Risk to Public

Over the last five years, the District of North Vancouver has taken bold steps to address landslide risk to the public

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Working with residents and the engineering and geoscience community, the District has implemented a Natural Hazards Management Program designed to protect public safety while still allowing for development. The program dedicates funding to risk assessment and mitigation, and provides greater access to hazard and risk information.

The District of North Vancouver encompasses large areas of steep, forested land with creeks and ravines. Located on the lower mainland's north shore, it is subject to severe weather events, and these conditions are ripe for a number of natural hazards including landslides, creek flooding, wind storms, and wild-fires.

Following a catastrophic landslide on the Berkley Escarpment in January of 2005 which destroyed two homes, killing one person and injuring another, the District of North Vancouver formally implemented a Natural Hazards Management Program. The program is focused on understanding and identifying hazards and their potential consequences, reducing risk to life and property through municipal policies, educating the community about risks, maintaining a hazard information database linked to hazard maps, and working with the scientific community to create and follow best practices in natural hazards management.

The program is centered on a risk-based approach; focused on life safety, a risk tolerance criteria is applied in understanding natural hazards and making decisions about reducing the risk to the public. In developing the risk tolerance criteria, the District of North Vancouver reached out to the community as well as engineering and geoscience professionals.

The District held community consultations-hosting public meetings, a public open house, and conducting a survey to gather information about the public's concern regarding types of natural hazards, their level of risk tolerance, residents' level of preparedness, and allocation of municipal budget for hazards management. The District also worked closely with geotechnical engineering consultants throughout the process.

Based on review and discussion from geotechnical engineering consultants and a task force made up of volunteer community members, District staff recommended risk tolerance criteria compatible with the recommended approaches to landslide safety assessments outlined by the Association of Professional Engineers and Geoscientists of BC (APEGBC) in their Guidelines for Legislated Landslide Assessments for Proposed Residential Development in British Columbia. The risk tolerance criteria were formally adopted by the District of North Vancouver Council as policy in November 2009.

"The District of North Vancouver's Natural Hazards Management Program has set an example for municipalities in BC," says Peter Mitchell, P.Eng., APEGBC's Director of Professional Standards and Development. "By carefully coordinating their approach in dealing with the assessment of natural hazards such as landslides with the guidance provided by the engineering and geoscience community, the municipality has reinforced the professional due diligence that should be followed in order to protect public safety."

The policy is designed to help District Building Officials evaluate landslide risks for existing and proposed developments, particularly those at the base or crest of steep slopes or on debris fans. It gives the District's Chief Building Official the discretion to apply the criteria in allowing building permit and subdivision and development applications for such sites.

A notable feature of the District's Natural Hazards Management Program is its transparency. The District provides publicly available online maps that outline areas prone to natural hazards as well as areas where assessment studies have been completed. These reports are available on the District's website and are distributed to public libraries. The maps are continu-ally updated, and new reports are posted as new information becomes available. This allows a prospective property buyer to access reports on the development they are thinking of buying into.

Public education remains an important component of the program. The District continues to hold public meetings to communicate information and receive public input on matters related to natural hazard risk. It also devotes a significant part of its website to provide information about the different kinds of geohazard risk in the municipality. "Trust is earned rather than granted," says Richard Walton, the District's mayor. "Involving people in the process, allowing them to ask their own questions, provides assurance and respect."

Recently, the Canadian Risk and Hazards Network and the Canadian National Platform for Disaster Risk Reduction nominated the District of North Vancouver for the United Nations' Sasakawa Award for Disaster Risk Reduction, recognizing the District's leadership in the area of proactive risk reduction.

In creating a safety-oriented, collaborative and transparent approach, the District is empowering stakeholders to make informed decisions.

By engaging the public and professionals, it has made large strides towards supporting best practices in natural hazard risk assessment and fostering public awareness through communication of geohazard risk in the community.

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