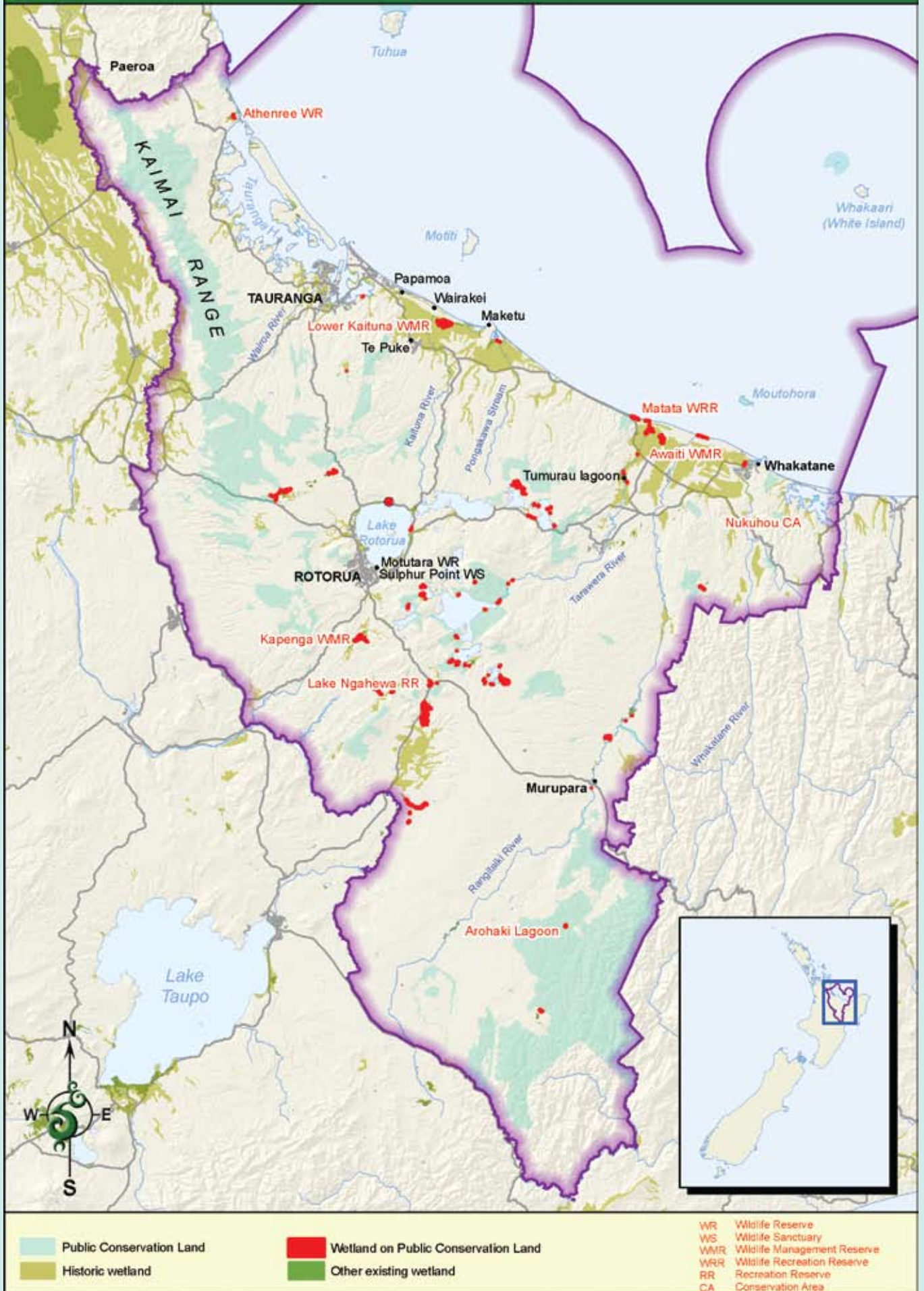


Freshwater Wetlands



2.3 FRESHWATER WETLANDS



Wetlands are permanent or intermittently wet areas, shallow water or land/water margins. They occur where the water table is at, or near, the land's surface, or where the land is covered by water, either permanently or temporarily. They include swamps, bogs, braided rivers and river and lake margins, and they are renowned for particularly high biodiversity values.


Wetland systems are dynamic. Different types of wetlands develop as a result of topography, soil and rock types, vegetation, water source, level and flow, and the surrounding landscape and land use.

Strong national direction to protect wetlands is the result of significant wetland loss and the fact that many remaining wetlands are privately owned. Many of the remnant wetlands on public conservation lands are located on the lowland plains. Because of land use and drainage, most of these fertile sites are perched above the surrounding land and water table. This makes maintaining and enhancing water levels - vital for wetland preservation and restoration - a challenge.

The Department of Conservation seeks to identify, for active management and optimal conservation gains, priority wetlands on public conservation lands. Identification will use factors such as representativeness, distinctiveness and susceptibility to a variety of pressures.

Wetlands are identified as a "place" because of the unprecedented scale of wetland loss in Bay of Plenty (less than one per cent of pre-European wetland areas remain), the high values attributed to wetlands, and the need to protect and enhance what remains.

Bay of Plenty has a range of wetland types categorised as bogs, fens,



swamps, marsh, seepage, shallow water, ephemeral, saltmarsh or pakihi (gumland). This section covers wetlands in a broad collective sense, and focuses on those under the department's management.

Culture and history

An extensive swathe of freshwater wetlands - 40 000 hectares - once existed around the Tarawera, Rangitaiki, Whakatane, Kaituna and Pongakawa rivers. This vast expanse limited both settlement and communication (except by water). European settlers drained most of the lowland wetlands in the first half of the 20th century, to create arable farmland. This resulted in a highly fragmented landscape: many of the connections that once linked habitats have been compromised, isolating wetlands and creating remnants of what were once much larger ecosystems.

The Bay of Plenty's wetlands, streams and rivers provided a variety of resources important to early Maori, including waterbirds, fish (tuna, koura, inanga), harakeke (flax), raupo and timber. The Kaituna was a renowned eel fishery. An historical channel built to divert migrating eels into traps has been recorded at Minginui and many similar features must have existed elsewhere.

Tangata whenua value wetlands for their spiritual and healing properties, for their historical, cultural and traditional relationships and associations and their significance to tribal identity. The main rivers of the conservancy - the Wairoa, Kaituna, Tarawera, Rangitaiki and Whakatane - ran through wetlands and provided access by waka and foot to the interior. These rivers, together with the Te Arawa/Rotorua lakes, were a major factor in Maori settlement of the inland parts of the conservancy.

Wetlands are an important archaeological resource. They preserve information from the past in the form of pollen, plant remains and artefacts which would decay if removed from anaerobic conditions. A number of pa were located around wetlands at Papamoa, Kaituna and Matata, providing defence and ready access to resources. Archaeological excavations at the late 17th century Te Kohika Pa near Matata have revealed palisades, houses and a wealth of wooden material preserved in the swamp.

In the early 19th century, wetlands were an important source of flax. The flax trade influenced Maori settlement patterns. Flax mills were established around the Kaituna and Rangitaiki swamps and a ropeworks operated at Matata in the 1850s.

With the drainage of coastal wetlands in the early 20th century, particularly those around the Kaituna River, Waihi/Pongakawa and the Rangitaiki plains, traditional resources were depleted, replaced by modern agriculture on the fertile organic soils.

Biodiversity

The Bay of Plenty's wetlands support important populations of threatened



and uncommon flora and fauna such as swamp maire, kahikatea, swamp buttercup and swamp nettle, the Australasian bittern, matata (North Island fernbird), New Zealand dabchick and spotless crane, giant and dwarf kokopu, grey duck and long-finned eel.

Changes to water levels and flow have contributed to changes in the ecological composition of some of the conservancy's wetlands. Reduced water inflow threatens to turn remnants into dryland habitats. Pest plants and animals also pose significant threats to the ecological integrity of wetland ecosystems.

Restoration work is necessary to maintain, enhance or improve the existing indigenous ecosystem values of wetlands. Regional land and water plans generally allow the department to carry out work necessary for the maintenance or enhancement of wetlands without the need for a resource consent where the work is consistent with a conservation management strategy. Maintenance and enhancement work carried out by the department on wetlands usually consists of plant and animal pest control, diversion or damming of water and removal of silt

Visitors

Wetlands are highly valued for active and passive recreational pursuits such as game bird hunting, fishing, kayaking, photography and bird-watching. Wetlands are also important for education, scientific study and traditional customary practices.

Community

The department will continue to work with relevant organisations and communities of interest to restore wetlands and to improve opportunities for ecological linkages between wetland habitats.

Many of the conservancy's remnant wetlands are on private land and

do not have formal legal protection: the department will work, through statutory advocacy, to protect these areas.

The department seeks to increase understanding and appreciation of wetlands. Showcasing representative wetlands is one way of achieving this. The process of identifying, selecting and developing showcase wetlands requires the support of tangata whenua and a range of communities of interest, including neighbouring landowners, regional and district councils and the Eastern Region Fish and Game Council.

Wetlands bring economic and social benefit through a range of activities including tourism and outdoor recreation opportunities, in some cases through concessions.

They provide life-sustaining ecosystem services vital to a healthy economy - services such as flood mitigation and control, nutrient recycling, water quality regulation and carbon absorption.

Outcomes - Freshwater Wetlands

1. Wetland ecosystems on public conservation lands and waters are healthy.
2. The range and diversity of wetlands is protected and enhanced.
3. The ecological importance of wetlands is recognised and valued.
4. Tangata whenua and communities of interest are connected to and actively involved in wetland management.
5. The cultural and historical heritage of wetlands is valued and protected.

Refer
1.4 Historical and cultural
heritage: objectives and
policies


Management Objectives

1. To manage wetlands so that they can provide ecosystem services such as integrated catchment management, nutrient recycling, water quality regulation and carbon absorption.
2. To maintain or enhance the habitat quality and level of indigenous biodiversity of wetlands primarily through control of pest animals and plants and maintenance and enhancement of water levels.
3. To work with tangata whenua and communities of interest to recognise and protect sites and stories of special historical and cultural interest.
4. To provide for a range of passive and active recreation opportunities to increase public use and enjoyment of wetlands.

Refer
1.3.6 Ecosystem services:
objectives 1/2, policy 1

Management Policies

1. Will implement a process to prioritise wetland restoration projects on public conservation lands.
2. Will advocate for the protection and enhancement of wetlands at priority sites in the Bay of Plenty.
3. Will promote the natural, cultural and historical values of wetlands.

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4. Will work with tangata whenua and communities of interest to reduce fragmentation and protect and enhance wetlands by:
 - actively supporting community conservation initiatives at priority sites
 - encouraging tangata whenua and communities of interest to undertake wetland restoration at sites of importance to them
 - encouraging neighbours to minimise adverse effects on adjacent wetlands.

Special Wetlands

Within the wetlands place there are two special places - the Lower Kaituna Wildlife Management Reserve and the Matata (Te Awa o te Atua) Wildlife Refuge Reserve.

The outcomes and objectives for wetlands apply to these two reserves, but policies are specific to the unique management requirements of each.

1. Lower Kaituna Wildlife Management Reserve

The Lower Kaituna Government Purpose (Wildlife Management) Reserve is managed cooperatively by the Department of Conservation, Environment Bay of Plenty and the Eastern Region Fish and Game Council. Management is assisted by a memorandum of understanding.

The reserve - approximately 248 hectares of flat low-lying terrain - is north-east of Te Puke near Maketu. It is bounded on the northern side by the Kaituna River and on the other three sides by a former wetland which was drained to create farmland. Before 1900, the wetland covered about 6400 hectares: now, it is the largest remaining wetland complex in the Bay of Plenty.

The district around the reserve is important to Te Arawa iwi. Maketu was the landing place for the Arawa waka. Maketu was occupied by a Taipuika ancestor, Tatahau, when Ngai Te Rangi came to the area. Battles raged around Maketu and Ngai Te Rangi eventually moved to Tauranga, but their mana remained over Maketu. Tapuika and Waitaha continued to occupy the area along with other migrating groups such as Ngati Whakahemo and Ngati Pukenga.

In the 1820s, flax from the wetland area surrounding the lower Kaituna River became a tradable commodity. This caused ongoing conflict and peace was only established between Ngai Te Rangi and Te Arawa in 1845 when a boundary was established on the coast at Wairakei.

The reserve is a highly valued community asset, utilised by game bird hunters, birdwatchers and people pursuing passive recreation. Tangata whenua gather flax and other resources here.

Threatened bird species recorded in the Lower Kaituna Wildlife Management Reserve include Australasian bittern, North Island fernbird, New Zealand dabchick, banded rail, royal spoonbill and white heron.

Locally significant flora species include maire tawake (swamp maire) and fuchsia (tupari maunga).

Management Policies - Lower Kaituna Wildlife Management Reserve

1. Will manage the Lower Kaituna Wildlife Management Reserve cooperatively with Environment Bay of Plenty and the Eastern Region Fish and Game Council.
2. Will manage water levels to maintain and enhance the reserve as a functioning freshwater ecosystem.
3. Will protect, enhance and showcase indigenous flora and fauna by re-establishing biological associations and habitat which were formerly characteristic of the Lower Kaituna wetland complex.
4. Will provide improved access and visitor facilities.

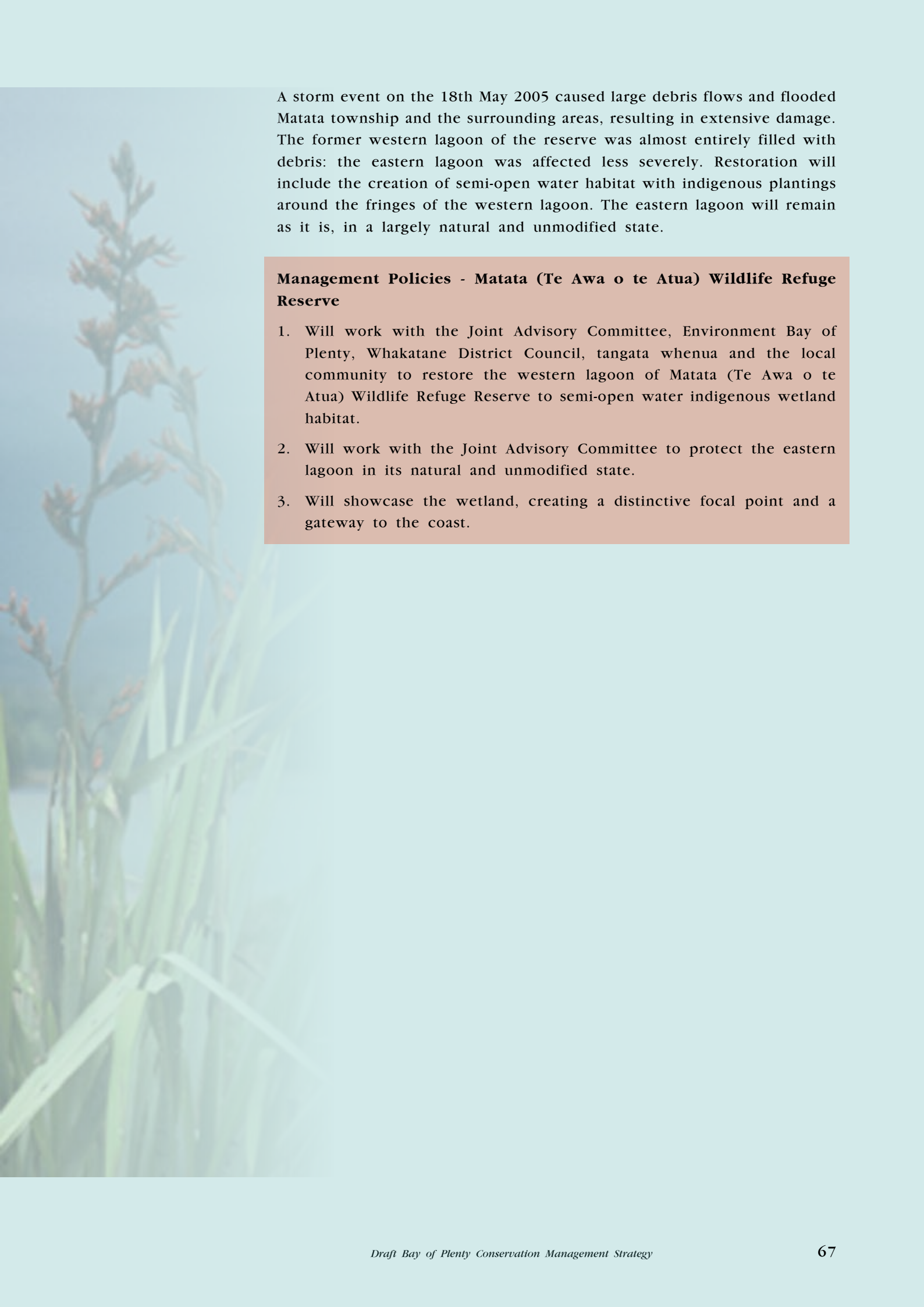
2. Matata (Te Awa o te Atua) Wildlife Refuge Reserve

Matata (Te Awa o te Atua) Wildlife Refuge Reserve is a 110-hectare coastal wetland which the department manages with the active support of the Matata community. The reserve was formerly the estuary of the combined Rangitaiki and Tarawera rivers, until new river mouths were created at Thornton and the Tarawera River bridge as part of the Rangitaiki River Drainage Scheme.

Matata is a culturally rich and significant area for Maori. Three iwi - Ngati Tuwharetoa (BOP), Ngati Awa and Ngati Rangitahi - express mana whenua in the reserve. All have strong historical, spiritual and cultural links with the area. Matata was an important strategic site for Maori and there are many battle sites and urupa nearby. Some taonga were buried in the tidal mudflats which are now beneath the lagoon. Matata was also the first landing place of the Arawa waka, before it relanded at Maketu.

The reserve is a unique complex of coastal duneland and freshwater and brackish water wetland habitats, and is split into western and eastern lagoons. Two threatened plant species are found here: the *Cyclosorus interruptus* fern and the sand-binding pingao. Forty species of birds are fully or partially dependant on the reserve. Of these, 18 species are threatened, including the New Zealand dotterel and the New Zealand dabchick.

The reserve and surrounding area are very popular for recreation. The area borders Matata Domain and Te Awa o te Atua Beach to the east and tennis courts to the south. The Ngati Awa and Ngati Tuwharetoa (BOP) Deeds of Settlement led to the establishment of a joint advisory committee for the Matata (Te Awa o te Atua) Wildlife Refuge Reserve and Matata Scenic Reserve under subpart 4 of the Ngati Awa Claims Settlement Act 2005. The committee currently has six members - two nominated by Ngati Awa, two by Ngati Tuwharetoa (BOP) and two from the Department of Conservation. There is provision for additional members to be included.



A storm event on the 18th May 2005 caused large debris flows and flooded Matata township and the surrounding areas, resulting in extensive damage. The former western lagoon of the reserve was almost entirely filled with debris: the eastern lagoon was affected less severely. Restoration will include the creation of semi-open water habitat with indigenous plantings around the fringes of the western lagoon. The eastern lagoon will remain as it is, in a largely natural and unmodified state.

Management Policies - Matata (Te Awa o te Atua) Wildlife Refuge Reserve

1. Will work with the Joint Advisory Committee, Environment Bay of Plenty, Whakatane District Council, tangata whenua and the local community to restore the western lagoon of Matata (Te Awa o te Atua) Wildlife Refuge Reserve to semi-open water indigenous wetland habitat.
2. Will work with the Joint Advisory Committee to protect the eastern lagoon in its natural and unmodified state.
3. Will showcase the wetland, creating a distinctive focal point and a gateway to the coast.