

Return of the heat: Restoration of a geothermal ecosystem

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New Zealand has a range of geothermally-influenced ecosystems with distinctive ecological features and biotic communities. Recent studies of geothermal ecosystems in New Zealand have determined the diversity, characteristics and function of aquatic geothermal environments. The Waikite wetland and associated Otamakokore Stream occupies approximately nine hectares close to the centre of the Waikite Geothermal Area. The system has undergone major hydrological changes in the last 80 years; land clearance, grassing, draining the wetland and diverting the Otamakokore Stream around the wetland are some of the works carried out since the 1930's. Several geothermal springs discharge along the stream and into the wetland in the southeast corner providing a source of hot water to the wetland. In recent years attempts have been made to return the wetland and the Otamakokore Stream to its former geothermal activity. This paper describes the restoration that has occurred and is planned for the area, presents the initial results of chemical, physical, microbiological and invertebrate monitoring of the Waikite geothermal area and reveals the response to the change in the management of the area.

