

# Upper Mohaka River (above Willowflat)



## Key Values

Cultural

Recreation (angling, rafting, kayaking)

Ecology (wildlife, fisheries, flora)

Landscape (scenic)

Natural Character

**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 for National Water and Soil conservation Authority
1982	Submission on the Draft Inventory of Wild and Scenic Rivers of National Importance	Ministry of Agriculture and Fisheries
1984	A National Inventory of Wild and Scenic Rivers	National Water and Soil Conservation Authority
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
1989	New Zealand Freshwater Fisheries Miscellaneous Report No. 25 Evidence presented to a hearing in respect of a national water conservation order for the Mohaka River	Electricity Corporation of New Zealand Limited
1990	Mohaka River National Water Conservation Order Application	Tribunal appointed by the Minister for the Environment
1992	Report and Recommendation of the Planning Tribunal - Mohaka River National Water Conservation Order Application	Planning Tribunal
1994	Headwater Trout Fisheries in New Zealand	NIWA
1994	Hawke's Bay Conservancy – Conservation Management Strategy	Department of Conservation

1994	Conservation Management Strategy (Volume II) for Hawke's Bay Conservancy 1994 – 2004	Department of Conservation
1998	Wildlife and Wildlife Habitat of Hawke's Bay Rivers	Department of Conservation
2004	Water Conservation (Mohaka River) Order 2004	New Zealand legislation
2004	Potential Water Bodies of National Importance	Ministry for the Environment
2008	Wetland Review Monitoring	Hawke's Bay Regional Council
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
2009	Death of a waterway	Stuff.co.nz
2010	Recreational Use of Hawke's Bay Rivers – Results of the Recreational Usage Survey 2010	Hawkes Bay Regional Council
2011	Taharua and Upper Mohaka Draft Strategy - A Discussion for Future Management	Hawke's Bay Regional Council
2012	River Values Assessment System (RiVAS)	Lindis Consulting
2014	Jet Boating New Zealand – Rivers Information	Jet Boating New Zealand
2015	Mohaka River Catchment – State and Trends of River Water Quality and Ecology	Hawke's Bay Regional Council
2016	Forest Lifeforce Restoration Trust, Annual Report 2015 – 2016	Forest Lifeforce Restoration Trust
2016	New Zealand Geo-preservation Inventory	Geological Society of New Zealand
2018	Mohaka 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
2018	New Zealand Waterfalls	NZ.waterfalls.co.nz
2018	Famous New Zealand Rivers	Fishing New Zealand

## 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 Mohaka 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 Mohaka River, above Willowflat in those documents referred to in Table 1, above. As such, any values associated with the Mohaka River below Willowflat are not discussed in detail in this report.

### *Overview*

3. The Mohaka River is a large river which rises in the Kaweka and Kaimanawa Ranges flowing into Hawke Bay 175 km later, near the town of Mohaka. The upper reaches of the Mohaka River are renowned for their spectacular scenery and exceptional whitewater boating opportunities.
4. The upper Mohaka River is in a near natural state, with high ecological values which include a number of threatened species of plants and animals. In 1996, the river was recognised as meeting the Ramsar Sites Criteria which identifies wetlands of international importance.
5. The upper Mohaka River is widely recognised as a top quality wilderness trout fishery, providing anglers with an opportunity to catch large trophy trout in a natural setting. A number of international visitors come to the area each year.
6. The Mohaka River has a total catchment area of 2440 km<sup>2</sup>. The land use in the upper catchment is predominately farming and plantation forestry. Dairy farming occurs on land surrounding the Taharua River which is a major tributary of the Mohaka River.

7. The Mohaka River is known for its stable riverbed which clears quickly after floods and has steady water levels all year round. There are no weed or cyanobacteria problems associated with the Mohaka River, however the quality of water flowing from the Taharua River into the Mohaka River has been steadily declining since the 1990s.
8. In 2004, the upper Mohaka River was recognised as containing nationally outstanding recreational and scenic characteristics, and a water conversation order (WCO) was put in place which restricted damming above State Highway 5. A WCO is the highest level of protection that can be afforded to any water body in New Zealand.

#### *Location*

9. The Mohaka River is located approximately 48 km northeast of Napier on the east coast of the North Island. Its main tributaries are the Waipunga, Taharua, Te Hoe and Hautapu rivers.
10. The location and extent of the Mohaka River can be seen in Figures 1 and 2, below.



Figure 1: Mohaka River

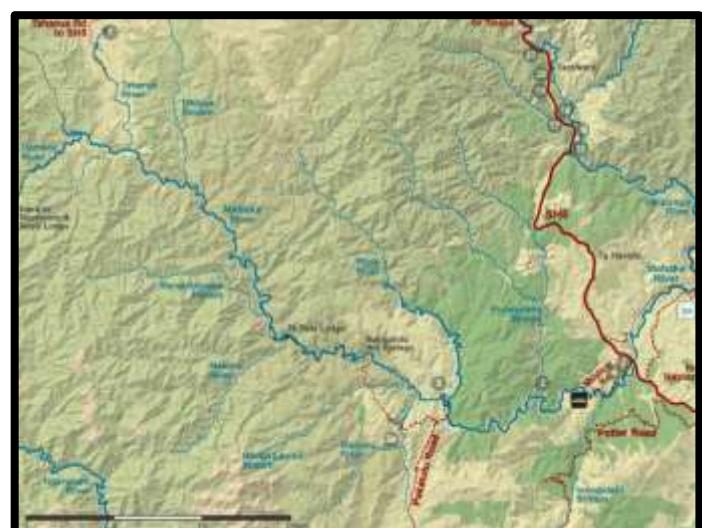


Figure 2: Mohaka River (above State highway 5)

#### *Cultural values \**

11. The upper Mohaka includes the overlapping areas of interest of four treaty settlement entities: Ngāti Hineuru, Ngāti Pāhauwera, Ahuriri Hapū and Ngāti Tūwharetoa. The Mohaka River has been used as a significant boundary marker to define areas of interest. Mohaka is said to have been the name of a river or stream in Hawaiki.
12. Many people who gave evidence in the various Waitangi Tribunal inquiries spoke about the sacralised qualities of this interior landscape, especially of the rivers. Traditionally, there were many pā, kāinga, cultivations, mahinga kai and urupā – many listed by people in Waitangi Tribunal evidence as being used in remembered history and since 1840. The landscape is a culturally dense one loaded with a wealth of place names and remembered events. The upper Mohaka was also a key route inland.
13. Hineuru kaumatua describe the wealth of resources provided by the Mohaka River. It was significant as a mahinga kai resource, the river was plentiful with fish species tuna, trout and koura. The forest around the Mohaka River was very dense and provided many important resources including harakeke, toitoi, birdlife and a range of plants used for medicinal purposes.
14. Attachment 1 contains a more detailed explanation of the cultural values associated with the upper Mohaka River, above Willowflat.

\* The HBRC and authors of this report are aware there are numerous areas, including waterbodies, where two or more iwi groups have agreed, shared interests and/or contested overlapping claims within the Hawke's Bay region. The information presented in this report is not intended to imply any exclusive rights over particular waterbodies for one or more iwi groups, nor does it confirm the validity of the claims of any group(s) over that waterbody. The information is solely for the purpose of recording important cultural and spiritual values identified by iwi groups in the region as sourced from existing published documents.

### *Recreation values*

15. The Mohaka River is widely recognised in New Zealand as a 'top quality wilderness trout fishery' and for its exceptional rafting and kayaking experiences. It contains a variety of water conditions for fishing and boating and is easy to access at various points throughout the catchment making it a highly valued recreational resource in Hawke's Bay.
16. The recreational activities associated with the Mohaka River have been discussed in a number of nationally published documents over the last 40 years, and are consistently described as outstanding, nationally important and exceptional.
17. In 1984, the Mohaka River was the only river in Hawke's Bay to be included in the Government's National Inventory of Wild and Scenic Rivers, included for its wide variety of recreational experiences which can occur in a diverse landscape.
18. In 2004, a WCO was placed over the Mohaka River to protect the river's outstanding scenic characteristics, trout fishery and rafting and canoeing values. A WCO is a special type of protection that is the equivalent of a national park status for a water body.
19. The recreational activities which take place on the upper Mohaka River are discussed in more detail below.

### **Angling**

20. The Mohaka River is classed as a wilderness and recreational trout fishery with exceptional scenic beauty. It is particularly valued for its clear, cool waters and high numbers of large trout which can reach trophy size. The headwaters are dominated by brown trout which is an unusual characteristic of a headwater fishery where both rainbow and brown trout co-exist.
21. The Mohaka River provides a range of fishing experiences from remote back country fishing, only accessible by a long walk or helicopter, to easily accessible, scenic areas, that contain high numbers of trout. The river has a significant biomass<sup>1</sup> of trout and twice as many large fish as other rivers in the Kaimanawa and Kaweka Ranges.
22. Drift diving undertaken in the 1990s indicates that the number of large trout in the upper Mohaka River are around 48 per km up to 70 per km in stretches. For biomass, the headwaters of the Mohaka River ranked 10<sup>th</sup> highest in New Zealand<sup>2</sup> and 4<sup>th</sup> highest in the North Island.
23. In 1982, the Mohaka River was identified by the Ministry of Agriculture and Fisheries as a nationally important scenic and recreational trout fishery. A total of six rivers in New Zealand were identified as being nationally important for these attributes.
24. In 1984, a report by the Fisheries Research Division identified the Mohaka River as supporting a nationally important recreational and scenic trout fishery. The Mohaka River was identified as having exceptional overall importance for its high use, scenic beauty, solitude, large trout and other recreational opportunities.
25. 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 Mohaka River was placed in 'Group One'<sup>3</sup> for its recreational qualities with specific reference to its nationally important trout fishery.
26. In 1994, the Mohaka 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 18 Category A headwater fisheries in the North Island.
27. In 2004, the Mohaka River was recognised as a Potential Water Body of National Importance for recreation by the Ministry for the Environment. Later that year, a water conservation order was placed over the Mohaka River, in recognition of a number outstanding features, including its outstanding trout fishery above State Highway 5.

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<sup>1</sup> For comparison with other river habitats, the abundance of fish or biomass takes into account the size of the fish and the size of the river.

<sup>2</sup> Out of 158 reaches

<sup>3</sup> 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.

28. In 2012, the Mohaka River was identified as nationally significant for salmonid angling in the Hawke's Bay RIVAS assessments.

#### ***Boating***

29. The Mohaka River is nationally renowned for its whitewater boating opportunities, with several commercial rafting and canoeing organisations operating in this area. Its stable water flows means the river can be paddled all year round, making it usable when many other rivers are not due to summer low flows.
30. The Mohaka River provides for a range of whitewater experiences above Willowflat, including single and multi-day rafting and kayaking trips. The river is particularly valued for it is increasing skill demands as the river progresses, allowing a graduation from beginner to intermediate paddling ability.
31. The Mohaka River is best known by paddlers for its technical Grade 4 and 5 rapids which can only be found in a few other rivers in New Zealand. In particular, the Te Hoe and the Mokonui gorges provide a demanding and exciting canoeing experience and have an international reputation.
32. In 1981, the New Zealand Recreational River Survey described the Mohaka River as one of the most frequently used rivers in the country, which provides for all levels of paddling difficulty along its length.
33. The upper Mohaka River provides a 55 km stretch of jet boating water between Pakaututu Road and Te Hoe. This area requires advanced jet boating skills, passing through gorges and around numerous rocks and boulders. This water is difficult to navigate and not suitable for family boating. The section of river between Te Hoe and Willowflat is a 10 km stretch of water which contains severe rapids and is unlikely to be used by jet boats.
34. In 1981, The Recreational River Survey assigned the recreational and scenic values of the upper Mohaka to Pungahuru an 'intermediate'<sup>4</sup> and 'moderate'<sup>5</sup> rating, respectively. From Pungahuru to Willowflat the recreational and scenic values were rated 'high' and 'impressive', respectively.
35. In 1986, The Mohaka River was placed in 'Group one'<sup>6</sup> 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.
36. In 2004, The Mohaka River was recognised as a Potential Water Body of National Importance for recreation by the Ministry for the Environment. Later that year, a water conservation order was placed over the Mohaka River, in recognition of the rivers outstanding rafting and canoeing values between the State Highway 5 Bridge and Willowflat.
37. In 2012, Hawke's Bay RIVAS assessments for whitewater kayaking concluded the Mohaka River was nationally significant for whitewater kayaking.
38. In 2014, Jet boating New Zealand classified the section of the Mohaka River between Pakaututu and Te Hoe, as a difficult 'Class 3' jet boating trip requiring advanced boating skills, not suitable for families. The section between Te Hoe and Willowflat is classified as 'Class 4' jet boating which is unlikely to be boated due to lack of flow and/or obstructions.

#### ***Ecology values***

39. The Mohaka River is recognised as a good example of an unmodified, deeply gorged river in New Zealand. The river has high ecological diversity, with a number of threatened endemic species of plants and animals present in the upper catchment.
40. Notably, in 1996 the Mohaka River was identified as meeting the Ramsar Sites Criteria which is part of an intergovernmental treaty and used to assist countries to identify wetlands of international importance.
41. In 2004, the Mohaka River was identified as a Potential Water Body of National Importance for aquatic biodiversity values by the Ministry for the Environment.

<sup>4</sup> Recreational values graded on a five point scale: insignificant, low, intermediate, high, exceptional

<sup>5</sup> Scenic values graded on a six point scale: dull, uninspiring, moderate, picturesque, impressive, exceptional.

<sup>6</sup> 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.

42. The ecological values associated with the upper Mohaka River are discussed in more detail below.

#### Fish

43. The upper Mohaka River has a highly valued habitat for both native and introduced fish species by providing a near natural environment with high water quality. Despite this, the upper reaches of the river have low native fish diversity with no rare or endangered species of native fish recorded in the area.
44. The upper reaches of the Mohaka River supports high populations of both longfin eel and large brown trout. Brown trout dominate the Mohaka headwaters which is an unusual characteristic of a mixed headwater fishery. Long finned eels are located throughout the catchment as far upstream as Poronui.
45. The most significant feature affecting the distribution of native fish in the upper Mohaka River is the Mokonui Gorge which acts as a natural barrier. This limits the native fish population above the gorge to only those native migratory fish species that are good climbers.
46. In 1996, the Department of Conservation identified the Mohaka River as meeting the Ramsar Sites Criteria which identifies wetlands of international importance, specifically noting that the river supports ten indigenous species of fish which adds to the rivers special value for maintaining the genetic and ecological diversity of the region.
47. In 2012, the Mohaka River was identified as regionally significant in the Hawke's Bay RIVAS assessments for native fish. The RIVAS assessment concludes that the average number of native fish in the Mohaka catchment is 40,305.

#### Wildlife

48. The Mohaka River provides habitat for many native bird species including the globally endangered blue duck (whio), and the nationally vulnerable long tailed bat which roosts in the gorges and riparian areas. Whio are extremely rare, more so than the kiwi with around 23 kiwi for every whio.
49. The Mohaka River is recognised as being a significant wildlife habitat for the blue duck, supporting around 2% of the national population. The Mohaka River is noted as containing a highly fragmented population of blue duck which consists of a number of isolated groups totalling around 60 birds.
50. In 1996, the Department of Conservation identified the Mohaka River as meeting the Ramsar Sites Criteria, which identifies wetlands of international importance. With regard to wildlife the report notes:
  - The river and its tributaries supports almost 2% of the world population of *Hymenolaimus malacorhynchus* (blue duck)
  - The river and its tributaries are of special value for their endemic plant and animal species.
  - In 2012, the Mohaka River (above the Te Hoe confluence) was identified as regionally significant in the Hawke's Bay RIVAS assessments for native birdlife.

#### Flora

51. Notable plants in the upper Mohaka catchment include *Pittosporum turneri* (commonly called Turner's kohuhu), the tussock *Chionochloa flavicans*, which is confined to small areas of the eastern North Island, and the calceolaria *Jovellana sinclairii*, a species restricted to the east coast of North Island. *Jovellana sinclairii* is thought to be the native herbaceous plant with the most restricted distribution in New Zealand.
52. In 1996, the Department of Conservation identified the Mohaka River as meeting the Ramsar Sites Criteria, which identifies wetlands of international importance. With regard to flora the report notes:
  - The river and its tributaries support a diverse fauna, including several species with restricted distributions, which adds to the river's special value for maintaining the genetic and ecological diversity of the region
  - The river and its tributaries supports populations of threatened species of plant, *Pittosporum turneri*
  - The river and its tributaries are of special value for their endemic plant and animal species.

### **Macroinvertebrates**

53. Hawke's Bay Regional Council regularly monitors the freshwater ecology of the Mohaka River at the following sites (see Table 2). The macroinvertebrate measures in Table 2 provide an indication of stream health, where generally, the higher the Macroinvertebrate Community Index, taxa richness and percent EPT, the better the health of the stream.
54. The monitoring results show that the ecological health of the Mohaka River is generally very good, with mild pollution potentially occurring downstream of the Waipunga confluence.

**Table 2: Macroinvertebrate sampling results – Mohaka River (median 2011 - 2016)**

Monitoring site	Macroinvertebrate Community Index (MCI)	Classification	Taxonomic richness	Percent EPT <sup>7</sup> richness
Mohaka site downstream of the Ripia River confluence	MCI >119	Excellent	21.5	62.4%
Mohaka River downstream of the Waipunga River confluence	MCI between 100 and 119	Good	24	50%

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**

55. The Mohaka River is known for its impressive scenic qualities which show a range of landforms. The river runs clean and clear through large native forest areas. Below the Taharua confluence the Mohaka River is shallow and stony, flowing through remote countryside with scrub covering the hills.
56. From Pungahuru, the Mohaka River is entrenched in spectacular gorges almost continuously down to Te Hoe. The increased flows in this section of the river make it more diverse and energetic with large numbers of big boulders, rapids, chutes and plunge pools. There are some powerful rapids within this section which cascade over and around the large boulders.
57. Between Pungahuru and Te Hoe, the river has several waterfalls which drop into the river from impressive heights. Of particular note is the Pungahuru Falls which is a scenic horsetail waterfall that drops 25 m into the Mohaka River.
58. In 1979, the Mohaka River was given an 'impressive'<sup>8</sup> scenic rating in the report titled 64 New Zealand Rivers, which contains an indepth scenic evaluation of sixty four of New Zealand's major Rivers.
59. In 1981, the New Zealand Recreational River Survey assigned the section of Mohaka River from its upper reaches to the Taharua confluence a 'moderate' scenic rating, and from Pungahuru to Te Hoe an 'impressive' scenic rating.
60. In 1984, the Mohaka River was identified on the Governments National Inventory of Wild and Scenic Rivers, with the final 1986 inventory placing the Mohaka River in 'Group one'<sup>9</sup> for its wide variety of recreational experiences in a diverse landscape.
61. In 2004, a water conservation order was placed over the Mohaka River identifying and protecting the outstanding scenic characteristics of the Mokonui and Te Hoe gorges.
62. Photographs of the upper Mohaka River above Willowflat are contained in Attachment 2.

<sup>7</sup> EPT stands for Ephemeroptera (mayfly), Plecoptera (stonefly) and Trichoptera (caddisfly), and are macroinvertebrates which are sensitive to water pollution.

<sup>8</sup> Scenic values graded on a five point scale: dull, ordinary, interesting, impressive, exceptional.

<sup>9</sup> 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.

### **Geological features**

63. The Pungahuru Falls and the Mohaka River Horseshoe Bend are the most notable geological features on the Mohaka River, above Willowflat.
64. The Pungahuru Falls are a ‘horsetail’ style type waterfall which are created as the Pungahuru Stream drops into the gorge above the Mohaka River. The falls have a total height of 25 m and are described as a ‘hidden gem’ on the New Zealand waterfalls website.
65. The Mohaka River Horseshoe Bend is an excellent example of a horseshoe bend on a meandering river. The National Geo-preservation Inventory, which ranks geological features according to their relative significance, classifies the Mohaka River Horseshoe Bend as regionally significant.

### **Naturalness/intactness of waterbody**

66. The Mohaka River is largely unmodified in its upper reaches. In particular, the section of the Mohaka River upstream of the Ripia River confluence, is noted for its naturalness and its pristine wilderness.
67. In 2012, Hawke’s Bay RiVAS assessments for natural character concluded the Mohaka River was nationally significant for natural character.

### **Water Quality**

68. Hawke’s Bay Regional Council regularly samples the water quality of the upper Mohaka River, above Willowflat at the following locations (see Table 3). The nitrate and ammonia attribute bands provide an indication of the chronic toxicity risk to aquatic animals.
69. The monitoring results generally show that the Mohaka River has excellent nutrient water quality, with very low levels of nitrogen and low to moderate levels of phosphorus. All sites fall within the NPSFM A band which reflects an extremely low risk of nitrate and ammonia toxicity for any aquatic species.

**Table 3: Water quality – Mohaka River (2016)**

Monitoring site	Water clarity	Nitrogen	Phosphorus	Microbiological Indicator ( <i>E. coli</i> )
Mohaka at Glenfalls (NIWA SITE)	Turbidity = 1.26 NTU; Black disk = 3.15 metres. Both within the best 50% of like sites within New Zealand.	NOF BAND A  Total Nitrogen, and Total Oxidised Nitrogen are within the best 50% of like sites within New Zealand.  Total Nitrogen = 0.346 g/m <sup>3</sup> ; Total Oxidised Nitrogen = 0.2745 g/m <sup>3</sup> (Annual median) and 0.363 g/m <sup>3</sup> (95 <sup>th</sup> percentile);  Ammoniacal Nitrogen is In the best 25% of like sites in New Zealand  Ammoniacal Nitrogen = 0.0047 g/m <sup>3</sup> (Annual median), 0.0134 g.m <sup>3</sup> (annual maximum)	Dissolved Phosphorus = Reactive Phosphorus, and Total Phosphorus are within the best 25% of ‘like’ sites within New Zealand.  Dissolved Phosphorus = 0.005 g/m <sup>3</sup> , Total Phosphorus = 0.01 g/m <sup>3</sup> .	NOF Band A  <i>E. coli</i> = 15 n/100ml (annual median)  In the best 25% of like sites in New Zealand
Mohaka site downstream of the Ripia River confluence	Turbidity = 1.38 NTU; Black disk = 2.6 metres. Both within the best 50% of like sites within New Zealand.	NOF BAND A  Total Nitrogen, and Total Oxidised Nitrogen are within the best 50% of like sites within New Zealand.  Total Nitrogen = 0.36 g/m <sup>3</sup> ; Total Oxidised Nitrogen = 0.27 g/m <sup>3</sup> (Annual median) and 0.441 g/m <sup>3</sup> (95 <sup>th</sup> percentile);  Ammoniacal Nitrogen is In the best 25% of like sites in New Zealand  Ammoniacal Nitrogen = 0.0046 g/m <sup>3</sup> (Annual median), 0.0126 g.m <sup>3</sup> (annual maximum)	Dissolved Phosphorus, and Total Phosphorus are within the best 25% of ‘like’ sites within New Zealand.  Dissolved Phosphorus = 0.005 g/m <sup>3</sup> , Total Phosphorus = 0.0085 g/m <sup>3</sup> .	NOF Band A  <i>E. coli</i> = 13 n/100ml (annual median)  In the best 25% of like sites in New Zealand

Monitoring site	Water clarity	Nitrogen	Phosphorus	Microbiological Indicator ( <i>E. coli</i> )
Mohaka River D/S Taharua River Confluence	Turbidity = 1.67 NTU; Black disk = 2.8 metres.  Both within the best 50% of like sites within New Zealand.	NOF BAND A  Total Nitrogen = 0.7 g/m <sup>3</sup> ; Total Oxidised Nitrogen = 0.61 g/m <sup>3</sup> (Annual median) and 0.98 g/m <sup>3</sup> (95 <sup>th</sup> percentile)  Total Nitrogen, and Total Oxidised Nitrogen are within the worst 50% of like sites within New Zealand.  Ammoniacal Nitrogen = 0.0031 g/m <sup>3</sup> (Annual median), 0.0069 g/m <sup>3</sup> (annual maximum)  Ammoniacal Nitrogen is in the best 25% of like sites in New Zealand	Dissolved Phosphorus = 0.006 g/m <sup>3</sup> , Total Phosphorus = 0.0105 g/m <sup>3</sup> .  Total Phosphorus is in the best 25% of like sites in New Zealand	NOF Band A  <i>E. coli</i> = 9 n/100ml (annual median)  In the best 25% of like sites in New Zealand
Mohaka River downstream of the Waipunga River	Turbidity = 2.3 NTU; Black disk = 1.9 metres.  Black disk test is within the best 50% of like sites in New Zealand.  Turbidity state is in the worst 50% of like sites within New Zealand.	NOF BAND A  Total Nitrogen = 0.28 g/m <sup>3</sup> ; Total Oxidised Nitrogen = 0.1975 g/m <sup>3</sup> (Annual median) and 0.286 g/m <sup>3</sup> (95 <sup>th</sup> percentile)  Total Nitrogen, and Total Oxidised Nitrogen are within the best 50% of like sites within New Zealand.  Ammoniacal Nitrogen = 0.0057 g/m <sup>3</sup> (Annual median), 0.0216 g/m <sup>3</sup> (annual maximum)  Ammoniacal Nitrogen is in the best 25% of like sites in New Zealand	Dissolved Phosphorus = 0.006 g/m <sup>3</sup> , Total Phosphorus = 0.011 g/m <sup>3</sup> .  Both are in the best 50% of like sites within New Zealand.	NOF Band A  <i>E. coli</i> = 12 n/100ml (annual median)  In the best 25% of like sites in New Zealand
Mohaka River upstream of the Taharua River Confluence	Turbidity = 0.86 NTU; Black disk = 5.3 metres.  Both within the best 25% of like sites within New Zealand.	NOF BAND A  Total Nitrogen = 0.055 g/m <sup>3</sup> ; Total Oxidised Nitrogen = 0.024 g/m <sup>3</sup> (Annual median) and 0.0617 g/m <sup>3</sup> (95 <sup>th</sup> percentile);  Ammoniacal Nitrogen = 0.0025 g/m <sup>3</sup> (Annual median), 0.0057 g/m <sup>3</sup> (annual maximum)  All are within the best 25% of like sites within New Zealand.	Dissolved Phosphorus = 0.0048 g/m <sup>3</sup> , Total Phosphorus = 0.006 g/m <sup>3</sup> .  Both are in the best 25% of like sites within New Zealand.	NOF Band A  <i>E. coli</i> = 7 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 less than 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 = high conservation values system. Unlikely to be effects even on sensitive species.

### Values Summary

Overarching Value	Sub-value	Description	Outstanding	Comments
			Yes/no	
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

# Attachment 1

## Upper Mohaka River – Cultural Values Report



### Key Values

Spiritual Values

Wāhi Tapu, wāhi taonga, wai tapu

Mahinga kai, Pā tuna

Pā, Kāinga

Rohe boundary

**Table 1: List of documents reviewed**

Year	Name	Author
1992	Wai 119: The Mohaka River Report	Waitangi Tribunal
1997	Fisheries Resource Inventory: The Mohaka River	Matt Hickey, Fish and Game NZ
1997	Cultural Health Assessment of the Mohaka, Waikari and Waihua Rivers	Ngāti Pāhauwera Development and Tiaki Trust
2004	Wai 201: The Mohaka ki Ahuriri Report	Waitangi Tribunal
2010	Ngāti Pāhauwera Deed of Settlement documents	Ngāti Pāhauwera and the Crown
2010	Background to Settlement Aspirations and Expectations	Ngāti Hineuru
2015	Ngāti Hineuru Deed of Settlement documents	Ngāti Hineuru and the Crown
2016	Ahuriri Hapū Deed of Settlement documents	Ahuriri Hapū and the Crown
2016	Statutory Acknowledgement Document	Hawke's Bay Regional Council
2017	Ngāti Tūwharetoa Deed of Settlement documents	Ngāti Tūwharetoa and the Crown

## **1. Introduction \***

### **Purpose**

The purpose of this report is to assist the RPC members to determine whether any of the cultural values associated with the upper Mohaka River are outstanding for the purposes of the National Policy Statement for Freshwater Management (NPSFM).

This report presents the summarised findings of the cultural values attributed to the upper Mohaka River in those documents referred to in Table 1, above.

The report summarises the cultural values associated with the upper Mohaka River into a series of categories. It is recognised that isolating the values into categories can be problematic from a Māori worldview and many of the values are part of a narrative that doesn't fit neatly into categories. However, the intention is not to take a reductionist or isolated approach to cultural values but to try and gain an appreciation of their significance and the level of detail available to progress a plan change. In preparing the reports, it became obvious that all waterways are part of a wider cultural landscape that weaves people and the environment into a rich history of cultural and spiritual association.

Ultimately, the Regional Planning Committee will need to decide what the appropriate threshold is for outstanding cultural values. Any objectives, policies or rules that are proposed to support outstanding waterbodies will be subject to scrutiny and potential challenges by those who may be affected by a plan change.

### **Importance**

The upper Mohaka includes the overlapping areas of interest of four treaty settlement entities: Ngāti Hineuru, Ngāti Pāhauwera, Ahuriri Hapū and Ngāti Tūwharetoa.

Mohaka is said to have been the name of a river or stream in Hawaiki.

### **Ngāti Hineuru**

Ngāti Hineuru has a strong cultural, spiritual, historical, and traditional association with the Upper Mohaka River. The River is one of the iwi's most important taonga and there are numerous settlements and sites of significance (Deed of Settlement).

Ngāti Hineuru's rohe focused on the upper Mohaka valley and a rich area of forest further inland. Their traditional boundaries are defined by rivers and mountains; the Mohaka, Te Hoe, and Waipunga rivers tend to be highlighted. Their main villages were at Waiparati, Te Haroto, Tarawera and Runanga.

Although in a mountainous region lying across the main divide, Hineuru's rohe was a strategic position as it lay across the main access routes from Hawke's Bay to Taupō, Rotorua and the Bay of Plenty. Prior to the confiscations in the 1860's, the District Land Purchase Commissioner noted that there was a major Māori route running inland from Hawke's Bay to Taupō. This was the Waipunga River down to Tarawera, to the Mohaka and across the Titiroa saddle to the Kaiwaka and Waiohingaanga (Esk) rivers. The route was also used frequently by early European travellers and traders.

Traditionally, they had many pā, kāinga, cultivations, mahinga kai and urupā – many listed by people in Waitangi Tribunal evidence as being used in remembered history and since 1840. The landscape is a culturally dense one loaded with a wealth of place names and remembered events.

### **Ngāti Pāhauwera**

The Mohaka River is significant to Ngāti Pāhauwera as taonga and the mauri of their spiritual and material wellbeing. It was significant as a highway, provider of mahinga kai and other resources important for cultural and commercial reasons. It was a traditional area of residence, urupā, places of spiritual and cultural significance.

Ngāti Pāhauwera's traditional tribal territory is from the Te Hoe river junction to its mouth.

Te Heru o Tureia (Historic Reserve) is near the Mohaka River and is of paramount importance as a kāinga, mahinga kai and the burial place of high-ranking Ngāti Pāhauwera ancestors, including Te Kahu o Te Rangi.

\* The HBRC and authors of this report are aware there are numerous areas, including waterbodies, where two or more iwi groups have agreed, shared interests and/or contested overlapping claims within the Hawke's Bay region. The information presented in this report is not intended to imply any exclusive rights over particular waterbodies for one or more iwi groups, nor does it confirm the validity of the claims of any group(s) over that waterbody. The information is solely for the purpose of recording important cultural and spiritual values identified by iwi groups in the region as sourced from existing published documents.

## *Ahuriri Hapū*

Ahuriri Hapū also state a cultural, spiritual, historical, and traditional association with the Mohaka River. Like the Upper Ngaruroro, it was a key transport route inland and it has been a significant marker of land interests from ancient times (Deed of Settlement).

The upper Mohaka River contained renowned eeling grounds and Ahuriri Hapū established transient camps there during the eeling season.

## *Ngāti Tūwharetoa*

Ngāti Tūwharetoa have a strong affiliation with the Upper Mohaka River, which results in a special relationship with Ngāti Pāhauwera because the river is shared by both.

### **2. Spiritual Values**

Many people who gave evidence in the various Waitangi Tribunal inquiries spoke about the sacralised qualities of this interior landscape, especially of the rivers (notably the Mohaka, Waipunga, Hauturu and Te Hoe).

The Mohaka River provided drinking water, was a source of spiritual cleansing, and was considered to have healing properties. It was used for the healing of women after they had given birth, used for the washing of Tupapaku and was an important part of the ta moko process.

Mangatutu Hot Springs and Mangatainoka Hot Springs located in the upper reaches of the Mohaka River have been used since the beginning of Māori occupation. They were of special significance to the early Māori.

### **3. Wāhi tapu, wāhi taonga, wai tapu**

Orangikapua was a kāinga and wāhi tapu, located on the Mohaka River very near to its junction with the Ripia River. According to traditional sources there were people killed here, and it was the site of a large cemetery.

### **4. Mahinga kai**

Hineuru kaumātua describe the wealth of resources provided by the Mohaka River. It was significant as a mahinga kai resource, the river was plentiful with fish species tuna, trout and koura. The forest around the Mohaka River was very dense and provided many important resources including harakeke, toitoi, birdlife and a range of plants used for medicinal purposes. Hineuru people hunted on all over Waitara block until the native bush was cleared in recent years and took eels from the streams that ran into the Mohaka.

The rivers and their beds did not only provide kai - a range of stones were highly prized, especially for hangi stones. Stones were also used for paths, anchors, weapons, tools, walls and tuahu. Shingle and sand were used for seed raising, improving drainage and retaining heat loss in soils. Three types of volcanic stone were found in the Mohaka River. Taupanga, (a speckled greyish rock used for hangi), Opunga, (a "whitish rock used for hangi and adzes"); Kowhatu Makauri a blue stone (used for adzes and patu, and hangi). Hangi stones were an important resource which were gathered and used to heat dwellings as well as to cook food.

Te Wero o Maru is a Pā tuna on the Mohaka and Hinaki o Kotihe and Hinaki o Kotene are places where eel traps were set.

The Ripia River was utilised as a mahinga kai.

Ngāti Hineuru had an agreement with Ngāti Pāhauwera which allowed them to fish at the river mouth at certain times when the kahawai were running. In return, Pāhauwera had access to hinterland areas when food on the coast was scarce. Hence the Ngāti Pāhauwera whakatauki: Tangitu ki te moana, maungaharuru ki uta.

### **5. Pā, Kāinga, ara**

Hineuru had settlements and a number of significant historical pā, kāinga sites, wāhi tapu along the Mohaka River, and it was used as a key transport route inland.

Archaeologists suggest that until the early or mid nineteenth century the population was relatively dense with competition for resources necessitating defenses around living areas and food storage pits and/or the location of sites hidden or difficult access places. Many settlements on the Mohaka were in proximity to routes and crossings.

An archaeological survey by Bain (1992) notes that:

....between Kakariki and Te Hoe indicate a clear pattern of settlement associated with known river crossings. Where the Mohaka River can be crossed, settlement is concentrated, and it was sparse in the intervening areas although the landscape might suggest suitable sites.

One of the principal routes taken by tribes entering the Mohaka Catchment from the north was via the Hautapu stream that runs into the Te Hoe River. The routes that travellers could take from the Mohaka and Te Hoe confluence included:

- Follow the Mohaka downstream to Mohaka and the sea
- Follow the river downstream to Kakariki then cross to follow the trail to Wairoa
- Climb the Maungaharuru to Pohokura and descend to Tutira
- Follow the Mohaka upstream and cross over Titiokura or Ranga a Tawhao near Puketitiri
- Cross the Mohaka and take a number of different routes inland

Orangikapua was a kāinga and wāhi tapu, located on the Mohaka River very near to its junction with the Ripia River. According to traditional sources there were people killed here, and it was the site of a large cemetery.

## 6. Rohe boundary

The Mohaka River has been used as a significant boundary marker to define areas of interest.

Ngāti Hineuru's traditional boundaries are defined by rivers and mountains: in this respect Titiokura, Maungaharuru, and the Mohaka, Te Hoe, and Waipunga rivers tend to be highlighted.

The Ripia River was a boundary between the Te Matai block and the Tarawera block, which are both of importance to Hineuru.

## 7. Archaeology

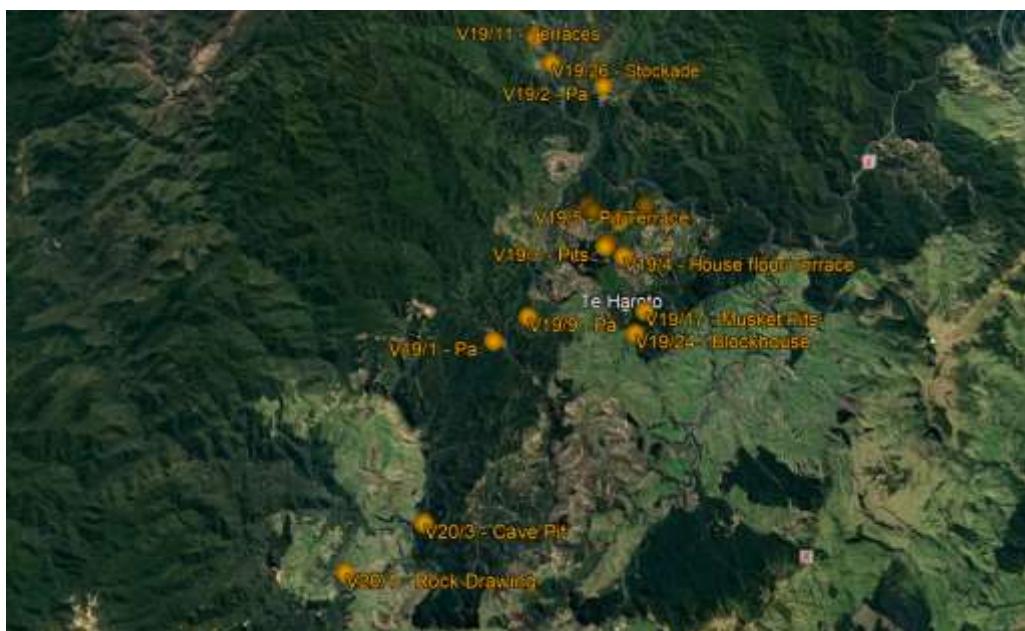


Figure 1: Archaeological sites in the Upper Mohaka

## 8. Statutory Acknowledgement Areas of Interest

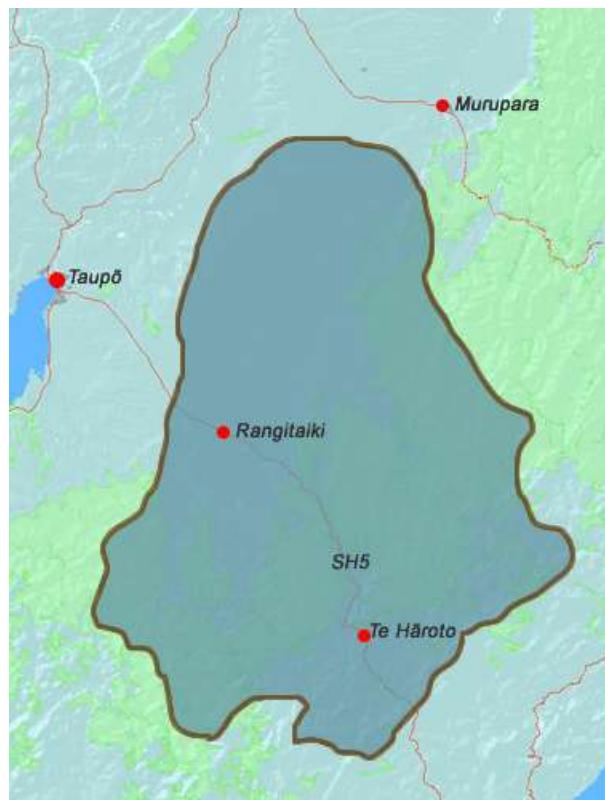


Figure 2: Ngāti Hineuru Area of Interest



Figure 3: Ngāti Pāhauwera Area of Interest

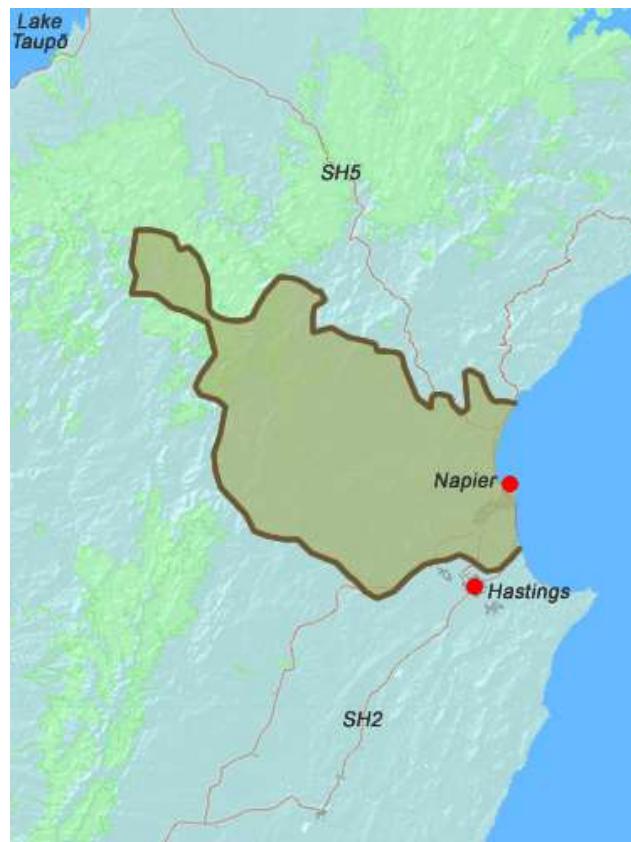


Figure 4: Ahuriri Hapū Area of Interest

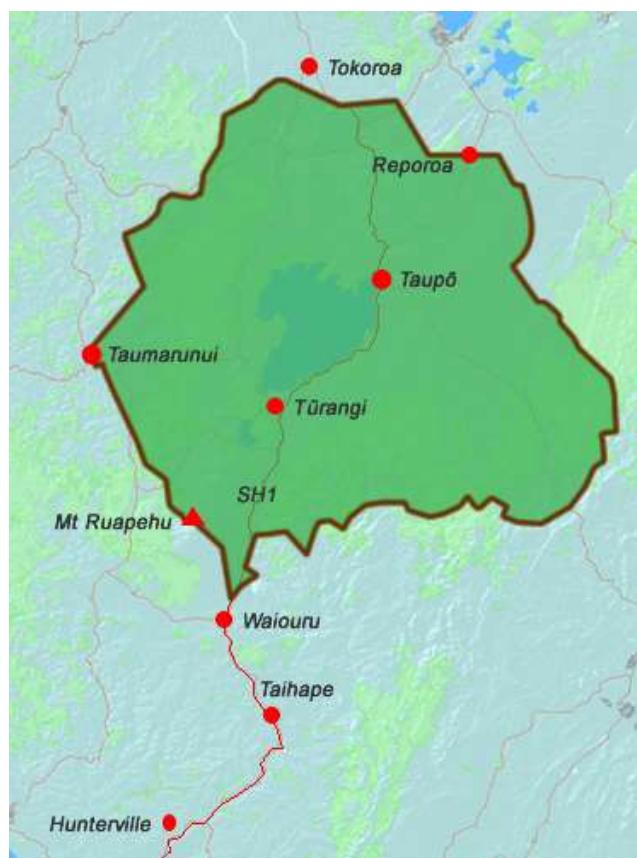


Figure 5: Ngāti Tūwharetoa Area of Interest

## **9. Resource Management Plans**

The following tables list any relevant resource management plans developed by iwi/hapū, the regional council or territorial authorities. The tables include any specific provisions that apply to the Upper Mohaka 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.

### **Regional Resource Management Plan**

Specific water quality standards apply to the Mohaka River

- 50 Faecal Coliforms (cfu/100ml)
- 10 Suspended Solids (mg/l)

Catchments Sensitive to Animal Effluent Discharges (Schedule 6b)

Rivers Considered for Riparian Protection (Schedule 8)

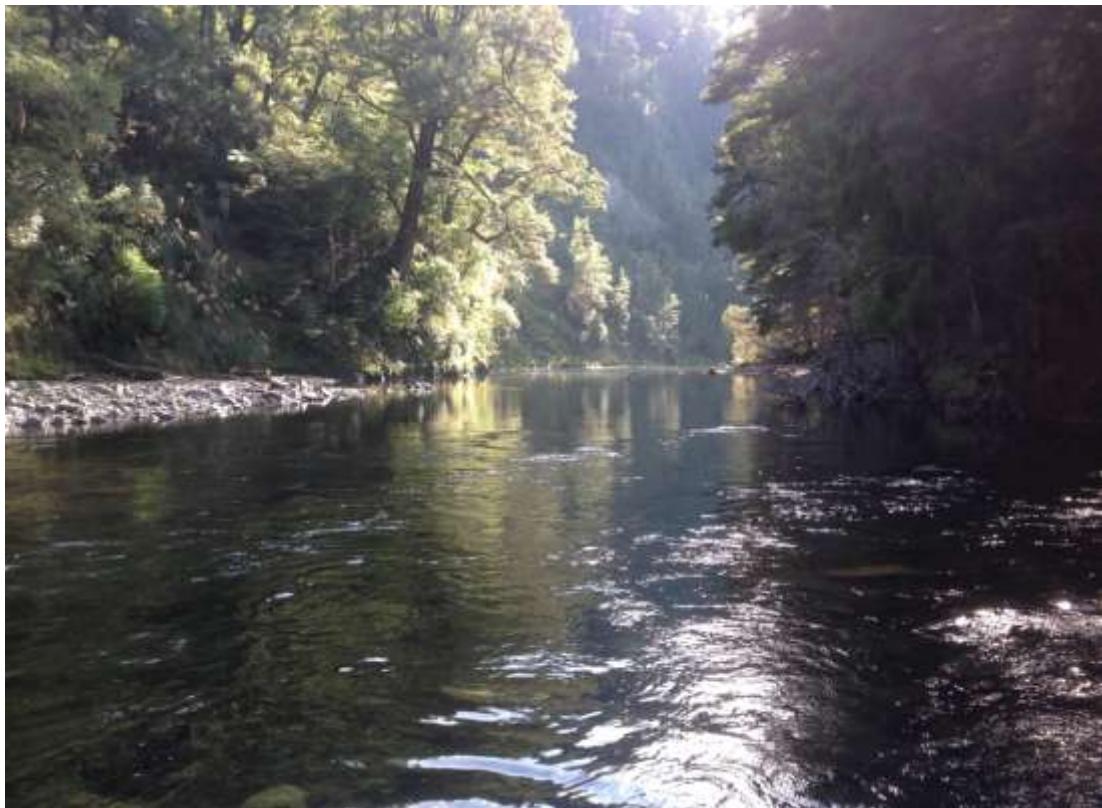
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### **Regional Coastal Environment Plan**

Specific water quality standards apply to Mohaka River Catchment

- 50 Faecal Coliforms (cfu/100ml)
  - 10 Suspended Solids (mg/l)
-

## Attachment 2: Photographs - Upper Mohaka River



Upper zone - Mohaka River



Downstream of the Taharua Confluence



Mohaka River



Mohaka River