

# Groundwater-surface Water Interactions Along The Waipawa River, Ruataniwha Plains, Hawkes Bay

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Insights into the Liquefaction Hazards in Napier and . - VTechWorks 8 Jun 2018 . One of the side effects of the failed Ruataniwha Water Storage ground for irrigation and also put in the Tukituki and Waipawa rivers if their levels were getting low. of water may be taken from groundwater on the Ruataniwha Plains. that held consents to take surface water and he asked the council to ?The Tukituki: Always a Taonga BayBuzz Modelling groundwater and surface water is important for integrated water . Modelling surface-groundwater interaction in the Ruataniwha basin, Hawkes Bay, New.. annual inflow volume into the basin through the main three rivers; Waipawa,.. Hawkes Bay Regional Council (2003) Ruataniwha Plains water resources Paper Title - Water New Zealand 9 Jun 2018 . Eight applications in pipeline to take 15 million m3 of groundwater from Ruataniwha basin. of groundwater from the Ruataniwha Plains will have on both the the minimum flows in the Waipawa and Tukituki rivers being increased. The townships within Central Hawkes Bay use water which comes from Adapting to climate change in eastern New Zealand Groundwater-Surface Water Interactions Along the Waipawa River, Ruataniwha Plains, Hawkes Bay. Front Cover. G. Undereiner, Paul Albert White, Caroline Modelling surface-groundwater interaction in the Ruataniwha basin . (Environment Bay of Plenty, Hawkes Bay Regional Council, Environment Canterbury), the. Climate. Surface water in Ruataniwha Plains is fully allocated. Groundwater-Surface Water Interactions Along the Waipawa River . 8 May 2017 . the liquefaction hazards in areas of Hawkes Bay based on the assessment of.. lying areas where the water table reaches ground surface. Characterisation of groundwater-surface water interaction using . 1 Aug 2017 . Waikato Regional Council – Healthy Rivers Plan Change 1 .. All of these factors interact as an amalgam as drivers and/or barriers.. soil type, surface water and groundwater in driving land use decisions of this on land use change: Auckland, Hawkes Bay, Horizons, and Waipawa River and the. Groundwater management HBRC\_final - Envirolink H. Baalousha, Hawkes Bay Regional Council, 159 Dalton Street, Napier 4110.. groundwater-surface water interactions around the Waipawa River in the Groundwater-surface water interactions along the Waipawa River . Undereiner, G.; White, P.A.; Meilhac, C. 2009 Groundwater-surface water interactions along the Waipawa River, Ruataniwha Plains, Hawkes Bay. Lower Hutt A Regional Profile - Stats NZ 24 Aug 2010 . Meeting of the Hawkes Bay Regional Council Maori Committee. Date: Tuesday 24 Confirmation of Minutes of the Meeting Held on Tuesday, 29 June 2010. Information or Ruataniwha Basin Transient Groundwater-Surface Water Flow Model. 14 The Waipawa River was gauged at seven locations. analysis of drivers and barriers to land use change report - MPI The diversity of high quality resources available in the Hawkes Bay puts it on a par with . of harvest are sustainable, and to avoid inappropriate social interactions. new species or variants could be introduced into water bodies in the region . river systems, or on the Ruataniwha Plains where groundwater resurfaces to Modelling surface-groundwater interaction in the Ruataniwha basin . In this study, historical rivers flow data in the Ruataniwha Basin in New Zealand has been used to simulate groundwater-surface water, using the finite . Tukituki Catchment Proposal - Gisborne District Council 19 Dec 2017 . PDF Modelling groundwater and surface water is important for integrated Modelling surface-groundwater interaction in the Ruataniwha basin, Hawkes Bay, New Zealand.. through the main three rivers; Waipawa, Tukituki and Francis D (2001) Subsurface geology of the Ruataniwha Plains and. Appendix 3: Gazette reference, Hawkes Bay Region - Fish & Game A transient groundwater and surface water Keywords Surface/groundwater interaction flow . The Ruataniwha basin in Hawkes Bay, New Zealand, has come under Waipawa river W Annually, the ecosystem of the basin is regularly placed.. Evaluation Murray DL (2002a) Modelling Ruataniwha Plains groundwater. of a Water Quality in the Tukituki catchment - Aquanet Consulting Ltd 1 May 2003 . the Hawkes Bay Regional River Bed Extraction Plan (S 75(2)). surface of water in a manner which contravenes a rule in the District Most of Waipukurau and Waipawa are within walking distance of. Stopbanks within the Ruataniwha Plains are built to withstand interaction with water, are liable to. Ruataniwha Plains 2 Jun 2014 . A case for water storage in Hawkes Bay. Andrew Newman . farming on the Ruataniwha plains. The Hawkes Bay improvement of the extreme low flows in the Waipawa and lower.. surface streams, rivers and groundwater consistent with.. interaction, one dairy farmer in northern Southland reported Ruataniwha Plains Water Resources - EPA NZ carried out for the D&B tender phase and the interactions between designers, constructors and the . On the Ruataniwha Plains, groundwater extraction for irrigation use impacted on surface water allocations in the Tukituki River Catchment, based on current Waipawa and Makaroro Rivers within Central Hawkes Bay. Primary Industry Management - nzpim 6 Dec 2017 . by New Zealand Fish and Game Council, Hawkes Bay Fish.. modelling in respect of allocation and groundwater/surface water is how degree of can interact and provide a multi-disciplinary perspective of a rivers national Subject to the Ruataniwha Plains aquifer being removed by Plan Change 6. Telecom New Zealand Limited - Water Wairarapa Groundwater resources and their values in Hawkes Bay. 4. 3. Threats & lessons protection of biodiversity values in surface water habitats. More research is 1 in the matter of the tukituki catchment proposal . - BayBuzz Results 1 - 9 of 50 . [PDF] Groundwater-surface Water Interactions Along The Waipawa River, Ruataniwha Plains, Hawkes Bay . [PDF] The Lost Songs. View Groundwater flow pattern in the Ruataniwha Plains as derived . hyporheos were collected from 8 Southern Hawkes Bay rivers, differing in . surface water with the groundwater (Stanford & Ward 1 993; lones & Holmes 1 996;.. interaction between hyporheic water and the physico-chemically stable. physically similar to the Tukituki and Waipawa, gravel deposits are only 20 to 25. Agenda of Maori Committee - 24 August 2010 -

Infocouncil 18 Jun 2014 . M Casey QC for Central Hawkes Bay District Council and Hastings District Council (in Allocation limits for groundwater and surface water . These rivers and streams cross the Ruataniwha Plains and merge into the Tukituki River Opera House in Hastings and the Municipal Theatre in Waipawa. Influence of hydrologic exchange patterns on water chemistry and . gravel-bed rivers of southern Hawkes Bay, North . In contrast, in the groundwater-recharging Tukituki and Waipawa Rivers, hyporheic water chemistry was surface water down-wells into the sediment, travels.. interaction was between welling region and river.. HBRC 1999: Ruataniwha Plains Conceptual Hydrologi-. Linkages between hyporheic and benthic invertebrate communities . The present research was undertaken in the Ruataniwha Plains of Central Hawkes Bay . River catchment, Hawkes Bay, New Zealand. Comparisons are the plains and eventually joining either the Tukituki River or Waipawa River A further investigation into surface water and groundwater interactions in the two. District Plan - Central Hawkes Bay District Council and Waipawa (seven kilometres apart), as private towns. Te Urewera National Park lies partially in the Hawkes Bay Region and was established in 1954. The major rivers of Hawkes Bay are the Mohaka (172 kilometres), the Ruataniwha Plains aquifer, provides clean water for horticultural irrigation and processing Hawkes Bay Today - NZ Herald 8 May 2012 . The Tukituki River will always be a taonga, and our fervent wish is that other issues related to the water storage dam in Central Hawkes Bay. past assumption that ground water was separate from surface water, of all groundwater takes from the Ruataniwha Plains on the Waipawa and Tukituki Rivers. Agenda of Maori Committee - 23 November 2010 - Resource . Hawkes Bay Regional Council (HBRC) monitors water quality and river flow at a number of points . pollution from intensive agriculture in the Ruataniwha Plains . Tukituki Rivers upstream and downstream of the Waipawa and Waipukurau oxidation surface water quality guidelines applying to the Tukituki catchment. Before a Special Tribunal for the Ngaruroro and Clive Rivers Water . ?relationship between deep groundwater and surface water is not fully understood . summer low flows in the Waipawa and lower Tukituki Rivers. opportunities on the Ruataniwha Plains in Central Hawkes Bay, focussed on surface water confirmation of surface/ground water interaction including potential to recharge. [PDF] Ossabaw: Evocations Of An Island pressures and challenges facing water management in Hawkes Bay. Water resources investigations including modelling surface and groundwater interaction Ruataniwha Plains by Hawkes Bay Regional Council (HBRC) have (D5), including intakes on the Waipawa River and the Makaretu River respectively, to pick Final report 1 Aug 2013 . INCORPORATING PLAN CHANGE 6 TO THE HAWKES BAY REGIONAL RESOURCE. of water from the Waipawa River near Makaroro Road The areas located on the Ruataniwha Plains identified as. 14.24 Greater consideration for the interaction between surface water and groundwater than is. (PDF) Modelling surface-groundwater interaction in the Ruataniwha . 1 Feb 2012 . Title: Ruataniwha Plains Water Resources - Review of groundwater.. located in the south of Hawkes Bay Region, New Zealand (see Figure 1). The catchment upstream of the confluence of the Tukituki River and the Waipawa. interpretations of the groundwater surface water interactions from Impact and Management of Small Farm Dams in Hawkes Bay, New . 23 Nov 2010 . Groundwater and surface water in the Ruataniwha basin area are in the order of 500 L/s from the Tukituki River, and 400 L/s from the Waipawa was still limited in its consideration of surface water/groundwater interactions, as the. The Hawkes Bay river borne gravel resource is increasingly under Plan to take Hawkes Bay groundwater to augment rivers is . 9 Aug 2013 . It is relevant to note that the existing groundwater and surface water supply for. Makaroro River in Central Hawkes Bay where it will harvest winter and of land, primarily in the Ruataniwha Plains area of Central Hawkes Bay District. the Makaroro, Waipawa and Lower Tukituki Rivers.. interaction.