to remove all contaminants
- Water from any containment system, such as fuel or storage tank containment areas
- Water that has been used to rinse equipment or parts washed with solvent
- Water from any uncovered storage areas used to store auto parts and equipment
- Water used to wash or rinse shop floors

This list is not complete and owners and operators should consult the official Bylaw 01-154 (Schedule A), Bylaw 05-80 and the Code of Practice pertaining to their business activity.

Spill Response Equipment

If oils, solvents, antifreeze, and other hazardous materials are stored in containers greater than 50 liters, the storage area must have secondary containment to prevent any spills or leaks from contaminating stormwater runoff or entering the storm sewer and drainage system. This requirement does not apply to any containers that have engineered to prevent leaks and spills on the condition that these containers are protected from accidental vehicle contact.

Spill Response Planning

Having a well developed spill response plan specific to your operation is extremely important as it will not only help you and your staff know what to do in the event of a spill, but it will also help demonstrate due diligence. The Code of Practice outlines the following components as being required in your plan:

- specify the response for containment and clean-up of all spills of hazardous material;
- define the roles and responsibilities of the operations personnel for spill response;
- include contact names and telephone numbers for appropriate agencies; and
- provide a checklist of spill response equipment and supplies.

A generic spill response plan template is available on the City's web site or by contacting the City's storm water officer at 361-0550 to obtain a copy.

Keeping Records

Businesses must keep records of all inspections, maintenance, and clean-outs of storm water rehabilitation units, and records of actions taken in the event of a spill. A spill report sheet is available on the City's web site or by contacting the City's storm water officer at 361-0550 to obtain a copy.

How much will this all cost?

The answer to this question depends on your particular business and your business practices. If your business currently utilizes best management practices (BMPs) that prevent runoff from becoming contaminated in the first place, you may not need to install additional treatment works (storm water rehabilitation units), as the runoff from your site may already be in compliance. Examples of BMPs include, but are not limited to covered storage areas, dry sweeping and regular maintenance of treatment works. If your business is unable to meet the discharge requirements contained in Schedule 'A' of bylaws 01-154 and 05-80, you may be required to modify the existing SWRU. Another option is to install new storm water rehabilitation units capable of treating the contaminated runoff from your business to the levels prescribed in Schedule 'A' and bylaw 01-154 and 05-80. A retrofit (i.e. installing an inverted 'T' to help trap oil and grease can cost as little as a $100.00), whereas a large industrial-type unit can cost several thousands of dollars.

The majority of the Codes of Practice do require that you have your SWRU cleaned out when it reaches 75% of its design capacity for floating oil and grease and/or settled solids. Clean out costs may vary depending on the size and degree of contamination of your unit(s).

Where do I purchase a Storm Water Rehabilitation Unit?

Although there are several companies in the area that can supply these units, the City's Plumbing Department requires that you utilize a mechanical engineer (P.Eng.) to design and/or verify an appropriate technology to suit the drainage particulars of your site.

Who do I contact to have my Stormwater Rehabilitation Unit Cleaned Out?

If you look under the Yellow Pages under 'Septic Tanks - Cleaning and Removing' you will find contact information for companies in the CRD that clean out catch basins (the same companies that service septic systems also service catch basins). Often you can set up a regular maintenance contract with these companies.

What if I don't want to comply with the Codes of Practice?

The City of Victoria can issue fines for non-compliance with any bylaw. Continued disregard of the storm water bylaws and the Codes of Practice could result in a fine up to $10,000 for each occurrence, depending on the severity of the infraction. The City also has the authority to discontinue storm drain access (drainage) to a site in extreme cases of continued unabated pollutant discharge in excess of the bylaws regulations. It is hoped however, that all business operators will comply with the regulations in a continued environmental stewardship