



West Quesnel Land Stability Program



CITY OF QUESNEL

Fact Sheet

April, 2009

Overview:

A large ancient landslide underlies a significant area of West Quesnel. Land movement has been occurring over a long period. The rate of movement has been slow, (i.e. less than 75 mm (three inches) per year) measured since monitoring began in 1998. The rate of movement is highly dependent on annual precipitation and snowmelt conditions. The impacts on buildings and infrastructure have been significant.

The City of Quesnel has spent more than \$1.6 million on the West Quesnel Land Stability Program. The provincial government invested \$1.2 million in 2006 to support scientific analysis. A number of geotechnical and hydrogeological technologies have been used to gain an understanding of what is happening, determine the cause, and establish what needs to be done to manage the movement.

Ground Movement:

- First conclusively proven in engineering work done in 2000-2002.
- Boundaries of the area impacted have been outlined.
- Movement is occurring very slowly, about 2 to 7 centimetres (1 to 3 inches) per year, and very deep, from 28 to 68 metres (100 to 300 feet) below the surface.
- Unless measures are taken to mitigate the problem, movement will continue to occur.
- Reducing groundwater levels and pressures are key to reducing movement to manageable levels.

Work completed to date:

- Significant engineering, analysis and study.
- Comprehensive communications program to engage residents of affected area.
- Trial de-watering program – showed significant drops in groundwater levels and pressures under certain conditions, providing solid evidence upon which next steps were based.
- Full-scale dewatering program design.
- An application for \$11.9 million was submitted to the Shared Information Management Systems for Infrastructure Building Canada Fund in time for the March 16, 2009 deadline.

2009-2010 Action Plan:

- Securing funding from senior levels of government for a remediation program.
- Installing a full-scale dewatering program to reduce groundwater pressures and levels.
- Installing a new series of storm drainage systems to help take water off site, reducing the amount of water entering the ground, which makes the problem worse;
- Initiating a comprehensive leak-detection program, which includes measuring water entering and leaving the area.
- Ongoing monitoring of ground movements, groundwater levels and precipitation.

Benefits of the Land Stability Program:

- Restored confidence in West Quesnel as a viable community.
- Rising real estate values and improved saleability for homes and property.
- Review of building restrictions to enable development on vacant lots.

Where To Get More Information:

To obtain more information, call the City of Quesnel at 250-992-2111 or visit www.city.quesnel.bc.ca and click on the West Quesnel Land Stability icon.