

Seismic Projects Completed or Projects with Improved Seismic Performance

The mitigation standards for some progress are not necessarily to the Wellington fault event standard. This is because of practical considerations. With some projects, the main reason was to replace life expired assets. In doing so, the design has been to the latest seismic codes that allow improved seismic performance compared to the asset replaced.

- Purchase of spare pipes and fittings.
- Orongorongo Tunnels Nos. 1 and 2
 - Pipeline replaced and holding down straps fitted.
- Big Huia Pipeline
 - Additional seismic restraints
- Orongorongo Truss Bridge
 - Replaced
- Wainuiomata Water Treatment Plant Access Road Bridge
 - Waterway improved under the bridge and piers strengthened.
- Korokoro stream crossing by OK main – the above ground crossing was replaced with a pipe below the stream bed as part of the Petone foreshore refurbishment project.
- Wainuiomata Main
 - Rocky Point tunnel. Holding down straps fitted to the pipeline
- Gear Island Water Treatment Plant
 - Electrical control panel secured
 - New fixings between roof rafters and the walls
 - Control reservoir structural strengthening
- Hutt Estuary Road Bridge
 - Bridge strengthened by Hutt City Council. Movement joints fitted to pipeline
- Kaitoke Main
 - Flume bridge adjacent to Tunnel No. 1 strengthened
- Stuart Macaskill Lakes
 - Automatic activation of shut off valves.
- Deviation of Kaitoke Pipeline from Silverstream Bridge
 - Evaluated but not to proceed based on a cost benefit analysis. Decision taken by the Utility Services Committee.
- Haywards Reservoir
 - Seismic shut off valves fitted
- Plimmerton/Pukerua Bay Branch Line
 - Emergency high flow cut-off valve installed.
- Kaitoke Main Tunnel No. 3, 4 and 5
 - Access to tunnels improved and holding down straps fitted to pipelines
- Installation of flexible joints to facilitate differential movement between pipelines and structures

The total cost of these projects in 2002 dollar values is approximately \$1.3M.

Emergency Response Project

- Installation of a standby generator at the Te Marua pumping station - \$750,000.

Note : other standby generators or direct drive diesel equipment is already available at Te Marua Water Treatment Plant (WTP), Wainuiomata WTP, Waterloo WTP, Waterloo Wellfield.