



Legend

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- Catchments Order 5
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Crown Land data - LINZ; Catchment data - LINZ; Block data - Te Runanga o Te Rarawa; Stream data - LINZ, modified; Terrain Geographix. Map Nathan Kennedy

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Tangonge Catchments and Flood Susceptible Land

There are two inter-related catchments that impact on Tangonge. The first referred to as the Awanui River Catchment is a large area of over 50000 acres (21000 ha) that drains into the Rangaunu Harbour. The second referred to as the Tangonge Catchment is an area of approximately 17500 acres (7000 ha) that feeds into the Tangonge wetland area. The two catchments have been manipulated as part of flood control measures to protect Kaitaia and surrounding farm land.

The headwaters of the Awanui River Catchment are located on the western slopes of the Maungataniwha and northern slopes of the Raetia Ranges, south of Kaitaia. The catchment flows northwest through hill country around Takahue and Pamapurua and opens to a wide floodplain extending between Kaitaia and the Rangaunu Harbour.

The sand dunes along Te Oneroa-a Tohe/ 90-Mile Beach form the western boundary of the catchment. A large peat basin has developed between the Awanui River and the dunes, with Lake Tangonge occupying the lowest part of the basin. The low-lying Awanui plains have an extensive drainage network and include the lower reaches of the Awanui River. Drains carry runoff created by excess infiltration during rainfall events as well as base flow derived from drainage of artesian groundwater from the surrounding unconfined aquifer.

How the flood control system works
 The Awanui floodplain and Kaitaia township area is highly prone to flooding. Prior to the construction of flood protection infrastructure (stop-banks, drainage channels, floodgates etc), flood waters would frequently inundate the plains west of Kaitaia. Floodwater drainage during this time was transmitted via the Pairatahi River to the east and the Waipapakauri Creek to the west. In 1958, water levels rose to a depth of 1 m on Commerce Street in Kaitaia. The current flood protection scheme includes the Whangatare Channel, the Tangonge drain, Lake Tangonge and the Waihoe Channel.

Whangatare Channel
 Floodwaters in the Awanui River are diverted primarily into the Whangatare Channel, which diverges northward from the Awanui in the northern extent of the township. Removal of sediment from the Whangatare Channel has resulted in a significant improvement of its flood carrying capacity. It was also altered from a v-notch to a broad-crested weir since initial construction, facilitating higher peak flow but causing a lag in transmitting flood flows.

Tarawhataroa Stream, Tangonge Drain, Lake Tangonge and Waihoe Channel
 During large flood events, the flood carrying capacity of the Whangatare Channel can be exceeded, which can cause overflow across State Highway 1 (SH1) at the southern extent of the Kaitaia township. These overflowing waters move into the upper catchment of the Tarawhataroa Stream, which directs flow into Lake Tangonge. During large floods, the lake area can remain inundated for extended periods.

NgaiTakoto
he i te toka...

TE RUNANGA O TE RARAWA

Tangonge Research Project