

Te Hiku

Ngatuwhete (Aupouri), NRC Lake No. 23



Ngatuwhete (2019), with a mostly pasture catchment, note the exposed beach providing habitat for native annual species.

Summary	Ngatuwhete
Surveyed:	2005 and 2019
Overall ranking:	Moderate: Shallow dammed water body with limited vegetation, possibly good wader habitat.
Threats:	Little threat from invasive species, nutrient enriched.
Management recommendations:	No monitoring.

Description

Ngatuwhete (6735915E, 1589385N) is a shallow (~ 5.1 m), dammed 8.6 ha lake with a firm iron-pan base. The catchment is primarily unfenced pasture with small areas of pines and manuka scrub. There

are no inlet or outlet streams. There is a well-formed track to lakeside across 1 km of private land from the main road. Small boats can be launched from the firm-bottomed lake margins.

Wetland vegetation

Most of the margins lack emergent species, but approximately 25% of the lake margins has beds up to 10 m wide on the southern margin. The dominant emergent is *Eleocharis sphacelata* growing from 1.5 to 1.6 m depth, with lesser amounts of *Machaerina articulata* and *Schoenoplectus tabernaemontani* growing in shallower water. Additional emergent species recorded in 2019 were *Machaerina arthropylla*, *M. juncea*, *Isolepis prolifera* and *Persicaria decipiens*.

Water levels were much lower in 2019 compared with the 2005 visit. Emerged turf species included *Glossostigma elatinooides*, *Lilaeopsis novae-zelandiae*, *Myriophyllum propinquum* and *Triglochin striata*. Annual species typical of exposed shores included *Centipeda aotearoana*, *Alternanthera nahui* and *Fimbristylis velata*.



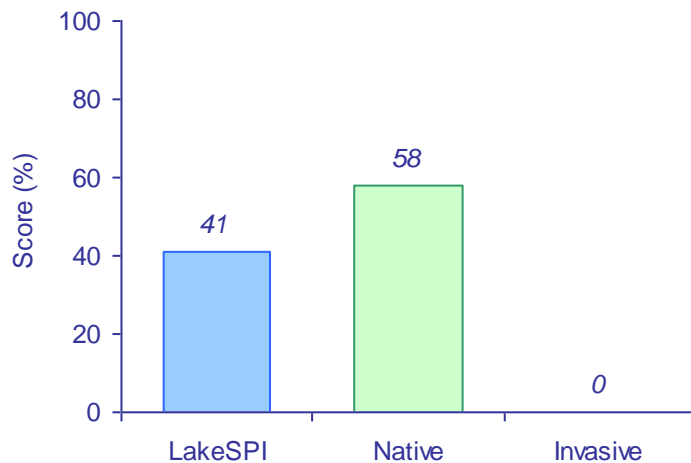
The naturally uncommon *Fimbristylis velata* on the margin of Ngatuwhete (2019)

Submerged vegetation

No submerged vegetation was recorded in 2019. In 2005, open turf communities (<10% cover) were common in areas to ~ 1.5 m deep dominated by *Glossostigma elatinooides*, *Lilaeopsis novae-zelandiae*, *Myriophyllum propinquum* and low-growing *Potamogeton cheesemaniae*. On the southern vegetation profile, surface-reaching areas of the exotic *Ludwigia palustris* were noted from the shore to 0.2 m

deep. Also, on this profile, a dense bed of *Nitella* sp. aff. *cristata* extended from the emergent *E. sphacelata* to 1.8 m deep. *P. ochreatus* was also present in this area at low covers ($\leq 5\%$). No other submerged vegetation was found in the 2 profiles swum.

LakeSPI



LakeSPI Index as % of potential score, Native Condition Index, and Invasive Impact Index (from left to right).

A moderately low LakeSPI score of 41% reflects the almost de-vegetated lakebed, although there were no invasive exotic species present (*L. palustris* is not ranked as invasive by LakeSPI). Profiles were limited so this LakeSPI assessment should be considered provisional. Based on the 2019 survey, the lake appeared to have no submerged vegetation.

Water birds

The large extent of shallow water may provide good habitat for wading birds. Royal spoonbill (*Platalea regia*), a regionally significant species, were recorded from this lake in 1978 (DoC SSBI). An important moulting site for paradise shelduck (*Tardorna variegata*).

Fish

No fish seen.

Aquatic invertebrates

Backswimmers (*Sigara arguta*) were common in the lake.

Endangered species

Fimbristylis velata is assessed as At Risk – Naturally Uncommon, restricted to similar habitats in the northern North Island.

Lake Ecological Value

A 2019 Lake Ecological Value rating of 7 (Moderate) was scored due to the narrow fringe of emergent species and lack of submerged vegetation. This had increased from 5 in 2005, as a result of a greater species richness and the presence of the At-Risk *Fimbristylis velata*.

Threats

Pest impacts are unlikely due to the hard bottom and shallow exposed nature of the lake.

Management recommendations

No monitoring recommended.