



Ramsar Information Sheet

Published on 19 August 2020

New Zealand

Wairarapa Moana Wetland



Designation date	20 August 2020
Site number	2432
Coordinates	41°13'48"S 175°12'06"E
Area	10 547,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Wairarapa Moana is the largest wetland complex in the southern North Island, New Zealand and contains the second largest lake in the North Island. Significant ecological, cultural and recreational values are associated with the complex that supports a diversity of wetland types, including an estuarine lake (Onoke), large freshwater lake (Wairarapa), freshwater swamps and marshes, coastal marshes, river and streams, and extensive coastal shore habitats. These ecological features are nationally and internationally significant in terms of the habitats they provide for fauna and flora, and the presence of threatened and migratory species.

Wairarapa Moana means "sea of glistening water" and was among the first areas settled in New Zealand by Maori people dating back some 800 years. The wetlands are culturally significant in particular for the abundant fish and waterbird resources that provided for mahinga kai (food gathering).

Lake Wairarapa is a permanent freshwater lake and is the most dominant feature of Wairarapa Moana. This lake is connected by the Ruamahanga River to a brackish lagoon (Lake Onoke) that is intermittently connected to the sea through a coastal spit. For long periods Lake Onoke is tidal, but in southerly conditions, with a low river flow, the exit to the sea becomes blocked.

Sedge and shrub-dominated wetlands, seasonal intermittent marshes and ephemeral wetlands are found on the river and lake edges, providing a diversity of habitats for flora and fauna. The site supports more than 50 rare and threatened species, a high diversity of migratory waterbirds and threatened ecological communities.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	DOC staff
Institution/agency	Department of Conservation
Postal address	Whakaoriori / Masterton Office PO Box 191 Masterton 5840 New Zealand
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Compiler 2

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Institution/agency	Greater Wellington Regional Council (GWRC)
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2.1.2 - Period of collection of data and information used to compile the RIS

From year	2000
To year	2017

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Wairarapa Moana Wetland
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2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

Former maps	0
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Boundaries description

Wairarapa Moana is a wetland complex that contains a number of connected freshwater and coastal waterbodies. It comprises the full extent of Lake Wairarapa and the full extent of Lake Onoke. The southern limit is the coastal shingle spit and the eastern and northern boundary includes the freshwater wetlands that are within conservation areas adjacent to Lake Wairarapa. The wetland complex also includes several rivers and streams including the Ruamahanga River that connects the two lakes. The boundary of the Ramsar site in some locations includes narrow sections or breaks between areas, which is due to the boundary following public conservation land boundaries and intersection of roads or other features.

2.2.2 - General location

a) In which large administrative region does the site lie?	Greater Wellington region
b) What is the nearest town or population centre?	Featherston

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes No

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):

Area, in hectares (ha) as calculated from GIS boundaries

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	
Freshwater Ecoregions of the World (FEOW)	New Zealand

Other biogeographic regionalisation scheme

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

- Criterion 1: Representative, rare or unique natural or near-natural wetland types

Wairarapa Moana is a large 10,000 ha wetland complex that is dominated by a large freshwater lake (Wairarapa), a tidal coastal lake (Onoke) and extensive lowland swamps, marshes and ephemeral wetlands. The site forms the largest wetland complex in the southern North Island of New Zealand.

Other reasons

The loss of wetlands has been substantial in New Zealand, and in the North Island wetlands are largely absent from lowland alluvial flood plains. Wairarapa Moana meets Criterion 1 as it contains a significant and representative area of near-natural wetland types. In particular, Wairarapa Moana contains representative, near natural examples of a coastal lake, ephemeral turf wetlands, lowland swamps and marshes on peat and mineral soils.

Swamps and marsh wetland types are both extensive at Wairarapa Moana and these are the most depleted wetland type in New Zealand with only 6% and 8%, respectively, of these wetlands types remaining in the country. The wetland complex also supports near-natural native turf plant communities (ephemeral wetlands) that is a naturally uncommon wetland type.

Lake Wairarapa and the surrounding wetlands are identified as having a high degree of natural character, as well as important heritage, recreation and other amenity values. The recognition of the wetlands value resulted in a Water Conservation Order being designated over Lake Wairarapa in 1989.

- Criterion 2 : Rare species and threatened ecological communities

- Criterion 3 : Biological diversity

Over 100 species of birds have been recorded at the Wairarapa Moana wetlands. This represents 23% of all bird species recorded from the New Zealand biogeographic region since human settlement; recorded in a wetland complex comprising only 0.03% of New Zealand's land area. These figures suggest that these wetlands play an extremely important role in helping to maintain avian diversity in the New Zealand biogeographic region.

Justification

Twenty species of freshwater fish, representing the main eight freshwater fish families found in New Zealand have been recorded in Wairarapa Moana or its tributaries. A number of additional species considered estuarine and marine have also been recorded from within Wairarapa Moana such as yelloweye mullet (*Aldrichetta forsteri*), yellowbelly flounder (*Rhombosolea leporine*), kahawai (*Arripis trutta*), stargazer (*Leptoscopus macropygus*) and estuarine triplefin (*Grahamina nigripenne*).

The wetland complex also supports important invertebrate species, including kakahi (freshwater mussel), hairy-handed mud crab (*Hemigrapsus crenulatus*), mysid shrimp (*Tenagomysis* spp.), decapod shrimp (*Paratya curvirostris*) and koura.

Wairarapa Moana also supports a high diversity of indigenous plant species. For example, over 50 species of these indigenous aquatic turf plants occur at Lake Wairarapa. The turf community is greater in area than in any other North Island lake. Wairarapa Moana is also considered a stronghold for the rare swamp grass *Amphibromus fluitans*, which is abundant at a few sites in Boggy Pond and Matthew's Lagoon. Onoke Spit duneland is one of the national strongholds for sand tussock (*Poa billiarderi*).

- Criterion 4 : Support during critical life cycle stage or in adverse conditions

Criterion 6 : >1% waterbird population

Criterion 7 : Significant and representative fish

Justification

Wairarapa Moana provides a wide variety of habitats for freshwater, estuarine and marine fish species. Twenty species of native freshwater fish species have been recorded within Wairarapa Moana or its upstream catchment. This includes species from all eight of the main freshwater families present in New Zealand (Geotriidae, Anguillidae, Retropinnidae, Galaxiidae, Pinguipedidae, Gobiidae, Pleuronectidae and Mugilidae).

Eleven fish species classified as being 'At Risk (declining)' by Allibone et al., (2010) are found either within Wairarapa Moana or use Wairarapa Moana as migratory pathway to complete their lifecycles: bluegill bully, brown mudfish, dwarf galaxias, giant kokopu, inanga, koaro, lamprey, longfin eel, redfin bully, shortjaw kokopu, torrentfish. Species such as giant kokopu and brown mudfish are regarded as wetland specialists, longfin eels are also commonly associated with wetland type habitats and thus the wider wetland complex is extremely important to the maintenance of populations of these species. Two other aquatic species, kakahi and koura are also classified as Threatened ('declining') in New Zealand's national threat classification system.

Many of the freshwater species found within Wairarapa Moana and its upstream catchment are diadromous. Wairarapa Moana has the pivotal role of being the only entry/exit point for the fish migration for the Ruamahanga catchment and maintaining the fish values of the catchment. Four non-diadromous species have also been recorded from wetlands within Wairarapa Moana or its immediate river and stream tributaries. Estuarine/tidal environments such as Lake Onoke also support several estuarine/marine fish species.

Criterion 8 : Fish spawning grounds, etc.

Justification

Wairarapa Moana is an important source of food and nursery ground for indigenous fish stocks. In particular, it provides important nursery habitat for grey mullet, yellowhead mullet, shortfin eel, longfin eel, black flounder and yellowbelly flounder. Eels and flounder maintain ongoing fisheries, including for cultural harvest. Wairarapa Moana also provides the only migratory pathway in the river for several endemic and native diadromous fish species basin (e.g. inanga, banded kokopu, giant kokopu, koaro and common bully) and contains extensive areas of estuarine wetland habitat that supports inanga spawning.

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<i>Amphibromus fluitans</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally Endangered	
<i>Carex cirrhosa</i>	Curly sedge	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally Vulnerable	Endemic species (NZ)
<i>Centipeda aotearoana</i>	New Zealand Sneezewort	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)
<i>Crassula ruamahanga</i>	null	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Naturally Uncommon)	Endemic species (NZ)
<i>Eryngium vesiculosum</i>	Sea holly	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Declining)	Likely endemic species (NZ)
<i>Fissidens berterii</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally Vulnerable	
<i>Isolepis basilaris</i>	Pygmy clubrush	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally Endangered	Endemic species (NZ)
<i>Juncus pusillus</i>	null	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Naturally Uncommon)	Endemic species (NZ)
<i>Korthalsella salicornioides</i>	Dwarf mistletoe	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Naturally Uncommon)	Endemic species (NZ)
<i>Leptinella dispersa dispersa</i>	null	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)
<i>Leptinella tenella</i>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)
<i>Lobelia carens</i>	null	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally Endangered	Endemic species (NZ)
<i>Lobelia perpusilla</i>	null	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Naturally Uncommon)	Endemic species (NZ)
<i>Pterostylis micromega</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally Critical	Endemic species (NZ)
<i>Ranunculus limosella</i>	null	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)
<i>Ricciocarpos natans</i>	null	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally Endangered	
<i>Urtica linearifolia</i>	Swamp nettle	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)

Threatened species status (other status) for qualification under Criterion 2 is based on the New Zealand Threat Classification System administered by the NZ Department of Conservation. This classification system defines the Threatened (Nationally Critical, Nationally Endangered and Nationally Vulnerable) species in New Zealand that qualify under Criterion 2. The classification system also defines the At Risk (Declining, Naturally Uncommon, Relict) species that are near-threatened. For details on the classification system refer to: Townsend et al (2008): New Zealand Threat Classification System Manual. Department of Conservation, Wellington. 35 p.

Endemic species status for qualification under Criterion 3 is based on the New Zealand Plant Conservation Network database.

Additional taxon: *Mazus novaezeelandiae* subsp. *novaezeelandiae* - At Risk (Declining)

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA/AVES	<i>Actitis hypoleucos</i>	Common Sandpiper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Migrants with fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Anarhynchus frontalis</i>	Wrybill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	2011-15		VU	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Vulnerable	Endemic species (NZ)
CHORDATA/AVES	<i>Anas gracilis</i>	Grey Teal	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	780	2012-14		LC	<input type="checkbox"/>	<input type="checkbox"/>	Not threatened	Resident native taxa that have large, stable populations at the site.
CHORDATA/AVES	<i>Anas rhynchos</i>	Australasian Shoveler	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	520	2012-14		LC	<input type="checkbox"/>	<input type="checkbox"/>	Not threatened	Resident native taxa that have large, stable populations.
CHORDATA/AVES	<i>Anas superciliosa</i>	Grey Duck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	200	1982-83		LC	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Critical	
CHORDATA/AVES	<i>Anthus novaeseelandiae</i>	New Zealand Pipit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)
CHORDATA/AVES	<i>Ardea modesta</i>	White Heron	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Critical	
CHORDATA/AVES	<i>Arenaria interpres</i>	Ruddy Turnstone	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Migrant	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Aythya novaeseelandiae</i>	New Zealand Scaup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Not Threatened	Resident native taxa that have large, stable populations at the site. Endemic species (NZ)
CHORDATA/AVES	<i>Botaurus poiciloptilus</i>	Australasian Bittern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50	2012-14	5	EN	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Critical	1% threshold (WPE) is 10 individuals. Important breeding site.
CHORDATA/AVES	<i>Bubulcus ibis</i>	Cattle Egret	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Migrant	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	Migrant	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Calidris canutus</i>	Lesser Knot	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Vulnerable	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Calidris ferruginea</i>	Curlew Sandpiper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Calidris melanotos</i>	Pectoral Sandpiper	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum. Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Calidris ruficollis</i>	Red-necked Stint	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Migrant	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Calidris tenuirostris</i>	Great Knot	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum. Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Charadrius bicinctus bicinctus</i>	Banded Dotterel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	580	2011-15	1.2	LC	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Vulnerable	Important site during life-cycle of migratory species. 1% threshold (WPE) is 500 individuals. Endemic species (NZ)
CHORDATA/AVES	<i>Charadrius obscurus</i>	New Zealand Dotterel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Vulnerable	Endemic species (NZ)
CHORDATA/AVES	<i>Chlidonias albostratus</i>	Black-fronted Tern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Endangered	Important site during life-cycle of migratory species. Endemic species (NZ)
CHORDATA/AVES	<i>Chlidonias leucopterus</i>	White-winged Black Tern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Chroicocephalus bulleri</i>	Black-billed Gull	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	290	2011-15		EN	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Critical	Important site during life-cycle of highly threatened species. Endemic species (NZ)
CHORDATA/AVES	<i>Chroicocephalus novaehollandiae</i>	Red-billed Gull	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Vulnerable	Endemic species (NZ)

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/AVES	<i>Cygnus atratus</i>	Black Swan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5400	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	Not Threatened	Resident native taxa that have large, stable populations.
CHORDATA/AVES	<i>Egretta garzetta</i>	Little Egret	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Egretta sacra</i>	Pacific Reef Heron	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Endangered	
CHORDATA/AVES	<i>Elseyornis melanops</i>	Black-fronted Dotterel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	85	2011-15	5.7	LC	<input type="checkbox"/>	<input type="checkbox"/>	Coloniser	1% threshold (WPE) is 15 individuals.
CHORDATA/AVES	<i>Gallinago hardwickii</i>	Japanese Snipe	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum. Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Gelochelidon nilotica</i>	Gull-billed Tern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Haematopus finschi</i>	South Island Pied Oystercatcher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)
CHORDATA/AVES	<i>Haematopus unicolor</i>	Variable Oystercatcher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Recovering)	Endemic species (NZ)
CHORDATA/AVES	<i>Himantopus himantopus</i>	Pied Stilt	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1240	2011-15	4.1	LC	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	1% threshold (WPE) is 300 individuals.
CHORDATA/AVES	<i>Hirundo ariel</i>	Fairy Martin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Hydroprogne caspia</i>	Caspian Tern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	60	2014	1.5	LC	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Vulnerable	1% threshold (WPE) is 40 individuals. Breeding site
CHORDATA/AVES	<i>Limosa haemastica</i>	Hudsonian Godwit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum. Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Limosa lapponica baueri</i>	Eastern Bar-tailed Godwit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	120	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Limosa limosa</i>	Black-tailed Godwit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum. Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Numenius minutus</i>	Little Curlew	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum. Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Numenius phaeopus</i>	Whimbrel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Migrant	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Plegadis falcinellus</i>	Glossy Ibis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Pluvialis fulva</i>	Pacific Golden Plover	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40	2011-15		LC	<input type="checkbox"/>	<input type="checkbox"/>	Migrant	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Poliiocephalus rufopectus</i>	New Zealand Dabchick	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	105	2011-15	7	VU	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Vulnerable	1% threshold (WPE) is 15 individuals. Endemic species (NZ)
CHORDATA/AVES	<i>Sterna albifrons</i>	Little Tern	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Migrant	Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Tadorna tadornoides</i>	Australian Shelduck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Tringa flavipes</i>	Lesser Yellowlegs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum.
CHORDATA/AVES	<i>Tringa nebularia</i>	Common Greenshank	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum. Important site during life-cycle of migratory species.
CHORDATA/AVES	<i>Tringa stagnatilis</i>	Marsh Sandpiper	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Vagrant	Fewer than 15 individuals visiting New Zealand per annum. Important site during life-cycle of migratory species.

Fish, Mollusc and Crustacea

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification	
			2	4	6	9	3	5	7	8									
CHORDATA/ ACTINOPTERYGII	<i>Aldrichetta forsteri</i>	Yelloweye mullet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Nursery ground that supports fish stocks. Indigenous species	
CHORDATA/ ACTINOPTERYGII	<i>Anguilla australis australis</i>	Shortfin eel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>		Nursery ground that supports fish stocks. Indigenous species	
CHORDATA/ ACTINOPTERYGII	<i>Anguilla dieffenbachii</i>	New Zealand longfin eel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				EN	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ). Nursery ground that supports fish stocks.	
CHORDATA/ ACTINOPTERYGII	<i>Cheimarrichthys fosteri</i>	Torrent fish	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Galaxias argenteus</i>	Giant kokopu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ). Wairarapa Moana is the only migratory pathway for this diadromous species in this catchment.	
CHORDATA/ ACTINOPTERYGII	<i>Galaxias brevipinnis</i>	Koaro	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Wairarapa Moana is the only migratory pathway for this diadromous species in this catchment.
CHORDATA/ ACTINOPTERYGII	<i>Galaxias divergens</i>	Dwarf galaxias	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Galaxias fasciatus</i>	Banded kokopu	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Wairarapa Moana is the only migratory pathway for this diadromous species in this catchment. Endemic species (NZ).	
CHORDATA/ ACTINOPTERYGII	<i>Galaxias maculatus</i>	Inanga	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Wairarapa Moana is the only migratory pathway for this diadromous species in this catchment. Species spawns in estuarine environments.
CHORDATA/ ACTINOPTERYGII	<i>Galaxias postvectis</i>	Shortjaw kokopu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	Nationally vulnerable	Endemic species (NZ)	
CHORDATA/ CEPHALASPIDOMORPHI	<i>Geotria australis</i>	Lamprey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				DD	<input type="checkbox"/>	<input type="checkbox"/>	Nationally Vulnerable	Wairarapa Moana is the only migratory pathway for this species in this catchment.
CHORDATA/ ACTINOPTERYGII	<i>Gobiomorphus basalis</i>	Cran's bully	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Gobiomorphus breviceps</i>	Upland bully	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Gobiomorphus cotidianus</i>	Common bully	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Wairarapa Moana is the only migratory pathway for this diadromous species in this catchment. Endemic species (NZ).	
CHORDATA/ ACTINOPTERYGII	<i>Gobiomorphus gobioides</i>	Giant bully	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Gobiomorphus hubbsi</i>	Bluegill bully	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Gobiomorphus huttoni</i>	Redfin bully	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Mugil cephalus</i>	Grey mullet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		NZ is southern limit of range for species.	
CHORDATA/ ACTINOPTERYGII	<i>Neochanna apoda</i>	Brown Mudfish	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	At Risk (Declining)	Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Retropinna retropinna</i>	Common smelt	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Wairarapa Moana is the only migratory pathway for this diadromous species in this catchment.	
CHORDATA/ ACTINOPTERYGII	<i>Rhombosolea leporina</i>	Yellowbelly flounder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Endemic species (NZ)	
CHORDATA/ ACTINOPTERYGII	<i>Rhombosolea retiaria</i>	Black flounder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				DD	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species (NZ)	

1) Percentage of the total biogeographic population at the site

Threatened species status (other status) for qualification under Criterion 2 is based on the New Zealand Threat Classification System administered by the NZ Department of Conservation. This classification system defines the Threatened (Nationally Critical, Nationally Endangered and Nationally Vulnerable) species in New Zealand that qualify under Criterion 2. The classification system also defines the At Risk (Declining, Naturally Uncommon, Relict) species that are near-threatened. For details on the classification system refer to: Townsend et al (2008): New Zealand Threat Classification System Manual. Department of Conservation, Wellington. 35 p

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Lake margins	<input checked="" type="checkbox"/>	Lake margin habitats encapsulate wetlands that are periodically inundated due to lake level fluctuations. Lake margin wetlands include podocarp forest, tall reedlands and rushlands, sedgelands, herbfields, and open habitat with only scattered herbs.	Nationally rare (uncommon) ecosystem type (Williams et al 2007).
Shingle beaches	<input checked="" type="checkbox"/>	Shingle beaches are comprised of sand, gravel, and cobbles. The uncommon ecosystems support rare plant and animal communities that are adapted to frequent disturbance, providing breeding habitat for caspian tern, black-fronted dotterel, banded dotterel	Nationally rare (uncommon) ecosystem type (Williams et al 2007).
Stony beach ridges	<input checked="" type="checkbox"/>	Stony beach ridges are comprised of gravel and cobbles but rarely disturbed by the sea. Vegetation is dominated by woody plants that form forest cover or hummocks of shrubs, including many rare plant species such as <i>Poa billardierei</i>	Nationally rare (uncommon) ecosystem type (Williams et al 2007).
Ephemeral wetlands	<input checked="" type="checkbox"/>	Ephemeral wetlands are formed in closed depressions lacking a surface outlet and are wet only seasonally or in wet years. Substrates are usually mineral and they occur on a range of landforms including fluvial systems, bedrock, dunes and volcanic deposits	Nationally rare (uncommon) ecosystem type (Williams et al 2007).
Freshwater swamp	<input checked="" type="checkbox"/>	Freshwater swamps are wetlands that receive a rich supply of nutrients via surface runoff and groundwater. Swamps usually have a combination of mineral and peat substrates. The water table is usually permanently above some of the ground surface.	Nationally rare (depleted due to wetland loss) ecosystem type (Ausseil et al. 2008).

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

Wairarapa Moana is a wetland complex comprised of a large freshwater lake (Lake Wairarapa), estuarine lake (Lake Onoke), a number of lake-edge wetlands and a coastal spit. Wairarapa Moana is now a modified system due to the Lower Wairarapa Valley Development Scheme including major diversions of the Ruamahanga and Tauherinikau rivers away from Lake Wairarapa, extensive floodplain drainage, construction of stop banks and network and lake level management by barrage gates.

Wairarapa Moana is located in a river basin downstream of a large alluvial plain. It is bounded on the east and west by large active faults. Extensive flats of mud and sand have developed over time on the eastern side of the lake. Non-coastal dunes have also been formed by wind-deposited sediments, which have also helped to form a variety of lagoons and wetlands on the eastern side. Lake Wairarapa is a shallow lake, only 2.5m in depth at its deepest point, while Lake Onoke is separated from the sea by a 3km long spit. The whole area was once a vast swampland, but the Development scheme has significantly reduced and altered the size and shape of the wetland complex.

The principal inputs of water are derived from surface water, groundwater and precipitation. Water sources are the Tauherinikau River, and several moderate-small sized tributaries. Natural fluctuations in lake levels are largely controlled by barrage gates situated at the southern end of Lake Wairarapa, though the state of the "opening" in Onoke Spit still exerts a major influence. Though fluctuations in lake levels are not as pronounced as they were prior to human impact, there is still a large variation between high and low water levels. For long periods, Lake Onoke is tidal, but in southerly conditions and at times of a low river flow the exit to the sea becomes blocked. Water quality in both lakes is considered to be in a degraded state with elevated concentrations of nutrients, algal biomass and poor water clarity. Nutrient inputs arise from farming and the discharge of treated wastewater effluent as well as historical nutrient inputs. Wind events also regularly re-suspended sediments in the lakes.

The site supports a diversity of wetland habitats. The eastern shore of Lake Wairarapa is a key stopover site for 17 species of migrating Arctic shorebirds. Over 100 bird species have been recorded in Wairarapa Moana, including numerous waders, waterfowl and wetland birds. It is a significant wintering site for populations of the nationally critical black-billed gull and the nationally vulnerable banded dotterel. Several threatened bird species breed at Wairarapa Moana, using the lakes, lagoons/ponds, shorelines and adjacent vegetation as breeding habitat, including the Caspian tern and Australasian bittern.

Twenty species of native freshwater fish, plus additional estuarine and marine species have been recorded. Inanga species are known to spawn in the estuarine habitat, while there is significant habitat for non-diadromous species, such as mudfish, whose entire lifecycle is completed in freshwater. Freshwater mussels also play an important role in the aquatic fauna of the wetland complex.

The turf plant communities and other wetland plant species play important roles in ecosystem processes. Many of these species are threatened in New Zealand and these plants rely on the fluctuating hydrological regime for their survival.

Invasive flora and fauna play a major role in the wetlands and are a focus for management activities. Reedlands on the edge of Lake Wairarapa have been overgrown by tall fescue (a pasture grass), while exotic trees such as alder and willow have displaced native species. Pest animals such as mustelids and cats prey on wetland birds and predatory exotic fish are having a major impact on the native fish fauna. Livestock grazing on the lakeshore has also had an impact.

4.2 - What wetland type(s) are in the site?

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
E: Sand, shingle or pebble shores	Onoke Spit	0		Representative
F: Estuarine waters	Lake Onoke	0		Representative
J: Coastal brackish / saline lagoons	Lake Onoke	3		Representative

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> L: Permanent inland deltas		0		Representative
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks		0		Representative
Fresh water > Flowing water >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks		0		Representative
Fresh water > Lakes and pools >> O: Permanent freshwater lakes	Lake Wairarapa	1	7000	Representative
Fresh water > Lakes and pools >> P: Permanent freshwater marshes/ pools	Lake-edge wetlands	0		Representative
Fresh water > Lakes and pools >> S: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils	Lake-edge wetlands	2		Representative
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands	Lake-edge wetlands	0		Representative

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Pasture land and native forest subject to flooding	314

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

RIS for Site no. 2432, Wairarapa Moana Wetland, New Zealand

Scientific name	Common name	Position in range / endemism / other
<i>Apodasmia similis</i>	Oioi, jointed rush	NZ endemic
<i>Carex appressa virgata</i>	Pukio	NZ endemic
<i>Carex buchananii</i>		NZ endemic, this site is close to northern limit
<i>Carex geminata</i>	Cutty grass	NZ endemic, part of lake edge community
<i>Carex secta</i>	Pukio	NZ endemic
<i>Carex sinclairii</i>		NZ endemic
<i>Coprosma propinqua</i>	Mngimingi	NZ endemic, mistletoe host
<i>Cordyline australis</i>	Cabbage tree, Ti	NZ endemic
<i>Crassula sinclairii</i>	Sinclair's stonecrop	NZ endemic
<i>Cyperus ustulatus</i>	Giant umbrella sedge	NZ endemic
<i>Dacrycarpus dacrydioides</i>	Kahikatea	NZ endemic
<i>Glossostigma cleistanthum</i>		NZ endemic, part of turf community
<i>Glossostigma diandrum</i>		Part of the turf community
<i>Ileostylus micranthus</i>	Green mistletoe	NZ endemic
<i>Isoetes kirkii</i>	Quillwort	NZ endemic
<i>Isoplepis basilaris</i>	Pygmy dubrush	Endemic species (NZ)
<i>Juncus distegus</i>	Two storey rush	NZ endemic
<i>Korhalsella lindsayi clavata</i>	Dwarf mistletoe	NZ endemic
<i>Leptinella maritoto</i>	button daisy	NZ endemic, this site its northern limit
<i>Lilaeopsis novae-zelandiae</i>		NZ endemic, part of the turf community
<i>Limosella australis</i>	Mudwort	Part of the turf community
<i>Lobelia perpusilla</i>	null	Endemic species (NZ)
<i>Mazus novaezeelandiae novaezeelandiae</i>	Dwarf musk	NZ endemic
<i>Myriophyllum propinquum</i>	Common water milfoil	NZ endemic
<i>Myriophyllum votschii</i>		NZ endemic
<i>Phormium tenax</i>	Harakeke	NZ endemic
<i>Ranunculus macropus</i>	Swamp buttercup	NZ endemic
<i>Schoenoplectus tabernaemontani</i>	kuawa	Keystone species (lake edge community)

Invasive alien plant species

Scientific name	Common name	Impacts	
<i>Alnus glutinosa</i>	Alder	Actual (major impacts)	No change
<i>Bidens frondosa</i>	Beggar's ticks	Actual (major impacts)	No change
<i>Ceratophyllum demersum</i>	Hornwort	Actual (major impacts)	No change
<i>Elodea canadensis</i>	Canadian pondweed	Actual (minor impacts)	No change
<i>Festuca arundinacea</i>	Tall fescue	Actual (major impacts)	No change
<i>Lagarosiphon major</i>	Lagarosiphon	Actual (minor impacts)	No change
<i>Lythrum salicaria</i>	Purple loosestrife	Potential	No change
<i>Paspalum distichum</i>	Mercer grass	Actual (major impacts)	No change
<i>Salix cinerea</i>	Grey willow	Actual (major impacts)	No change
<i>Salix fragilis</i>	Crack willow	Actual (major impacts)	No change

4.3.2 - Animal species

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	
CHORDATA/ACTINOPTERYGII	<i>Carassius auratus</i>	Goldfish	Potential	No change
CHORDATA/ACTINOPTERYGII	<i>Oncorhynchus mykiss</i>	Rainbow trout	Potential	No change
CHORDATA/ACTINOPTERYGII	<i>Perca fluviatilis</i>	Perch	Actual (major impacts)	No change
CHORDATA/ACTINOPTERYGII	<i>Salmo trutta</i>	Brown trout	Potential	No change
CHORDATA/ACTINOPTERYGII	<i>Scardinius erythrophthalmus</i>	Rudd	Actual (major impacts)	No change
CHORDATA/ACTINOPTERYGII	<i>Tinca tinca</i>	Tench	Actual (minor impacts)	No change
CHORDATA/MAMMALIA	<i>Erinaceus europaeus</i>	Hedgehog	Actual (major impacts)	No change
CHORDATA/MAMMALIA	<i>Felis catus</i>	Feral cat	Actual (major impacts)	No change
CHORDATA/MAMMALIA	<i>Mus musculus</i>	Mice	Potential	No change
CHORDATA/MAMMALIA	<i>Mustela erminea</i>	Stoats	Actual (major impacts)	No change
CHORDATA/MAMMALIA	<i>Mustela nivalis</i>	Weasel	Actual (major impacts)	No change
CHORDATA/MAMMALIA	<i>Mustela putorius furo</i>	Ferret	Actual (major impacts)	No change
CHORDATA/MAMMALIA	<i>Oryctolagus cuniculus</i>	European Rabbit	Potential	No change
CHORDATA/MAMMALIA	<i>Rattus norvegicus</i>	Norway rat	Potential	No change
CHORDATA/MAMMALIA	<i>Trichosurus vulpecula</i>	Brushtail possum	Actual (minor impacts)	No change

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Csb: Mediterranean (Mild with dry, warm summer)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

Entire river basin

- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

River basin: Ruamahanga River Basin.

The Wairarapa Moana wetland complex discharges into Palliser Bay and to the Pacific Ocean, near it's connection point to the Tasman Sea.

4.4.3 - Soil

- Mneral
- Organic
- No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

Please provide further information on the soil (optional)

The soils of Wairarapa Moana are recent soils derived from alluvium. Kairanga soils and Manawatu soils occur to the north and east of Lake Wairarapa, while Manawatu and Esk soils occur to the south and south east of Wairarapa Moana. Sediment characteristics of material carried in the rivers is mostly greywacke detritus from the Tararua Ranges. In addition finer grained sediments from the eastern hill country within the Ruamahanga River catchment e.g. Taueru, will have increased with the clearing of these hills in relatively recent times for farmland. Much of the previous swampy wetlands in the vicinity of Wairarapa Moana have been converted to farmland.

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from surface water	<input checked="" type="checkbox"/>	No change
Water inputs from rainfall / snowfall	<input type="checkbox"/>	No change
Marine water	<input type="checkbox"/>	No change
Water inputs from groundwater	<input type="checkbox"/>	No change

Water destination

Presence?	
Marine	No change

Stability of water regime

Presence?	
Water levels fluctuating (including tidal)	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

The principal inputs of water to Lake Wairarapa are derived from surface water inflows, groundwater and precipitation. Downstream from the barrage gates Lake Onoke and the lower Ruamahanga river are tidal.

The primary surface water sources are the Tauherenikau River at the north eastern end of the lake, from several moderate sized tributaries along the western shore and numerous smaller streams.

Natural fluctuations in lake levels are now largely controlled by the barrage gates situated at the southern end of Lake Wairarapa, though the state of the "opening" in the Onoke Spit still exerts a major influence. While the fluctuations in lake levels are not as pronounced as they were prior to human impact, there is still a large variation between high and low water levels. Under flood conditions, water from the Ruamahanga River once again enters the lake, though via the Oporua Floodway midway along the eastern shore.

(ECD) Connectivity of surface waters and of groundwater	Groundwater discharges into Lake Wairarapa through a number of springs. In summer these are thought to be a major inflow component to the Lake. The Ruamahanga river has been diverted so discharges into L Wairarapa only occur during major floods.
(ECD) Stratification and mixing regime	Both lakes are less than 3 metres deep and isothermal. Tidal saline water intrusion occurs throughout the Ruamahanga river and occasionally into Lake Wairarapa.

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site
- Significant accretion or deposition of sediments occurs on the site
- Significant transportation of sediments occurs on or through the site
- Sediment regime is highly variable, either seasonally or inter-annually
- Sediment regime unknown

Please provide further information on sediment (optional):

The sediment regime is variable depending on flooding. Historically fire, storms, deforestation, earthquakes and land use activities have varied the sediment regime. Changes in the hydrological management regime for flood control also previously altered the sedimentation regime, leading to a period of increased infilling on the eastern shoreline of Lake Wairarapa, although sedimentation rates may have now returned towards natural. Lake edge erosion can occur during high lake levels and strong wind events.

(ECD) Water turbidity and colour	Water turbidity is variable, dependent on climate and tide. Lake Wairarapa median 51.5 NTU, Lake Onoke median 17 NTU
(ECD) Light - reaching wetland	Light climate is variable, median seechi depth (visibility) for Lake Wairarapa is 0.2m and for Lake Onoke is 0.5m.

4.4.6 - Water pH

- Acid (pH<5.5)
- Circumneutral (pH: 5.5-7.4)
- Alkaline (pH>7.4)
- Unknown

Please provide further information on pH (optional):

Lake Wairarapa median 7.5 ranging from 6.7 to 7.9; Lake Onoke median 7.4 ranging from 5.9 to 8.8.

4.4.7 - Water salinity

- Fresh (<0.5 g/l)
- Mxohaline (brackish)/Mxosaline (0.5-30 g/l)
- Euhaline/Eusaline (30-40 g/l)
- Hyperhaline/Hypersaline (>40 g/l)
- Unknown

(ECD) Dissolved gases in water

Dissolved oxygen (mg/l): Lake Wairarapa median 10.4 range 8.2 to 13.8; Lake Onoke median 10.3 ranging from 7.91 to 12.2.

4.4.8 - Dissolved or suspended nutrients in water

- Eutrophic
- Mesotrophic
- Oligotrophic
- Dystrophic
- Unknown

Please provide further information on dissolved or suspended nutrients (optional):

Lake Wairarapa is classed as supertrophic indicative of "very high" nutrient enrichment. The classification is heavily influenced by low water clarity and high total phosphorus concentrations which are, in turn, both adversely affected by wind suspension on bottom sediments in this shallow lake.

Lake Onoke is also supertrophic. It is an example of a relatively unique lake type (coastal barrier lake). Its water quality is influenced by similar characteristics to Lake Wairarapa, although it is expected the lake water quality varies dependent on proximity to the mouth of the Ruamahanga river or to the west which probably incurs less flushing. Water quality will also vary dependent on whether the "opening" to the sea is closed or not.

(ECD) Water conductivity	Conductivity measurements (microS/cm): Lake Wairarapa median 348.5 ranging from 136 to 3,200
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4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ii) significantly different

- Surrounding area has greater urbanisation or development
- Surrounding area has higher human population density
- Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

Please describe other ways in which the surrounding area is different:

The overall hydrological system has been highly modified by the Lower Wairarapa Valley Development Scheme. Key components of this development included dredging of the lower Ruamahanga River, diverting the Ruamahanga River away from Lake Wairarapa and directly to the sea (previously all surface water drained through Lake Wairarapa now 98% of these waters flow directly to the coast), the control of Lake Wairarapa water levels by the operation of the barrage gates situated at the southern end of the Lake and mechanical opening of the river mouth when it becomes blocked. Significant areas of the Ruamahanga river floodplain catchment have been drained and are now intensively farmed. The river system is stop-banked with many flap gated culverts. Treated wastewater is discharged into the Ruamahanga river system from five towns. To the west and east of Wairarapa Moana there are steep native bush clad mountain ranges which are tectonically active.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium
Fresh water	Drinking water for humans and/or livestock	Medium
Wetland non-food products	Reeds and fibre	Low
Biochemical products	Extraction of material from biota	Low
Genetic materials	Medicinal products	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	High
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium
Climate regulation	Local climate regulation/buffering of change	Medium
Hazard reduction	Flood control, flood storage	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Recreational hunting and fishing	High
Recreation and tourism	Water sports and activities	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	High
Spiritual and inspirational	Aesthetic and sense of place values	High
Spiritual and inspirational	Spiritual and religious values	High
Spiritual and inspirational	Contemporary cultural significance, including for arts and creative inspiration, and including existence values	High
Scientific and educational	Educational activities and opportunities	High
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High
Scientific and educational	Major scientific study site	High
Scientific and educational	Long-term monitoring site	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High
Nutrient cycling	Carbon storage/sequestration	Medium
Pollination	Support for pollinators	Medium

Within the site:

Outside the site:

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

Description if applicable

New Zealand's indigenous people originally migrated from Polynesia in many waves. Kupe, according to Wairarapa traditions was the original discoverer of New Zealand, living in the proximity of the wetland now known as Wairarapa Moana. The next wave of native people was the extended family of the first explorers. One leader from this group, Haunuianaia named the wetland Wairarapa or Glistening Water. The tribe or iwi living in this area after this was Rangitaane and before European discovery another related tribe negotiated occupation around the lakes and they are known as Ngati Kahungunu. These tribes are today considered the indigenous people of Wairarapa Moana.

These wetlands reflect the development of the native peoples from their arrival until European discovery and as such are of vital importance to them. The change of climatic conditions for the Polynesian migrants was an obvious learning opportunity and Wairarapa Moana was a focus area. Necessity meant that understanding the cycles of the flora and fauna in a temperate climate, the wetland became a site for controlled tuna (eel) harvesting. The skill of preserving tuna meat marked the progression from subsistence to trading, matched in thinking that moved from survival to tertiary thinking (Rawiri Smith, pers comm.).

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

Description if applicable

Wairarapa Moana literally means "sea of glistening water" and was among the first areas settled in New Zealand with sites dating back some 800 years. Fish and waterfowl were plentiful, but the major draw card was tuna – the native freshwater eel. Tuna could be caught in vast quantities during their seasonal migration to the sea, and the catch could be dried for storage or trading. Seasonal eeling settlements dotted the edge of Wairarapa Moana with several permanent settlements on the surrounding higher ground.

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

Description if applicable

There are at least eight species of exploited fishes in Wairarapa Moana, not including whitebait (Hicks, 1993). These are: black flounder (*Rhomobosela retiaria*), yellowbelly flounder, lamprey, shortfin eel (*Anguilla australis*), longfin eel, grey mullet (*Mugil cephalus*), brown trout (*Salmo trutta*) and perch (*Perca fluviatilis*). Of these, eels and flounder maintain ongoing fisheries (although no concessions for commercial eel fishing in the lakes have been approved at present). Kakahi, koura and eels, as well as some of the other native fish species, have a high cultural value and are a traditional food source.

Plants species such as Raupo were gathered, in early times, to construct dwellings and flax (*Phormium tenax*) and pingao (*Desmoschoenus spiralis*) were used to weave many functional and decorative items.

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

Description if applicable

Seasonal eeling settlements dotted the edge of Wairarapa Moana with several permanent settlements on the surrounding higher ground.

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Provincial/region/state government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Local authority, municipality, (sub)district, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Commercial (company)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other types of private/individual owner(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Foundation/non-governmental organization/trust	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Provide further information on the land tenure / ownership regime (optional):

The Crown is in Treaty of Waitangi settlement negotiations with Rangitāne o Wairarapa and Rangitāne o Tamaki Nui-ā-rua and Ngāti Kahungunu ki Wairarapa Tāmaki Nui-ā-Rua. Those iwi have interests in Lake Wairarapa and Lake Onoke, which are of cultural, historical and spiritual importance to the iwi. Those iwi wish to negotiate redress reflective of those interests. In Treaty settlement negotiations with respect to Lake Wairarapa and Lake Onoke and the consideration of any proposal for redress, the Crown will consider the interests of all iwi with interests in these Lakes. This includes providing for the transfer of the beds of Lake Wairarapa, parts of the Ruamahanga river, and some surrounding reserves. Lake Ōnoke will remain in Crown ownership. The Treaty Settlement case is currently before the Waitangi Tribunal. Once settled it will establish a new governance structure, the Wairarapa Moana Statutory Board. The majority of the reserves will be classified as local purpose reserves.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Department of Conservation (DOC)
 Greater Wellington Regional Council (GWRC)
 South Wairarapa District Council (SWDC)
 Rangitāne o Wairarapa
 Rangitāne o Tamaki Nui-ā-Rua
 Ngāti Kahungunu ki Wairarapa Tāmaki Nui-ā-Rua
 Land Information New Zealand
 Fish & Game New Zealand

Provide the name and/or title of the person or people with responsibility for the wetland:

Operations Manager, Department of Conservation

Postal address:

Department of Conservation (DOC)
 Masterton Office
 Postal address
 PO Box 191
 Masterton 5840

E-mail address:

masterton@doc.govt.nz

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Housing and urban areas	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Drainage	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Water abstraction	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Canalisation and river regulation	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Livestock farming and ranching	High impact		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Utility and service lines (e.g., pipelines)	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fishing and harvesting aquatic resources	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hunting and collecting terrestrial animals	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Dams and water management/use	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Vegetation clearance/ land conversion	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Household sewage, urban waste water	High impact		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Agricultural and forestry effluents	High impact		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Earthquakes/tsunamis	unknown impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Temperature extremes	unknown impact	unknown impact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Storms and flooding	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Public Conservation Land (Conservation Act & Reserves Act)	Wairarapa Wetlands Conservation Area, Allsop's Bay Wildlife Reserve, Ruamahanga Cutoff Wildlife Reserve, Wairarapa Lakeshore Scientific Reserve; Matthew's Lagoon and Boggy Pond Wildlife Reserve		partly
Water Conservation Order	Lake Wairarapa	http://www.legislation.govt.nz/regulation/public/1989/0051/lates/t/whole.html?search=ts_act%40bill%40regulation%40deemedreg_wairarapa_resel_25_a&p=1#DLM129362	partly

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Improvement of water quality	Partially implemented
Habitat manipulation/enhancement	Partially implemented
Faunal corridors/passage	Proposed
Re-vegetation	Partially implemented
Land conversion controls	Partially implemented
Catchment management initiatives/controls	Partially implemented
Hydrology management/restoration	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Partially implemented
Control of invasive alien animals	Partially implemented
Control of invasive alien plants	Partially implemented

Human Activities

Measures	Status
Research	Implemented
Communication, education, and participation and awareness activities	Implemented
Regulation/management of recreational activities	Implemented
Harvest controls/poaching enforcement	Implemented
Livestock management/exclusion (excluding fisheries)	Partially implemented
Management of water abstraction/takes	Partially implemented
Fisheries management/regulation	Partially implemented
Regulation/management of wastes	Implemented

Other:

Note: the ownership and management of much of the wetland will change pending the Ngāti Kahungunu ki Wairarapa Tāmaki Nui-ā-Rua (Ngāti Kahungunu) and Rangitāne o Wairarapa and Rangitāne o Tamaki Nui-ā-Rua (Rangitāne) Treaty Settlements [CAB-17-Min-268 refers]. Settlement legislation will provide for the transfer of the beds of Lake Wairarapa, parts of the Ruamahanga river, and some surrounding reserves. Lake Ōnoke will remain in Crown ownership. The majority of the reserves will be classified as local purpose reserves with primary purpose of ecosystem and wildlife management, and the secondary purpose recreation.

5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

Several education centres including schools, universities and research institutes are associated with the site and have specific programmes. The local Regional Council also has an education programme that includes Wairarapa Moana.

Local visitor centres are associated with the site and have information about the wetland complex, which they provide to visitors.

URL of site-related webpage (if relevant):

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but a plan is being prepared

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Animal community	Proposed
Plant species	Implemented
Soil quality	Implemented
Plant community	Implemented
Water quality	Implemented
Birds	Implemented
Water regime monitoring	Implemented
Animal species (please specify)	Implemented

Waterbird, including migratory shorebird, monitoring is frequently undertaken. Some fish monitoring is undertaken. Wetland condition monitoring undertaken by Greater Wellington Regional Council (GWRC) includes wetland plant and soil sampling.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

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6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Wairarapa Moana, New Zealand (DOC, 08-10-2006)



Wairarapa Moana Wetland, New Zealand (DOC, 30-01-2015)



Lake Onoke, New Zealand (DOC, 08-10-2006)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2020-08-20