

Waterbody	Site	Physical Attributes	Values	Issues
Cam River Reach 1	Kaiapoi River to Revells Road	Deep, wide, tidal and silty. Long water residence time.	Significant Cultural Landscape - important source of food for tangata whenua. Mahinga Kai and Taonga species including mullet, long fin and short fin eel, flounder and common bully, and Koura, Kakahi and Shrimp. Recreation - Fishing, kayaking and boating. "Priority river" for esplanade under the Waimakariri District Plan. Established esplanade. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), and Transport and tauranga waka.	Degraded water quality. Access for Whanau. Adjacent Landuse. Poor data availability. Excessive bed sediment.
Cam River Reach 2	Revells Road to junction of Three Brooks	Wide river-like reach. Shallower than Reach 1. Gravel runs in some places.	Significant Cultural Landscape. Recreation - good Fish habitat. Fishing for trout particularly brown trout. Prime fishing reach. "Priority river" for esplanade under the Waimakariri District Plan. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), and Transport and tauranga waka.	Bank management. Excessive bed sediment. High <i>E. coli</i> levels.
Cam River Reach 3	Brooks and upper Cam to source	Smaller streams with variable depths and forms	Significant Cultural Landscape. "Priority river" for esplanade under the Waimakariri District Plan. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Adjacent land use. Poor data availability. Excessive bed sediment. High <i>E. coli</i> levels.
Cam River Reach 4	Tuahiwi Drain	Silted and degraded. Roadside Drain. Incised. Extensively straightened.	Significant Cultural Landscape. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Excessive macrophyte growth. Poor bank and riparian management. Low flow. Poor data availability. Straightening and channel modification. Excessive bed sediment.
North Brook	Marsh Road	Increasing area of urban reaches. Contribution from North Brook lake waters and from old oxidation ponds. Large wide channel. Connected to Ashley shallow groundwater.	Extensive ecological values. Increasing amenity values. Northbrook ponds have significant recreation values and heritage values. Indigenous vegetation. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Urbanisation of spring-heads. Urban stormwater inputs. Closure of water races. Excessive macrophyte growth. Excessive bed sediment.
Middle Brook	Marsh Road	Smallest brook. Drains Rangiora's Matawai swamp forest reserve.	NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Closure of water races. Poor data availability. Excessive bed sediment.
South Brook	Marsh Road	Modified channel runs through industrial area. Urban stormwater treatment instream. Urban areas 500m from springhead.	Provides reliable quantities of high quality water to the Cam which is a significant cultural landscape (COMAR). NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Closure of water races. Possible stormwater management issues instream. Poor invertebrate community health. Excessive bed sediment.
Greigs Drain	Greigs Drain Road	Deep, narrow, swift spring-fed run. Water source largely from Waimakariri River. Largely channelised for the purpose of agriculture. Not tidal. Silty bed sediment.	Good Trout habitat. Amenity value for adjacent landowners. Land drainage. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Culvert at motorway is a fish barrier that isolates Griegs drain from the sea. Adjacent land management and drain maintenance. Poor data availability. Excessive bed sediment.

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No. 7 Drain Reach 1	Main Drain Road Culvert/Flaxton Road Drain	Large incised roadside drain.	Mahinga Kai. Flow contribution to Cust Main Drain. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Industrial stormwater. Poor data availability. Excessive bed sediment.
No. 7 Drain Reach 2	Tributaries	Small agricultural land drains. More natural than Reach 1.	Flow contribution to Cust River Reach 1. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Urban encroachment and agricultural use. Poor data availability. Excessive bed sediment.
Ohoka Stream Reach 1	Kaiapoi River confluence to Christmas Road	Deep and wide runs often willow lined.	Fly fishing. Amenity and recreational use. Formed walkway along Ohoka Stream. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Excessive macrophyte growth. Excessive bed sediment. High <i>E. coli</i> levels. High nitrate levels.
Ohoka Stream Reach 2	"the rest"	In some places there are modified (straightened and deepened) drains. Gravel bed in places but often silty bottoms. Incised drains with relatively steep banks.	Good instream habitat for juvenile brown trout, eels and other native fish species. Community Planting. Amenity values. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Conversion from natural drainage patterns to engineered. Excessive macrophyte growth. Excessive bed sediment. Specific tributaries going dry. Poor invertebrate community health.
Kaiapoi River Reach 1	Tidal Kaiapoi River to Waimakariri River	Deep wide tidal Reach. Historically the north branch of the Waimakariri River.	Culturally Significant (Mahaanui). Cure Boating Club clubhouse - rowing. Coast guard facilities. Dragon boat racing and waka-ama paddling. Port of Kaiapoi and navigation channel to Waimakariri. Fishing in the tidal reach of the Kaiapoi includes whitebait, trout and salmon. Riverside Walkway. Significant site for mahinga kai gathering. Limited taonga species are present. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), Transport and tauranga waka.	Saltwater intrusion. Excessive sediment from upstream catchments and Waimakariri back-flow. Seasonally poor water quality. Algal scums and blooms. Poor recreational water quality health. High <i>E. coli</i> levels.
Kaiapoi River Reach 2 (S	Three Springs Junction to Tram Road	Deep, wide and swift flowing. Banks mixed - slowly urbanised by Silverstream subdivision.	Culturally Significant (Mahaanui). Urban amenity values. Recreation - Significant salmon and trout run and fishery. Mahinga kai gathering. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), Transport and tauranga waka.	Ford at Swing Bridge. 4WD. Surrounding land uses. Poor invertebrate community health. Excessive macrophyte growth. Excessive bed sediment. High and increasing trends in nitrates. High and increasing trends in dissolved inorganic nitrogen (DIN). Potential nitrate toxicity effects.
Kaiapoi River Reach 3 (S	Tram Road to Heywards Road	Shallower than reach 1. Extensive gravel reaches.	Culturally Significant (Mahaanui). Trout and Salmon spawning habitat. Important fishing reach. Silverstream reserve. Amenity values. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), Transport and tauranga waka.	Excessive macrophyte growth. Excessive bed sediment. High and increasing trends in nitrates. High and increasing trends in dissolved inorganic nitrogen (DIN). Potential nitrate toxicity effects.

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Kaiapoi River Reach 4 (S	Heywards Road to Spring Heads	Multiple spring heads and smaller channels. Mixed groundwater flow from the Waimakariri River and the plains. Still in old bed of Waimakariri River, so surrounded by gravel rather than typical wetland soils.	Culturally Significant (Mahaanui). Amenity values - largely lifestyle blocks. Fishery values. Previously had trout and salmon. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Stock in waterways. Excessive macrophyte growth. Excessive bed sediment. High nitrate levels. High dissolved inorganic nitrogen (DIN) levels. Potential nitrate toxicity effects.
Kaiapoi River Reach 5 (associated tributaries and drains)	Old bed Eyre River/ Eyre Main Drain, Englefield Drain,	Deep incised roadside drains and farm drains.	Culturally Significant (Mahaanui). Mahinga Kai. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Drain maintenance and agricultural impacts. Poor data availability.
Cust River Reach 1 - Cust Main Drain	Waimakariri to No.1	Constructed drain. Clean loose gravels. Extensive drainage network feeding in. Steady base flow.	Good Habitat - high diversity of fish species. Popular for trout fishing and whitebaiting in the lower reaches. Tuna (eel) found in varying numbers. Banks of the Cust Main Drain are popular for walking groups and dog walking. The river sustains healthy populations of taonga species. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Limited access to the river. Willows. Adjacent land use. Poor invertebrate community health. High cyanobacteria cover at times. Occasionally excessive bed sediment. High dissolved inorganic nitrogen (DIN) levels. High nitrate levels.
Cust River Reach 2	Drying reach - No. 1 to Oxford Bridge	Broad gravel bed. Intermittently flowing in some seasons.	Fish passage. Seasonal fishery. Good brown trout fishery. "Priority river" for esplanade under the Waimakariri District Plan. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Potential extension of drying durations. No continuous walkway for recreation (Sparrow, 2016). Poor data availability.
Cust River Reach 3	Oxford Bridge to bottom of foothills	Variable flow - flash flows. Can go through deeply incised heavy soils. May have connections from the Ashley.	Tuna (eel) are present in northern tributaries. "Priority river" for esplanade under the Waimakariri District Plan. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Poor data availability.
Cust River Reach 4	Headwaters	Multiple small streams. Flash flows. Easterly extent, limited contribution in nor-west.	Headwater habitat for native species. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Poor data availability.
Cust River Reach 5	Hunters Stream (confluence rangiora-oxford road)		NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters).	Poor data availability.

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Courtenay Stream Reach 1	Kaiapoi River confluence to Main North Road	Largely impounded because of tide gates and naturally tidal. Water depth when ponded 1-2m or more. A lot of accumulated sediment that leads to stagnation.	Significant Cultural Landscape Area that includes Kakanui Pa. Courtney Lake is a recreation site for fishing. Reach 1 is fished and used for kayaking and walkways. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), Commercial and industrial use, Transport and tauranga waka.	Excessive and anoxic bed sediment causing bad odours and appearance (the result of flood gate and lack of flow). Invasive vegetation specifically willows (COMAR)
Courtenay Stream Reach 2	Main North Road to above minimum flow site	Swift flowing water. Gravel bed dominated. Short reach.	Good trout habitat. Fast runs. Previously popular fishing site. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), Commercial and industrial use, Transport and tauranga waka.	Loss of water flowing in from adjacent wetland. Poor data availability.
Courtenay Stream Reach 3	above minimum flow site to the motorway	Deep sluggish drain with silty bottom. Narrow riparian margin. Flows through industrial area.	Small amount of fishing activity. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), Commercial and industrial use, Transport and tauranga waka.	Barriers to fish passage. Industrial discharges in upper extent of reach. Extensive channel modification. Excessive bed sediment.
Courtenay Stream Reach 4	Kaikanui Stream	Largely rainfall fed. Largely disconnected from groundwater and spring sources at Griegs Drain and under the motorway. Stormwater system for urban Kaiapoi with stormwater treatment ponds in stream at confluence with Courtenay.	Kaikanui is an old Ngai Tahu kainga nohoanga (established village area of occupation). Traditionally an outpost of Kaiapoi Pa. Mahinga Kai area (Te Whakatau Kaupapa). Urban amenity. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), Commercial and industrial use, Transport and tauranga waka.	Disconnected from Courtney Stream and treated as an urban drainage system. Stormwater contaminants. Excessive bed sediment.
Saltwater Creek Reach 1	Coast to Factory Road	Extensive ponded tidal reach. Extension of the Ashley Estuary. Soft sediment. Salt marsh. Saltwater Creek joins the Ashley Estuary as a meandering tidal swampland.	Mahinga Kai - high use value (Mahaanui). Mahaanui identifies Saltwater Creek as a cultural landscape. High cultural and recreational values because of extension from Ashley Estuary. Whitebait spawning. Extensive amount of indigenous vegetation remaining - salt marsh vegetation to flax swamp. Supports a range of taonga species. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Transport and tauranga waka.	Access from Highway. Freedom Camping. Water quality from catchment. Excessive bed sediment. Discharges from Board Mill (pulp and paper mill) in catchment. Invasive weeds.
Saltwater Creek Reach 2	Factory Road to Upper Sefton Road	Non tidal. Standard small scale tributaries with gravel beds. Watercourses and users reliant on water from Ashley River.	Mahinga Kai - high use value (Mahaanui). Mahaanui identifies Saltwater Creek as a cultural landscape. Amenity values, NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Discharges from Board Mill (pulp and paper mill) in catchment. General land use issues. Poor invertebrate community health. Excessive bed sediment.

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Saltwater Creek Reach 3	Above Upper Sefton Road	Flows intermittently during the summer.	Mahinga Kai - high use value (Mahaanui). Mahaanui identifies Saltwater Creek as a cultural landscape. Limited due to intermittent nature. <i>No info in rec or COMAR report.</i> NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Transport and tauranga waka.	Discharges from Board Mill (pulp and paper mill) in catchment. Excessive bed sediment.
Little Ashley Reach 1	Waikuku to 87 Tulls Road	Tributary of Waikuku Stream. Deep incised physical channel. Spring-fed from Ashley River.	Mahinga Kai - high use value (Mahaanui). Mahaanui identifies Little Ashley as a cultural landscape. Extension of Waikuku Stream in terms of ecological habitat. Sustains populations of tuna (eels). Mahinga Kai - watercress is present. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Transport and tauranga waka.	General land use issues and drain management. Excessive bed sediment.
Little Ashley Reach 2	Rest	Farm drainage system.	Mahinga Kai - high use value (Mahaanui). Mahaanui identifies Little Ashley as a cultural landscape. Limited habitat due to access and modified for farm drainage. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water.	General land use issues and drain management. Excessive bed sediment.
Waikuku Stream Reach	Ashley River to Gressons Road	Deep run. Silty bottom. Reasonably incised into landscape. Modified watercourse that carries natural waters.	Mahinga Kai - high use value (Mahaanui). Eel Habitat and migratory passage way through to Reach 2. Amenity values. Taonga species sustained. Refuge for native fish when the lower Rakahuri is stressed. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Transport and tauranga waka.	Flood gate creates a potential barrier to fish passage. Stock to close to stream. Limited riparian cover. Poor invertebrate community health. Excessive macrophyte growth. Excessive bed sediment. High <i>E. coli</i> levels.
Waikuku Stream Reach	Gressons Road to Spring Head	Run and riffle. Narrow channel. Gravel. Variable habitat.	Mahinga Kai - high use value (Mahaanui). High habitat values. Spawning for salmon and trout. Habitats for a range of native species. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Transport and tauranga waka.	General land use issues. Lack of protection for spring-heads.
Taranaki Creek Reach 1	Ashley River to Kaiapoi Pa Road and Coastal Channel and wetland	Ponded peat stained water. Often sluggish or static water. Impounded behind Ashley stop bank flood gate. Tidal water level change.	Highly valued cultural landscape. Mahinga Kai - high use value (Mahaanui). Taonga species. Whitebait spawning sites. Established esplanade strip from Waikuku Beach Road to the stopbank with a walkway along the stream edge. "Priority river" for esplanade under the Waimakariri District Plan. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Transport and tauranga waka.	Impounded behind Ashley stop bank flood gate. Flood gates serves as a barrier to fish passage. Invasive weeds. Access at Pa Road. Stock Access (Mahaanui). Poor invertebrate community health. Excessive macrophyte growth. Excessive bed sediment. High <i>E. coli</i> levels.

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Taranaki Creek Reach 2	Rest	Highly modified. Silty incised drainage channel. Lesser spring flows because further away from Ashley River.	Taranaki Creek is a highly valued cultural landscape. Mahinga Kai - high use value (Mahaanui). "Priority river" for esplanade under the Waimakariri District Plan. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Urban development pressures. Cross-catchment diversions. Culverts that block and serve as barriers to fish passage. Weed control. Poor invertebrate community health. Excessive macrophyte growth. Excessive bed sediment. High E. coli levels. Low dissolved oxygen levels. High dissolved inorganic nitrogen (DIN) levels.
Ashley River Reach 1	Ashley Estuary	Extensive ponded tidal reach. Tidal lagoon/barrier enclosed lagoon. Soft sediment. Relatively unmodified estuary. Salt marsh. The estuary includes sand dunes and spits, open brackish water, a river delta, low mud banks and extensive mudflats (COMAR).	Te Akaaka - important mahinga kai site. Rakahuri Estuary Wahi Toanga for tangata whenua. Cultural Landscape. Ashley/Rakahuri is central to the identify of Te Ngai Tuahuriri. Taonga species. Whitebaiting. Mahinga Kai. Important spawning ground for a number of fish species (COMAR). Jet skiing popular at estuary. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Excessive sediment accumulation received from upstream catchment. Nutrient enrichment and eutrophication. Habitat Loss. 4WD access and disturbance in the estuary. Coastal retreat resulting from climate change.
Ashley River Reach 2	Ashley Estuary to Okuku confluence	Open gravel bed with active floodplain. Occasionally braided.	Ashley/Rakahuri is central to the identify of Te Ngai Tuahuriri. Cultural values associated with Fenton reserves. Nesting habitat. Many migratory bird over-winter here. Many of these are recognised as taonga species in the Ngai Tahu Claims Settlements Act 1998. Taonga species and mahinga kai. Recreation and amenity values. Beginning Kayaking. Whitebaiting. Amenity. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Gravel extraction. Drying reaches preventing fish passage, limiting instream and bird nesting habitats. 4WD access disturbing river birds and other wildlife. Excessive cyanobacteria growth. Nuisance growths of algae. Stopbanks break connections. Fish strandings are a risk due to low summer flows.
Ashley River Reach 3	Okuku confluence to Ashley Gorge (recorder)	Gravel bed river. Currently poorly braided - single thread river. Naturally well-braided.	Ashley/Rakahuri is central to the identify of Te Ngai Tuahuriri. Several access points for recreation. Taonga species and mahinga kai. Swimming holes created by Ecan each year around Rangiora. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Invasive vegetation (Gorse and Broom) constraining braided nature. Bank erosion. Bank erosion has not been addressed by river engineering on the reach from Okuku to Ashley Gorge (Current pathways - community feedback). Excessive cyanobacteria growth.
Ashley River Reach 4	Ashley Gorge itself	Deeply incised rock gorge.	Ashley/Rakahuri is central to the identify of Te Ngai Tuahuriri. Heavily used by Whanau in summer months. Native vegetation around the gorge. The volume of water that provides a range of recreation opportunities. Recreation - fishing and swimming. Outstanding intermediate/advanced whitewater kayaking . Ashley Gorge reserve includes a camping ground. Amenity values. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Excessive cyanobacteria growth. Gorse and other invasive vegetation growth.

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Ashley River Reach 5	Lees Valley	Braided through Lees Valley. Three main gravel tributaries (Townshend, Whistler and Upper Ashley/Lilburn) plus two wetland-fed tributaries (Broom and Duck).	Ashley/Rakahuri is central to the identify of Te Ngai Tuahuriri. Remnant wetlands. Swimming and fishing. Trout and salmon (to a lesser degree) spawning habitat. Taonga species. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation.	Excessive cyanobacteria growth at the head of the gorge. Gorse growth. Drainage and loss of wetland tributaries. Canada geese populations. Stock access. Poor data availability.
Coopers Creek Reach 1	Confluence with Eyre River to Coopers Creek Headwaters	Steep hill-fed creek. Deep gravel bed. Drying bed in lower 4 km of creek.	Native fish habitat. Recreation - walking and one swimming hole. Localised gravel source. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Gravel extraction. Poor data availability.
Coopers Creek Reach 2	Three tributaries above Woodside Road	Small, stable hill-fed streams.	Native fish habitat. Recreation - walking. In Department of Conservations Oxford Forest Park - formed walking and mountain biking tracks. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Lifestyle Block development pressures. Culverts potentially causing barriers to fish passage. Poor data availability.
Washpen Creek	Whole catchment	Hill and wetland catchment. Deep peat wetlands with iron pan (soft bottom).	Large areas of Wetlands and native bush. Mudfish populations. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Development pressures. Wetland drainage. Poor data availability.
Eyre River Reach 1	Waimakariri River to confluence with Coopers Creek	Intermittent/seldom flows.	Passageway for fish recruitment for headwater. Recreation - jetboating. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Invasive vegetation. 4WD access and disturbance. Gravel extraction. Poor data availability.
Eyre River Reach 2	Coopers Creek confluence to Igrams Road	Wide, gravel-bed, low flow. Mixture of pools, runs and riffles.	Recreation - swimming and fishing, and amenity values. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Stock access. Invasive vegetation. General land use pressures. Gravel extraction. Poor data availability.

Waterbody	Site	Physical Attributes	Values	Issues
Eyre River Reach 3	Headwater tributaries	Topographically controlled. Steeper, faster flowing. Pools, runs and riffles.	Native habitat. Trout fisheries. Recreation. Native vegetation. In Department of Conservations Oxford Forest Park - formed walking and mountain biking tracks. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Native vegetation clearance lower in the reach. Poor data availability.
McIntosh Drain	Whole catchment	Land surface recharge dominated and wetland drainage.	NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking wate.	Flood gates act as a barrier to fish passage and cause water quality issues. Urban encroachment. Poor data availability.
Karaki Creek	Whole catchment	Land surface recharge dominated and wetland drainage.	Whitebait fishery. Connects to Tu tai patu lagoon. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use.	Flood gates act as a barrier to fish passage and cause water quality issues. Poor data availability.
Viewhill Stream	Whole catchment	Runs across foothills into WIL main race. Hill catchment adjacent to Eyre River. Loses all flow prior to Oxford-Waimakariri Gorge Road.	Small catchment very intermittent. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use.	Poor data availability.
Makerikeri and Grey	Whole catchments	Hill catchments. Exotic forest with small patches of bush. Top reach intermittent due to rainfall and intermittency increases in lower reach due to losing to ground.	Native fish populations in headwaters. Amenity and recreation sites. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use.	Invasive vegetation including broom and gorse. Gravel Extraction. Forest harvesting resulting in sediment. Poor data. Excessive filamentous algae cover (Makerikeri at Dixons Rd and Grey at Whiterock Rd). Excessive cyanobacteria cover (Grey River). High dissolved inorganic nitrogen (DIN) levels (Makerikeri). Poor invertebrate community health (Grey at Whiterock Rd).
Okuku River Reach 1	Ashley River to Okuku Gorge	Braided gravel bed river, losing flow - intermittent in its lower portions.	Swimming holes, Jet boating, amenity, fishing. Important tuna habitat (Mahaanui). Taonga species - inanga, kakahi, upland bully, freshwater shrimp and koura (COMAR). Mahinga Kai high use value (Mahaanui). NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use.	4WD access causing disturbance to river bird and other wildlife. Stock access. Invasive vegetation (gorse and broom). Gravel extraction. Adjacent land use pressures (COMAR). Poor data availability.
Okuku River Reach 2	Gorge and above	Similar to Ashley Gorge and Lees Valley.	Recreation - fishing and outstanding advanced and expert whitewater kayaking. Mahinga Kai - high use value. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation.	Forestry tracking issues. Forest harvesting resulting in sediment. Poor data availability.

Waterbody	Site	Physical Attributes	Values	Issues
Karetu and Kowhai and Fox	Wholes catchments	Shorter more stable-bed rivers.	NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation, Transport and tauranga waka.	Poor data availability.
Bullock and Mt Thomas	Whole catchments	Commercial forestry in headwaters. Flowing out onto the Loburn Fan. Not a gravel bed sitting on Loess and swamp soils. Lower reaches often a series of connected pools.	Potential for perennial water. Mt. Thomas Forest Park. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation.	Stock access and other land use pressures. Forest tracking issues. Forest harvesting resulting in sediment. Mt Thomas/Happy Valley Stream used to be tussocks before 1963 - has been replaced by commercial forestry. Companies harvest right up to the slips which causes heavy siltation and erosion of the stream banks when it rains (Community Feedback - current state). Poor invertebrate community health (Bullock Creek). Poor data. Excessive filamentous algae cover (Bullock at Birch Hill Rd). Low dissolved oxygen levels. River pooling and stagnation. High nitrate levels (Bullock Creek). High dissolved inorganic nitrogen (DIN) levels (Bullock).
Garry River Reach 1	Loburn Fan reaches	Wide incised fairway, losing water as it crosses the fan and gaining reaches as it approaches the Ashley.	Taonga species including koura, long fin eel, freshwater shrimp, and Canterbury galaxiis. Mahinga kai values. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use.	Invasive vegetation including extensive willow growth. 4WD access disturbing wildlife. Access (COMAR). Poor data availability.
Garry River Reach 2	Headwaters	Large river. Big catchment. High flood flows.	Amenity. Picnicking and camping opportunities. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, Wai tapu (sacred waters), municipal and domestic water supply, Commercial and industrial use, Hydro-electric power generation.	Forestry tracking issues. Forest harvesting resulting in sediment. Poor data availability.
Glentui	Whole catchment	Small catchment. Doesn't dry.	Native bush habitat. Lodges/School Camp. Picnicking and camping opportunities. NPSFM 2014 Values - Ecosystem Health, Human Health for Recreation, Natural form and character, Mahinga Kai (kai is safe to harvest and eat), Mahinga Kai (the mauri of the place is intact), Fishing, Irrigation and Food Production, Animal drinking water, municipal and domestic water supply, Commercial and industrial use.	Development pressures. Invasive vegetation growth. Poor data availability.