Do your part for future generations

Would you plant a garden here? Natural vegetation needs intact, healthy soil to grow in an ecosystem.

What can you do to conserve the soil?
Everyone can ensure that appropriate drainage is maintained.

Recreationists: Obtain a permit to create new trails. Realize that you may cause damage on existing trails under conditions that are too wet or too dry for adequate traction. Don’t make trails wider, wander off trails, create ruts, or alter drainage controls like waterbars. Ensure that you keep trails free of invasive plants (weeds) and take action to not spread weeds.

Commercial users: When travelling across or using resources on Crown, forest, and range land, meet legislated/permit requirements, adhere to soil conservation plans, ensure that natural drainage patterns are maintained, and use appropriate soil expertise.

Everyone using Crown land and natural resources has a role to play in soil conservation. Do your part to help ensure that the soil and our natural resources (and drinking water supplies) that depend on healthy soil are maintained for future generations of humans, for our native fish and wildlife, and for the vegetation and soil animals they depend upon to live.

For further information, consult soils guidance documents and research publications (available from the website on the front page), or contact your local research soil scientist, or the specialist responsible for soil conservation at the Resource Practices Branch.

Mike Curran, PhD, PAg, Nelson, BC, February 2012

Healthy soil is essential for all natural resources

British Columbia Ministry of Forests, Lands and Natural Resource Operations
Research Program, Regional Operations, and Resource Practices Branch

Soil Conservation

www.for.gov.bc.ca/hfp/values/soils/index.htm
What is soil disturbance? Roads, landings, and bladed trails represent severe disturbances that are directly created by human activities. Without adequate care or drainage control, these disturbances can lead to more severe erosion and sedimentation events (e.g., see downstream effects photo, far lower right). Recreation, logging, and cattle traffic, or fires that expose mineral soil, can also create negative effects on the soil and other ecosystem components. The soil ecosystem can be negatively disturbed by compaction effects from traffic, even without exposing the mineral soil.

What is soil disturbance? Changes to the soil disturb the internal soil ecosystem and ecosystem components that are dependent on the soil, such as plants and downslope/downstream aquatic organisms. Currently in British Columbia, after roads and landings, the soil disturbances of greatest concern are soil compaction/rutting and soil loss due to displacement of forest floor and topsoil layers. (But some soil disturbance may not be harmful, such as site preparation for reforestation.) Disrupted drainage and/or erosion from disturbed soil can greatly increase soil disturbance effects.

What are the effects of soil disturbance? Recreational activities like off-highway (e.g., ATV) vehicle use, fires, fire suppression, and commercial use of resources create soil disturbances that cause on- and off-site effects that can and do affect soil productivity, hydrology, and watersheds (e.g., fisheries). Public safety and infrastructure can also be affected when the disturbance or its drainage results in events such as erosion, sedimentation, and/or landslides (see photo below).

What is soil conservation? Soil conservation is the practice of conserving the integrity of the soil during commercial operations and during recreational use of our natural landscapes.

Climate change With variable and changing climate, the soil ecosystem will be more stressed due to drier or wetter conditions and more climatic extremes, including more violent runoff events that erode disturbed soils. Maintaining optimum soil health is more critical than ever for ensuring that productive, fertile, and stable soils, and their dependent ecosystems, are retained into the future.

Everyone recreating or working on Crown lands has a role to play in soil conservation, including ensuring that drainage is controlled.