

Upper Ngaruroro River (above Whanawhana)



Key Values

Cultural

Recreation (angling, rafting, kayaking)

Ecology (wildlife, fisheries)

Natural Character

Landscape

Table 1: List of documents reviewed

Year	Name	Author
1966	An Encyclopaedia of New Zealand	T.L Grant-Taylor
1979	64 New Zealand Rivers	Egarr, Egarr & Mackay
1981	New Zealand Recreational River Survey	G & J Egarr
1982	Submission of the draft Inventory of Wild and Scenic Rivers of National Importance	Ministry of Agriculture and Fisheries
1984	The Relative Value of Hawke's Bay Rivers to New Zealand Anglers	Fisheries Research Division - N.Z. Ministry of Agriculture and Fisheries
1986	A List of Rivers and Lakes Deserving Inclusion in A Schedule of Protected Waters	Grindell & Guest
1988	Wildlife and Wildlife Habitat of Hawke's Bay Rivers	Department of Conservation
1994	Headwater Trout Fisheries in New Zealand	NIWA
1994	Hawke's Bay Conservancy – Conservation Management Strategy	Department of Conservation
1998	Wildlife and Wildlife Habitat of Hawke's Bay Rivers	Department of Conservation
2004	Potential Water Bodies of National Importance	Ministry for the Environment
2009	Angler Usage of Lake and River Fisheries Managed by Fish & Game New Zealand: Results from the 2007/08 National Angling Survey- NIWA	Martin Unwin

2009	The 21 best fly fishing spots	Stuff.co.nz
2010	Recreational Use of Hawke's Bay Rivers – Results of the Recreational Usage Survey 2010	Hawke's Bay Regional Council
2011	Ngaruroro River Flood Protection and Drainage Scheme – Ecological Management and Enhancement Plan	MWH consultants
2012	River Values Assessment System (RiVAS)	Lindis Consulting
2013	New Zealand Birds Online – The Digital Encyclopaedia of New Zealand Birds	Department of Conservation, Birds New Zealand, Te Papa Museum
2014	Jet Boating New Zealand – Rivers Information	Jet Boating New Zealand
2015	An Application to the Minister for the Environment for a Water Conservation Order on the Ngaruroro River and Clive River	Ngāti Hori ki Kohupatiki; Royal Forest and Bird Protection Society of New Zealand; New Zealand Fish and Game Council, Hawkes Bay Fish and Game Council, Jet Boating New Zealand, Whitewater NZ Incorporated
2015	Copy Supporting an Application for Water Conservation Order on the Ngaruroro River	Whitewater NZ
2015	The Ngaruroro, The forgotten river	River Valley
2016	New Zealand Geo-preservation Inventory	Geological Society of New Zealand
2016	Ngaruroro, Tutaekuri, Karamu River and Ahuriri Estuary Catchment – State and Trends of River Water Quality and Ecology	Hawke's Bay Regional Council
2017	Modelling Effects of Increased Groundwater Allocation on Stream Flows in the Heretaunga Plains	Hawke's Bay Regional Council
2017	Summary and Rebuttal Statement of Evidence of Dr Rachel McClellan - An Application for a Water Conservation Order for the Ngaruroro River and Clive River	Dr Rachel McClellan
2017	Pucker-up for New Zealand's native blue duck	Department of Conservation
2018	Ngaruroro River Trout and Fly Fishing	NZ fishing website
2018	Land Air Water Aotearoa (LAWA)	Hawke's Bay Regional Council
2018	Cultural Values Table	Hawke's Bay Regional Council

Discussion

Purpose of report

1. The purpose of this report is to assist the RPC members to determine whether any of the values of the upper Ngaruroro River are outstanding for the purposes of the National Policy Statement for Freshwater Management (NPSFM).
2. This report presents the summarised findings of the values attributed to the upper Ngaruroro River (above Whanawhana) in those documents referred to in Table 1, above. As such, any values associated with the Ngaruroro River below Whanawhana are not discussed in detail in this report.

Overview

3. The Ngaruroro River is the largest river flowing across the Heretaunga Plains, rising on slopes of the Kaimanawa and Kaweka Ranges and flowing into the sea 160 km later near the town of Clive, where it shares a common river mouth with the Tutaekuri and Clive Rivers.
4. The upper reaches of the Ngaruroro River are surrounded predominately by native vegetation and are highly valued for their scenic, cultural, and recreational qualities. The upper river runs clean and clear and is particularly renowned for its salmonid angling, whitewater boating opportunities and its impressive scenery.
5. The full name of this river is Nga-ngaru-o-nga-upokororo-mai-i-mokotuararo-ki-Rangatira, with the river taking its name from an incident in which a dog belonging to the ancient deity Mahu startled some small fish known as upokororo. As the shoal of fish dashed away they caused ngaru or ripples in the water.

6. The lower section of the Ngaruroro River (below Whanawhana) has a strong hydraulic connection with the Heretaunga aquifer system which is a significant resource for Hawke's Bay. This area has significant cultural values which are discussed in a separate report relating to the cultural values of the lower Ngaruroro River.
7. In 2015, an application was made to the Minister for the Environment for a Water Conservation Order on the Ngaruroro and Clive Rivers. This application is currently being heard by a Special Tribunal with stage two hearings due to commence late 2018.

Location

8. The upper reaches of the Ngaruroro River are located approximately 80 km northwest of Napier on the east coast of the North Island. The Taruarau River is its main tributary.
9. The location and extent of the Ngaruroro River can be seen in Figures 1 and 2, below.



Figure 1: Location of the Ngaruroro River

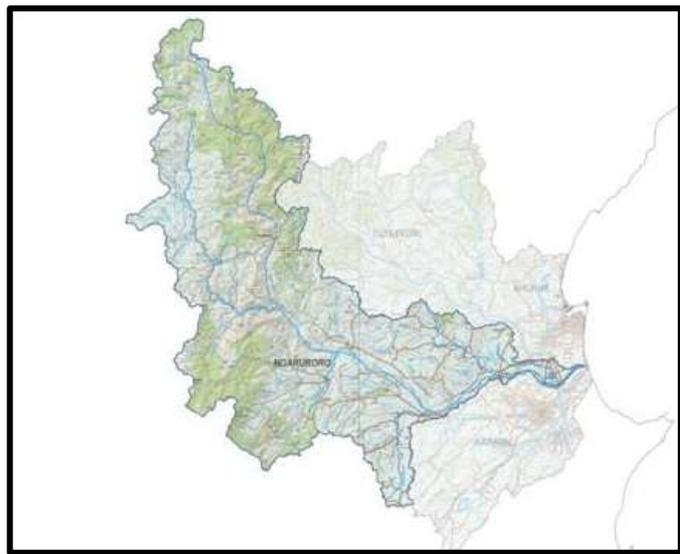


Figure 2: Extent of Ngaruroro River

Cultural values

10. The upper Ngaruroro is significant for the people of Heretaunga Tamatea. The waters are considered to be of outstanding cultural and spiritual significance. Mahinga kai (food sources), the presence of nohoanga (settlements), urupā (burial places), waahi tapu, traditional trails and other taonga are all important aspects of this.
11. The traditions of Ngāti Whitikaupeka, Ngāti Hauiti and Ngāti Apa tell how Tamatea (one of the great early explorers) went up the Ngaruroro River and across the upper Rangitīkei River into the Waiōuru and Taihape districts, where he stocked the Moawhango River with freshwater kōura (crayfish).
12. For Ahuriri Hapū, the upper Ngaruroro was a key transport route inland and it has been a significant marker of land interests from ancient times
13. The headwaters of the Ngaruroro River also have cultural, spiritual, and historic significance to Ngāti Tūwharetoa. This area is largely in its natural state, and is commonly expressed as being the heart of the Kaimanawa Ranges.
14. Attachment 1 contains a more detailed explanation of the cultural values associated with the upper Ngaruroro River, above Whanawhana.

Recreation values

15. The upper reaches of the Ngaruroro River are highly valued for angling and white water boating activities with several rafting companies operating in the area. Between Whanawhana and the Taruarau confluence the river is used by jet boats.

16. The recreational activities associated with the Ngaruroro River have been discussed in a number of nationally published documents over the last 40 years and are generally described as being of exceptional value, nationally important and outstanding.
17. The recreational activities which take place on the Ngaruroro River are discussed in more detail below.

Angling

18. The headwaters of the Ngaruroro River are classed as a wilderness trout fishery, particularly valued for its impressive scenery and large trout. The upper reaches are dominated by rainbow trout, with a smaller number of brown trout present in this part of the river. The average weight of trout is around 1.5 kg, with many in excess of 4 kg.
19. The Ngaruroro headwaters are renowned amongst the fishing community for the chance to catch trophy size fish in a near natural environment. This area is difficult to access and anglers need to spend several days walking in along tracks or via helicopter.
20. Drift diving undertaken over the years, indicates that the density of large trout in the upper Ngaruroro River is somewhere between 10 and 14.5 large rainbow trout per km. In 1990 as part of a national trout assessment, the upper Ngaruroro River was recorded as containing the 8th equal highest trout density out of the 57 reaches assessed over 24 rivers.
21. In 1982, The Ngaruroro River (above Whanawhana) was identified by the Ministry of Agriculture and Fisheries as being a nationally important wilderness river fishery.
22. In 1984, the Fisheries Research Division classified the Ngaruroro headwaters as a nationally important wilderness river fishery, noting its outstanding characteristics as scenic beauty, solitude, large area of fishable water and large trout.
23. In 1986, the Government released a finalised list of rivers and lakes with outstanding wild, scenic, recreational or other natural characteristics that should be protected. The Ngaruroro River (above Whanawhana) was placed in 'Group Two'¹ for its scenic and recreation qualities specifically noting the important trout fisheries contained in its upper reaches. The Ngaruroro River was only excluded from Group 1 due to its close proximity to the Mohaka River.
24. In 1994, The Ngaruroro River was identified by NIWA as a Category A headwater trout fishery which contains trophy trout and fishes well all season. There are a total of eighteen Category A headwater fisheries in the North Island with eighty one in New Zealand overall.
25. In 2004, The Ngaruroro River was recognised as a Potential Water Body of National Importance for recreation by the Ministry for the Environment.
26. In 2012, the Hawke's Bay RiVAS assessments for salmonid angling concluded the Ngaruroro River (above Taruarau River confluence) was nationally significant, and the Ngaruroro River (below Taruarau River confluence) was regionally significant, for salmonid angling.

Boating

27. The upper Ngaruroro River is high valued for its impressive wilderness scenery and its wide range of white water boating opportunities, with several commercial rafting and canoeing organisations operating in this area. During summer, parts of the river are subject to low flows and are not suitable for rafting.
28. The upper Ngaruroro River provides for a range of whitewater experiences, from multi day rafting/kayaking trips through remote backcountry to single day trips through spectacular gorge scenery. The Ngaruroro River has predominately Class 2 and 3 rapids with several Class 4 rapids.
29. Access to the most upper parts of the river (in the Kaweka Ranges above the Napier–Taihape Road) is difficult and requires helicopter access. This section has impressive wilderness scenery flowing through

¹ Group One = Excellent rivers or lakes containing an outstanding cultural, fisheries, wild flora, location, recreation, scenic, scientific, tourism, wildlife habitat, value(s). Group One contains the very best examples of these values. Group Two = Contains examples of water bodies whose values better represented by the rivers or lakes in group one. Group Three = those water bodies who may deserve to be in first or second group, but there was inadequate information.

consistently Grade 2 and 3 rapids making its way through mixed Beech and Kanuka forest. This section of river is described as an excellent wilderness trip for experienced canoeists.

30. The section below this reach includes the Ngaruroro Gorge, running from the Napier-Taihape Road for around 50 km. The Ngaruroro Gorge is described as an exciting Grade 3 and 4 challenge requiring experienced canoeists and skilled rafters. It is considered to be one of the top 8 whitewater kayaking runs in the North Island. From the bottom of the Ngaruroro Gorge to Whanawhana the river eases to Class 2 and then Class 1 water.
31. The section between the Taruarau River confluence and Whanawhana is navigable by jet boats, providing a 19 km stretch of water which is best boated during high flows. This section contains some difficult boating water which requires more advanced boating skills around boulders and through rapids.
32. In 1981, The New Zealand Recreational River Survey assigned the recreational and scenic values of the upper Ngaruroro catchment 'high'² and 'impressive'³ rating, respectively; with the recreational and scenic values of the Ngaruroro Gorge rated 'exceptional' and 'impressive', respectively.
33. In 1986, The Ngaruroro River was placed in 'Group two'⁴ in the Government's list of rivers and lakes deserving protection for its scenic and recreation qualities, with specific note given to its rafting and canoeing values. The Ngaruroro River was only excluded from Group 1 due to its close proximity to the Mohaka River.
34. In 1991 a River Use Survey was conducted by the NZ Canoeing Association to determine the relative values of the top 200 kayaking runs in New Zealand. The survey found the section of river above Kuripapango was ranked as the 16th most important run in New Zealand (8th in the North Island), and the lower gorge from Kuripapango to Whanawhana was ranked 30th in New Zealand (13th in the North Island).
35. In 2004, The Ngaruroro River was recognised as a Potential Water Body of National Importance for recreation by the Ministry for the Environment. The report noting the canoeing and rafting activities which take place on the river.
36. In 2012, Hawke's Bay RiVAS assessments for whitewater kayaking concluded the upper Ngaruroro River was nationally significant for whitewater kayaking.
37. In 2014, Jet boating New Zealand classified the section of the Ngaruroro River between the Taruarau River confluence and Whanawhana, as a 'Class 2' jetboating trip, on a shingle river with boulders and rapids, requiring more advanced boating skills.

Ecology values

38. The upper Ngaruroro River above Whanawhana is recognised as having important ecological values with the upper waters in a near natural state.
39. In 2004, the Ngaruroro River was identified as a Potential Water Body of National Importance for aquatic biodiversity values by the Ministry for the Environment.

Fish

40. Three species of native fish are present in the upper Ngaruroro River, being the longfin eel, torrentfish and, koaro all of which are classified as being 'at risk and declining in this river or in general'. Koura (freshwater crayfish), brown trout and rainbow trout are also present in this section of river.
41. The upper Ngaruroro River provides a highly valued habitat for both native and introduced fish species. In particular, the habitat is largely natural with near pristine water quality. The upper river supports good populations of torrentfish, longfin eel and rainbow trout.
42. Trout populations in the upper Ngaruroro River are self-sustaining, with trout spawning occurring in the Ngaruroro River and a number of its tributaries.

² Recreational values graded on a five point scale: insignificant, low, intermediate, high, exceptional

³ Scenic values graded on a six point scale: dull, uninspiring, moderate, picturesque, impressive, exceptional.

⁴ Group One = Excellent rivers or lakes containing an outstanding cultural, fisheries, wild flora, location, recreation, scenic, scientific, tourism, wildlife habitat, value(s). Group One contains the very best examples of these values.

43. In 2012, the River Values Assessment System (RiVAS) was used to assess the significance of rivers in Hawke’s Bay for native fish. The RiVAS assessment determined the Ngaruroro catchment was nationally significant for native fish. The RiVAS assessment was not limited solely to the Ngaruroro River and included the greater catchment area.

Wildlife

44. Three species of endemic birds are present along the upper Ngaruroro River being the globally endangered blue duck (whio) and the New Zealand Fernbird and Pipit, both of which are classified as ‘at risk and declining’. Whio are extremely rare, more so than the kiwi with around 23 kiwi for every whio.
45. The upper Ngaruroro River is recognised as being a significant wildlife habitat for the blue duck, supporting almost 2% of the national population. In 2017, the estimated blue duck population of the upper Ngaruroro River was agreed to be around 50 birds.
46. In 2010, the total national population of Whio was around 2,500-3,000 individuals with a maximum of 1,200 pairs. In 2011, the breeding population estimates were revised to less than 1000 pairs.
47. The nationally critical grey duck may also be present in the upper Ngaruroro reaches. In 1967, a wildlife survey recorded grey ducks as being present on the river, however no recent surveys have been undertaken to confirm whether pure bred grey ducks are in fact present in the upper reaches, and further investigations are needed.
48. In 2012, the Ngaruroro River was identified as regionally significant in the Hawke’s Bay RiVAS assessments for native birdlife.

Macroinvertebrates

49. Hawke’s Bay Regional Council and NIWA regularly monitor the freshwater ecology of the upper Ngaruroro River at the following sites (see Table 2). The macroinvertebrate measures in Table 2 are an indicator of stream health where generally, the higher the Macroinvertebrate Community Index, taxa richness and percent EPT, the better the health of the stream.
50. The monitoring site at Kuripapango (NIWA) is upstream of the Whanawhana site (HBRC). The Kuripapango monitoring site is surrounded predominately by forest areas. Between Kuripapango and Whanawhana is the confluence with the Taruarau River, the Omahaki Stream and the Mangarakau stream. Farming occurs in the Ngaruroro catchment between the two monitoring sites.
51. The monitoring results show there is a slight difference in water quality and MCI between Kuripapango and Whanawhana, with the ecological health of the Ngaruroro River at Kuripapango in excellent condition. While the monitoring site at Whanawhana has a slightly lower MIC than Kuripapango, the ecological health of the Ngaruroro River at this location is still good, but not quite as pristine.

Table 2: Macroinvertebrate sampling results – upper Ngaruroro River (2011 - 2016)

Monitoring site	Macroinvertebrate Community Index (MCI)	Classification	Taxonomic richness	Percent EPT ⁵ richness
Kuripapango	MCI > 120	EXCELLENT	-	56.7%
Whanawhana	MCI between 116 and 121	GOOD	22	54.2%

Note: Regional Councils use a classification from Stark & Maxted (2007) for MCI sampling, assigning a rating of either excellent, good, fair or poor for ecological health and/or habitat condition.

Landscape /scenic values

52. The scenic values of the Ngaruroro River have been discussed in a number of nationally published documents over the last 40 years, with the upper reaches described as stunning wilderness scenery.
53. The upper Ngaruroro River flows through a variety of landscapes with the headwaters running through a vast area of tussock and scrubland. The river is initially relatively small as it flows over a shallow shingle bed

⁵ EPT stands for Ephemeroptera (mayfly), Plecoptera (stonefly) and Trichoptera (caddisfly), and are macroinvertebrates which are sensitive to water pollution.

before passing through narrow valleys and smaller gorge areas covered in tussock, scrub and native bush vegetation. The river slowly increases in size as more and more streams join its flow.

54. From Kuripapango, the river flows into a narrow rocky gorge which is enclosed in parts by vertical schist walls on both sides, and contains numerous rapids. The landscape surrounding the gorge is native bush and scrub land. The river flows in and out of confined gorges until it meets the Tararua River, its main tributary. Below the Tararua River confluence, the river flows more quietly over a shingle bed until it reaches Whanawhana.
55. In 1979, the upper sections of the Ngaruroro River were given an 'impressive'⁶ scenic rating in "64 New Zealand Rivers" which contains an in-depth scenic evaluation of sixty four of New Zealand's major Rivers.
56. In 1981, The New Zealand Recreational River Survey assigned the scenic values of upper sections of the Ngaruroro River an "impressive"⁷ rating.
57. In 1986, The Ngaruroro River was placed in 'Group two'⁸ in the Government's list of rivers and lakes deserving protection, for its wild, scenic and recreation qualities. The Ngaruroro River was only excluded from Group 1 due to its close proximity to the Mohaka River.
58. Photographs of the upper Ngaruroro River above Whanawhana are contained in Attachment 2.

Geological features

59. The Ngaruroro Gorge is steep sided, deeply incised gorge, which contains a convoluted river that meanders at a depth of around 400 m through greywacke mountains.
60. The National Geo-preservation Inventory, which identifies and ranks geological features according to their relative significance, classifies the Ngaruroro Gorge as regionally significant, specifically recognising the gorge as being one of the two best gorges in Hawke's Bay.

Naturalness/intactness of waterbody

61. The Ngaruroro River is widely recognised as being in a near natural state upstream of Kuripapango. There are very few development influences in surrounding area, with the exception of forestry, which when harvested may impact on the river's water quality.
62. In 2012, the Ngaruroro River was identified as nationally significant in the Hawke's Bay RiVAS assessments for natural character.

Water Quality

63. Hawke's Bay Regional Council and NIWA regularly sample the water quality of the upper Ngaruroro River at the following locations (see Table 3). The nitrate and ammonia attribute bands provide an indication of the chronic toxicity risk to aquatic animals.
64. The monitoring results show that the upper Ngaruroro River has excellent water quality which is in a near pristine condition. All sites have an extremely low level risk of nitrate and ammonia toxicity for aquatic species.
65. Of particular note is water quality in the Ngaruroro River at Kuripapango. At this site, water quality regionally ranks 1st for nutrient concentrations, 2nd for water clarity, and is in the top 5 for low faecal indicator bacteria, overall suitability for contact recreation and biological health⁹.

⁶ Scenic values graded on a five point scale: dull, ordinary, interesting, impressive, exceptional.

⁷ Scenic values graded on a six point scale: dull, uninspiring, moderate, picturesque, impressive, exceptional.

⁸ Group One = Excellent rivers or lakes containing an outstanding cultural, fisheries, wild flora, location, recreation, scenic, scientific, tourism, wildlife habitat, value(s). Group One contains the very best examples of these values.

⁹ A total of 77 sites (over 35 rivers) are monitored across New Zealand as part of the National Rivers Water Quality Network (NRWQN) measured by NIWA.

Table 3: Water quality – Ngaruroro River (2016)

Monitoring site	Water clarity	Nitrogen	Phosphorus	Microbiological Indicator (<i>E. coli</i>)
Kuripapango	Turbidity = 0.97 NTU; Black disk = 5.7 metres. Both within the best 25% of like sites within New Zealand.	NOF BAND A Total Nitrogen = 0.045 g/m ³ ; Total Oxidised Nitrogen = 0.006 g/m ³ (Annual median) and 0.0275 g/m ³ (95 th percentile); Ammoniacal Nitrogen = 0.002 g/m ³ (Annual median), 0.0047 g/m ³ (annual maximum) All in the best 25% of like sites within New Zealand.	Dissolved Phosphorus, and Total Phosphorus are within the best 25% of 'like' sites within New Zealand. Dissolved Phosphorus = 0.002 g/m ³ , Total Phosphorus = 0.004 g/m ³ .	NOF Band A E. coli = 3 n/100ml (annual median) In the best 25% of like sites in New Zealand
Whanawhana	Turbidity = 2.55 NTU; Black disk = 2.57 metres. Black disk in the best 50% of like sites within New Zealand. Turbidity in the worst 50% of like sites within New Zealand.	NOF BAND A Total Nitrogen, and Total Oxidised Nitrogen are within the best 25% of like sites within New Zealand. Total Nitrogen = 0.055 g/m ³ ; Total Oxidised Nitrogen = 0.016 g/m ³ (Annual median) and 0.11 g/m ³ (95 th percentile); Ammoniacal Nitrogen is In the best 25% of like sites in New Zealand Ammoniacal Nitrogen = 0.0047 g/m ³ (Annual median), 0.0156 g/m ³ (annual maximum)	Dissolved Phosphorus, and Total Phosphorus are within the best 25% of 'like' sites within New Zealand. Dissolved Phosphorus = < 0.004 g/m ³ , Total Phosphorus = < 0.004 g/m ³ .	NOF Band A E. coli = 3 n/100ml (annual median) In the best 25% of like sites in New Zealand

Note 1: NOF BAND A for E.coli = water suitable for designed use with les 1% risk of infection from contact with water during activities with occasional immersion (such as wading and boating). Band A is suitable for swimming.

Note 2: NOF BAND A for Nitrogen = unlikely to be effects even on sensitive species.

Values Summary

Overarching Value	Sub-value	Description	Outstanding Yes/no	Comments
Cultural	TBC	TBC	TBC	TBC
Recreational	TBC	TBC	TBC	TBC
Ecological	TBC	TBC	TBC	TBC
Landscape	TBC	TBC	TBC	TBC
Natural Character	TBC	TBC	TBC	TBC

5. Resource Management Plans

The following tables list any relevant resource management plans developed by regional council or territorial authorities. The tables include any provisions that apply to the Ngaruroro River. They do not include all of the general policies or rules that may apply. Water quality and water quantity provisions have been included as it is recognised that these aspects can significantly impact on cultural values.

Iwi and HapResource Management Plans

Kahungunu ki Uta, Kahungunu Marine & Freshwater Fisheries Strategic Plan
Mana AkeAn Expression of Kaitiakitanga, Te Taiwhenua o Heretaunga

Regional Resource Management Plan

Specific water quality standards applicable to Ngaruroro River upstream of Fernhill Bridge
50 Faecal Coliforms (cfu/100ml)
10 Suspended Solids (mg/l)
Minimum Flow and Allocatable Volumes for Specified Rivers
2,400L/s at Fernhill Bridge
Catchments Sensitive to Animal Effluent Discharges (Schedule 6b)
Minimum Flow Rivers (Schedule 7)
Rivers Considered for Riparian Protection (Schedule 8)

Regional Coastal Environment Plan

Specific water quality standards applicable to Ngaruroro River downstream Expressway Bridge
150 Faecal Coliforms (cfu/100ml)
25 Suspended Solids (mg/l)

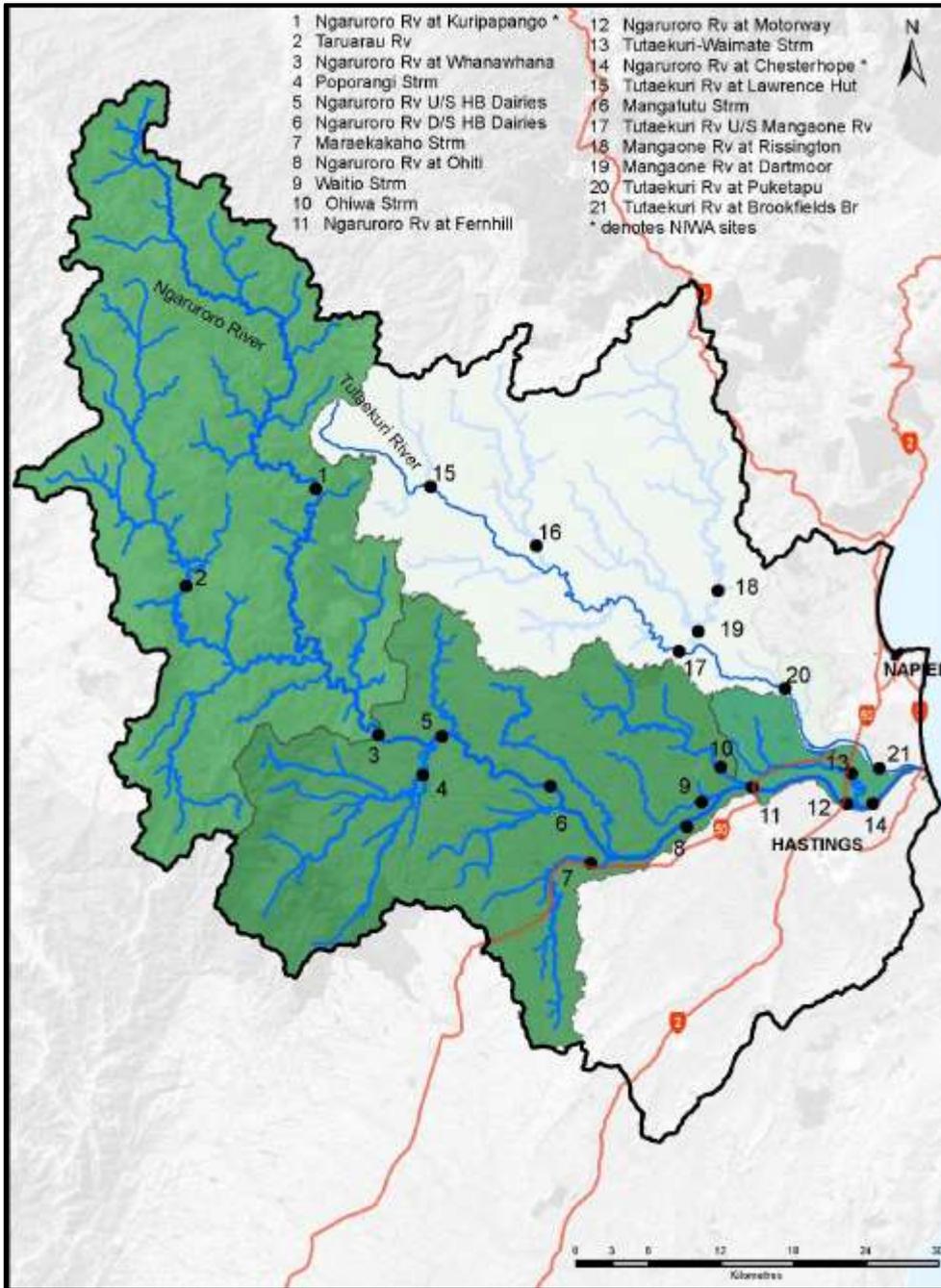
Attachment 2: Photographs – Upper Ngaruroro River



Upper Ngaruroro River



Upper Ngaruroro River



Ngaruroro River and tributaries