

# Rain Rain Go Away, and Don't Come Back Some Other Day: Rebuilding Earthquake Damaged Stormwater Infrastructure in Christchurch

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## SUMMARY

The SCIRT alliance is responsible for the rebuild of Christchurch's horizontal infrastructure following the 2010/11 earthquakes. Its stormwater objective is "to return the land drainage network to a condition that will facilitate the provision of service that were provided prior to the 4th September 2010 earthquake". SCIRT's rebuild approach has moved from an initial "intervention point" approach whereby all defects above a damage threshold were repaired, to a "level of service" approach. This requires SCIRT designers to understand pre- and post-earthquake drainage performance, and to evaluate how the network's levels of service can be improved through the designs. This paper examines the processes SCIRT employs. Damage to stormwater assets is evaluated through information collated from various spatial databases, pipe condition assessments, and sources such as pre-earthquake asset records and observed post-earthquake flooding; with all this information stored in shared software systems. Based on local site conditions, design standards that are continually improved and refined, and the underlying drive for best-value solutions, SCIRT designers are producing resilient solutions that return Christchurch's stormwater system to pre-earthquake levels of service. Where appropriate, this may include deferring non-critical repairs while out of scope works may be incorporated.

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