

# Riparian Actions that Create Problems

Often, because of our impatience with spring flooding we cut through bends to "speed" the water through, or straighten and channelize to protect buildings.



*Straightening and widening stream channels increases stream horsepower and often the flooding or erosion is transferred to downstream neighbours.*

Bridges are expensive, so culverts become the choice for many stream crossings.

*Culverts increase stream velocity because friction between the water and the culvert material is reduced. If improperly sized or installed, culverts increase horsepower and downstream erosion is certain.*



The "too soon, too long, too much and too often" type of grazing fails to protect riparian areas.



*Excessive removal or alteration of vegetation by unmanaged grazing decreases friction on the banks and increases water horsepower. The defense against erosion is reduced.*

Because we like to live beside water and establish our towns and cities there, we often develop the riparian area out of existence.



*Drainage or removal of wetlands can increase flood risk, reduce water storage and negatively affect water quality.*

Cultivation and logging, when undertaken without appropriate buffers, remove key elements of the riparian area.



*Stream horsepower is increased with the removal of the friction provided by streamside vegetation. The extra energy is used to increase erosion of the streambanks (lateral erosion) or stream bed (vertical erosion).*

*All of these actions can result in more pressure on the gas pedal, more speed, more energy and more erosion.*