Poutō Peninsula

Lake Parawanui (Poutō), NRC Lake No. 297.

Lake Parawanui: View from the southern end of lake showing the fenced pasture margins and re-establishing marginal vegetation. (Lisa Forester, 2025).

Summary	Lake Parawanui
Surveyed:	2001, 2016, 2018 and 2025.
Overall ranking:	**Moderate**: A degraded lake, with poor water quality, but it has been fully fenced to prevent grazing of the lake margins permitting the re-establishment of an emergent vegetation band around the lake. Submerged vegetation appears to be declining.
Threats:	Pest fish have been introduced into this lake. Submerged vegetation appears to be declining, possibly due to a combination of pest fish browsing, nutrient enrichment and loss of torewai.
Management recommendations:	Advocate the establishment of wetlands to mitigate impacts of the nutrients transported to the lake. Five yearly ecological monitoring and removal of pest fish.

Description

Parawanui (1676581E, 6008811N) is a relatively steep sided dune lake, 6.47 ha in area with a 19.1 m maximum recorded depth. The catchment is pasture with grazing of the lake margin excluded by fencing. There are two inflows, the largest entering the eastern bay at the southern end of the lake draining from approximately 1 km to the east. There is no outlet. Access is through 1 km of private farmland, mostly on well-formed tracks. Small boats can be launched from parts of the shore with a 4-WD vehicle.

Wetland vegetation

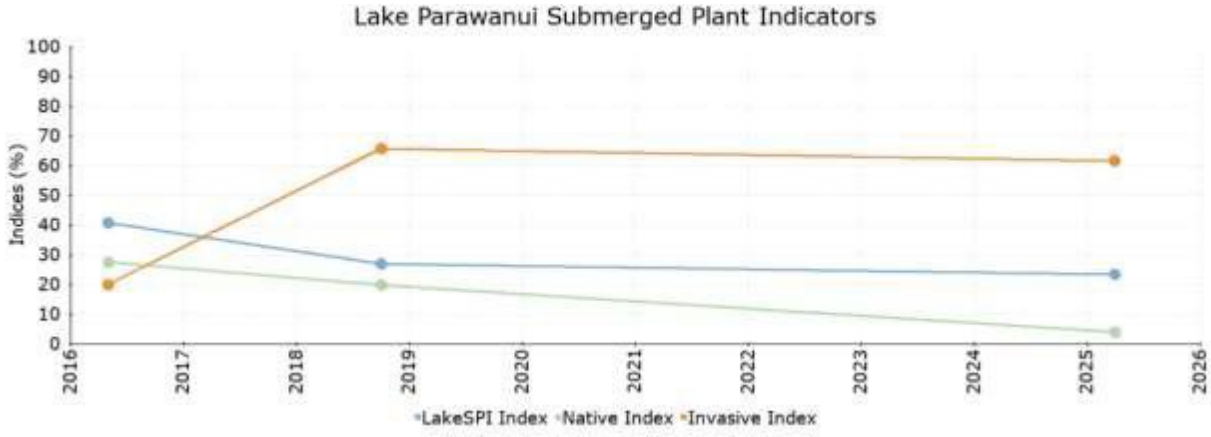
A narrow, but almost entire dense margin of emergent species including *S. tabernaemontani, Apodasmia similis, Eleocharis sphacelata, Machaerina juncea* and *Juncus pallidus* surrounded the lake. Floating rafts of alligator weed (*Alternanthera philoxeroides*) and Mercer grass (*Paspalum distichum*) were noted as abundant in 2025, floating over depths of 0.2 to 0.9 m. Alligator weed mats showed evidence of heavy browsing by the biocontrol agent *Agascicles hygrophila*, but this agent only appears to provide temporary control in late summer and autumn. Marginal turf communities were not surveyed in 2025, but prior surveys had recorded *Fimbristylis velata, Centipeda aotearoana, Limosella australis* and *Myriophyllum propinquum.*

Submerged vegetation

In 2025, a diver survey of five LakeSPI sites was undertaken to depths of 3 to 4.3 m. Beds of the introduced weed *Potamogeton crispus* were found at all sites forming moderate covers (median covers up to 50%) from 0.3 to 2.6 m. The native *Potamogeton ochreatus* was the only other submerged species seen, restricted to only one site at a maximum cover of 6-25%. Dive profiles were short and steep, and cyanobacterial mats were noted on deeper, sandy sediment.

Previous surveys recorded deeper vegetation (4.3 m maximum), with the native milfoil *Myriophyllum triphyllum* present in 2016 and 2018, and *Chara australis* seen in 2016. In 2001, only *P. crispus* was present at low covers from 0.2 to 2.4 m depth.

LakeSPI



Survey Date	Status	LakeSPI %	Native Condition %	Invasive Impact %
March 2025	Moderate	23.3%	4.1%	61.5%
September 2018	Moderate	27.0%	19.8%	65.7%
April 2016	Moderate	40.8%	27.6%	20.0%

In 2025, a **moderate** LakeSPI Index of 23.2% was calculated, lower than previous scores in 2016 and 2018.

Water birds

A single Australasian bittern (*Botaurus poiciloptilus*) was the only bird recorded from the lake in 2025.

Additional species recorded in earlier surveys were black swans (*Cygnus atratus*), mallard (*Anas p. platyrhynchus*), paradise shelduck (*Tadorna variegata*), New Zealand dabchick (*Poliocephalus rufopectus*) and three species of shag (*Phalacrocorax carbo novaehollandiae, P. v. varius* and *P. sulcirostris*).

Fish

The pest fish goldfish (*Carassius auratus*) and rudd (*Scardinius erythrophthalmus*) are recorded from this lake (NRC lake survey summary information 2025). Additionally, pest fish koi carp (*Cyprinus carpio*) and orfe (*Leuciscus idus*) were reported as liberated into Lake Parawanui but neither have been detected by recent sampling efforts.

Crow and Jellyman (2014) caught three longfin and 46 shortfin eels (*Anguilla dieffenbachii* and *A. australis* respectively), remarking that this lake had the largest and heaviest eels of all lakes sampled on the Poutō Peninsula. NIWA FBIS also records common bully (*Gobiomorphus cotidianus*) in Lake Parawanui.

Aquatic invertebrates

Abundant torewai / freshwater mussels (*Echyridella menziesii*) were noted in surveys prior to 2018, but only empty shells have been noted during the last two visits. Water boatmen (*Sigara* sp.) were noted in 2025.

Endangered species

No threatened plant species were noted in 2025, but in previous surveys, the At Risk Naturally Uncommon sedge *Fimbristylis velata* was recorded and this species is likely to persist in exposed mud on the lake edge during low water level events.

At-Risk Declining longfin eels (*Anguilla dieffenbachii*) are likely to still be present although it is probable that these fish were stocked into this lake, with no connection from the lake to the sea.

The National Critical Australasian bittern (*Botaurus poiciloptilus*) was seen in 2025.

Lake Ecological Value

In 2025, an Ecological Value rating of **Moderate** was calculated for Lake Parawanui, with a score of 7. Over the past three visits, the score has decreased, with no endangered plant or invertebrate species seen, although longfin eels are likely to still be present, and the apparent loss of torewai, with no living mussels seen on the last two monitoring occasions and declining lake water quality apparent.

Threats

Pest fish have been deliberately stocked in this lake in the past to create a coarse fishery, with rudd and goldfish being recorded recently. Possibly a combination of pest fish (especially rudd)

browsing, nutrient run-off from the steep pasture catchment and the recent loss of torewai has resulted in a decline in submerged vegetation.

Since 2017, eel fishing and coarse angling are no longer permitted at this lake.

Management recommendations

Poor water quality remains a concern and continuation of restoration initiatives are advocated, especially the interception of nutrients from inflows, possibly by planting wetlands.

Five-yearly ecological monitoring and continued fishing to reduce populations of the pest fish rudd (and goldfish) numbers is recommended.

Reference

Crow, S.K., Jellyman, D.J. (2014) Assessment of the eel fishery in the Pouto Lakes in Northern Kaipara. New Zealand Fisheries Assessment Report 2014/21. 36