RUNOFF & EROSION PROTECTION

Why is the Province Concerned about Runoff and Erosion Protection?

The intent of the *Clean Water Act, 2006* is to ensure communities are able to protect their municipal drinking water supplies through developing collaborative, locally driven, science-based protection plans. Communities will identify potential risks to local water sources and take action to reduce or eliminate these risks. Municipalities, conservation authorities, landowners, farmers, industry, community groups, and the public will all work together to meet common goals.

The main purpose of runoff and erosion protection activities under the *Clean Water Act, 2006* is to protect municipal drinking water sources from runoff contamination and soil erosion and to reduce the amount of sediment and nutrients that reach drinking water sources.

If your property is within or extends into a 100-metre radius of a municipal wellhead and/or a 200-metre radius of a municipal surface water intake, you may be eligible for runoff and erosion protection funding, under the Source Protection Program 2007-2008.

For More Information on Runoff and Erosion Protection,

or to find out if your property qualifies, contact your local Source Protection Region or Area.
You can find out which Source Protection Region or Area you live in at *www.conservation-ontario.on.ca*.

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DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

Ontario

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For more information on the Source Protection Program, please visit the Ministry of the Environment's website:
www.ene.gov.on.ca/en/water/cleanwater/sourceprotection.php

This project has received funding support from the Ontario Ministry of the Environment.
Such support does not indicate endorsement by the Ministry of the contents of the material.

November 2007

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The story of water quality starts where the river begins… in its headwaters. Everything done 'upstream' impacts 'downstream' water quality, affecting both groundwater and surface water sources. Landowners in key headwater areas can help protect the health of downstream drinking water sources.

What is Runoff?

Runoff occurs when rain water or melting snow flows over the land. As water flows, it picks up contaminants, such as sediment and nutrients, that can pollute our drinking water sources and pose risks to our health. While the most obvious drinking water sources to be affected by runoff are surface water sources such as lakes, rivers and streams, groundwater too can be negatively impacted by runoff.

What is Erosion?

Erosion is the loss of soil from the land through natural events such as wind and runoff. It is a process that is always occurring, but it can happen faster if no erosion controls are in place. Like runoff, erosion allows unhealthy sediments and nutrients to enter into drinking water sources.

Why is it Important to Protect Against Runoff and Erosion?

There are many reasons to protect drinking water sources from runoff and erosion. The main reason is to keep sediment and excess nutrients out of our drinking water supplies in order to protect our health. Having clean, healthy sources of drinking water also saves us from having to treat contaminated water to make it safe for drinking and to help from having to find new sources of clean, healthy water when old ones are polluted.

Other benefits of protecting against runoff and erosion is to help the landowner protect the health and value of his land and water features, and to help agricultural operators protect the health of their livestock and livelihood.

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What are Some Ways to Protect Against Runoff and Erosion?

There are many ways landowners and agricultural operators can protect against runoff and erosion and these fall into a few broad categories:

Riparian Area Management

A riparian area is the land associated with the banks of a natural water course such as a stream, river, pond or lake. The benefits of a well-maintained, naturally vegetated riparian area include:

- Improved water quality.
- Improved aquatic and wildlife habitats.
- Reduced downstream flooding.
- Improved livestock grazing.
- Healthier environment.
- Increased recreational opportunities.

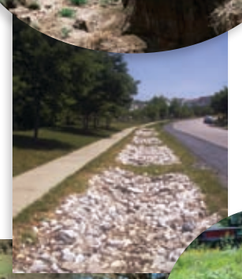
Some activities that help to protect and manage riparian areas include:

- Providing alternative water systems for livestock.
- Establishing healthy buffer zones.
- Fencing to keep livestock out of waterways and improve riparian areas.
- Restoring native plant ranges.
- Managing livestock grazing in upland areas.
- Improved stream crossings for livestock and equipment.
- Assessing riparian area health on a regular basis.

Erosion Control

Some activities that help to prevent erosion include work in both riparian and non-riparian areas:

- Constructing contour terraces.
- Stabilizing gullies.
- Stabilizing water course banks.
- Constructing drop inlets.
- Enhancing filtration systems.
- Creating in-channel controls.
- Constructing sediment control basins.



Land Management for Soils at Risk

Some activities that help to protect and manage soils at risk include:

- Establishing forage or annual barriers for soils at risk (e.g. strip cropping, grassed waterways, perennial forages on severely erodible or saline soils).
- Managing livestock grazing in critical erosion areas.
- Using straw mulch to help establish permanent forage.
- Establishing non-harvested, non-grazed cover crops.
- Modifying equipment for inter-row seeding of cover crops (e.g. relay crops).
- Developing soil erosion and salinity control plans.

Nutrient Management

Some activities that help to prevent unwanted nutrients from contaminating drinking water sources include:

- Modifying agricultural equipment to improve manure application.
- Developing nutrient management plans.

How will I know if there are Runoff and Erosion Problems on My Land?

Protecting soils means protecting future earnings, since most nutrients and organic matter is bound in the topsoil. Some ways to tell if there are runoff and erosion problems on your land include:

- Hilltops show sub-soil, often a lighter colour, where the crops don't grow as well.
- Soil accumulates in the bottom of low-lying areas, such as valleys, and even smothers vegetation in extreme cases.
- Rills and gullies form on the land, especially during intense localized storms.