

Weir-Jones Earthquake Early Warning System (EEWS)

— Key Facts —

- Weir-Jones has become a world leader in autonomous seismic monitoring systems and *Earthquake Early Warning System* (EEWS) technology.
- An earthquake generates two waves. The first wave, the 'P' wave, is a very fast moving non-damaging compression wave. The second wave is the 'S' wave or shear wave and it is the wave that we feel and does the damage in a major earthquake. The proprietary technology developed by Weir-Jones measures the 'P' wave, analyses it in less than half a second, and immediately sends out warnings of the coming 'S' or shear wave. Depending on site, facility, or population and public safety needs, the signal can be trigger specific actions, including public alerts via cell phone apps.
- Weir-Jones' *Earthquake Early Warning System* is in use in B.C.'s Massey Tunnel, 75 seismic monitoring stations in Argentina, 110 microseismic monitoring systems in Alberta, more than 80 per cent of U.S. nuclear reactors, and in the world's largest microseismic array in the oil and gas fields of Saudi Arabia.
- When applied to emergency services, the Weir-Jones EEWS technology gives first responders an early warning that can also be used to automatically open fire-hall and ambulance-bay doors so first responders can get their equipment out. The system can turn off gas lines and water and electrical utilities and turn on generators at hospitals, schools, or other facilities.
- The first Weir-Jones *Earthquake Early Warning System* was installed in 2009 in British Columbia at the Massey Tunnel on Highway 99 at the request of the B.C. Ministry of Transport and is able to trigger alerts that shut down traffic in less than one second. Since installation, the Massey Tunnel system has operated with a reliability and availability that approaches 100% (>99.99999%, or an uncertainty of only 0.0002%) of total deployment time.
- In 2016 Weir-Jones signed an international marketing agreement for its seismic products with the Société Générale de Surveillance (SGS) of Geneva, Switzerland. SGS is the world's leading inspection, verification, testing and certification company, with over 1,800 offices worldwide. The agreement will see SGS bring Weir-Jones' British Columbia-developed *Earthquake Early Warning System* technology to countries with high seismic risk that currently do not have proven technology and systems in place.
- Weir-Jones, based in Vancouver, British Columbia is an internationally recognized expert in seismic detection and monitoring. The company's recent agreement with SGS elevates BC-based Weir-Jones into a position of global leadership in seismic detection and monitoring.

