

Responsible Stewardship for your Ravine or Bluff

The City has implemented a series of procedures to assess all land development and building permit applications located on or near slopes in Surrey to proactively avoid future slope stability concerns. Measures to address these concerns include geotechnical evaluations, increased building setbacks, deep foundations, the control and conveyance of stormwater, and the planting and maintenance of vegetative ground cover on the slope itself. The City also completes a ravine stability assessment every two years where all ravines in the City are inspected and all erosion zones are documented and classified. Any sites that have significant erosion are further examined by a Professional Engineer and remedial actions recommended by the Engineer are undertaken.



Regardless of whether the lots were developed before or in accordance with the City's current land development or building permit application procedures, the responsible stewardship of each lot remains with the owner of the lot.

Signs to Watch For

- Springs, seeps or saturated ground in areas that have not typically been wet before
- New cracks or unusual bulges in the ground
- Soil moving away from foundations
- Ancillary structure such as decks and patios tilting and/or moving relative to the main house
- Tilting or cracking of concrete floors and foundations
- Leaning telephone poles, trees, retaining walls or fences
- Rapid increase in water levels, possibly associated with increased turbidity or muddiness in water

IN AN EMERGENCY SITUATION CONTACT: 911

FOR MORE INFORMATION:

www.surrey.ca/steepslopes

Planning & Development Department

(building permits or land development applications)

604-591-4184

Engineering Department

(Engineering service requests)

604-591-4152



LIVING NEAR STEEP SLOPES



Property care for ravine and bluff side residents

Understanding the Risks of Ravine or Bluff Slopes

It is important as a property owner to realize that the stability of the slope on your property can be affected by a number of factors. Your property care decisions at the top of a slope can influence the neighbours you have beside you as well as those at the bottom of the slope.

Slope failures and landslides typically occur after an extended period of heavy rainfall when the slope becomes saturated with water causing the soil structure on the slope to become weakened.



DISCLAIMER

[IMPORTANT! THIS AFFECTS YOUR RIGHTS!]

This brochure contains information which is for general informational use only and shall not be construed as specifically applicable to any particular house, property or area. Accordingly, this brochure shall not be relied upon other than as general information available to the public. The City of Surrey makes no warranty as to the accuracy of the information contained in this brochure, or its suitability for any particular purpose. Any reliance placed on statements or information contained within this brochure is done solely at the risk of the user of the information. The City of Surrey will not be responsible or liable for any loss suffered or incurred by any person arising from their reliance on information contained within this brochure.



There are several actions that property owners can take to help reduce the risk of slope failures and landslides. These include:

- **Comply with the City's procedures land development guidelines and By-laws. These measures have been put in place to help protect your property.**
- **Divert water away from any bluff or ravine slope edges and avoid water ponding near slopes. This includes storm runoff water from your roof drainage. Water flow on a slope can increase the potential for soil erosion and this can affect soil stability. Design your property and landscaping so that water sheds away from steep slopes.**
- **Avoid placing fill (including yard waste, excavated materials, sand and soil) at the crests of steep slope or along pre-existing drainage channels. Place ancillary structures (sheds, pools, decks, patios, etc.) as far from the ravine of bluff slopes as possible.**
- **Regularly inspect plumbing, irrigation pipes, drains, gutters, downspouts, pools and ponds for any signs of leakage.**
- **Refer to the City's Tree Protection By-law and consult with a professional arborist when pruning or limbing trees as improper tree care can damage the tree and make it more susceptible to breakage.**
- **Maintain vegetation on slopes as bare or exposed soils can increase the risk for slope instability. In addition, any removal of vegetation on slopes can also decrease slope stability. Native trees and shrubs originating from this region's costal climate are the best choices to plant as they are suited to the weather in this area.**
- **If you have any concerns about your slope or are considering constructing a retaining wall on your property seek the advice of a Professional Engineer or Professional Geoscientist. Advice on hiring a Professional Engineer or Professional Geoscientist can be found at www.apeg.bc.ca**