

Te Hiku

Onepū (formerly Lake Bulrush) (Aupouri), NRC Lake No. 49.



Onepū. Showing a lack of emergent vegetation due to a mostly unfenced shoreline.

Summary	Onepū
Surveyed:	2005 and 2017.
Overall ranking:	Moderate-Low: Minimum submerged, emergent and riparian vegetation. Nutrient enriched with cattle access.
Threats:	Poorly buffered with livestock access from adjacent pasture. Risk of introduction is moderate; some species could establish, but with little impact on ecological values.
Management recommendations:	No monitoring.

Description

Located at 1599677.7E, 6159353.9N, this lake is 4.9 ha in size and shallow (maximum depth < 1

m). The catchment is pine plantation and scrub to the west and pasture surrounding the remainder of the lake. The inflow to north end of lake drains 2 km through pine, native forest and pasture. There was no outflow stream. Access is via a well-formed farm track across 2 km of private land, with relatively easy boat access from the shoreline.

Wetland vegetation

Marginal vegetation was sparse (Figure 3-1) with *Juncus pallidus*, *Schoenoplectus tabernaemontani* and *Persicaria decipiens* present in patches. Turf communities were well developed on exposed sandy lake margins, with native species including *Rorippa palustris*, *Cotula coronopifolia*, *Pseudognaphalium luteo-album*, *Myriophyllum propinquum*, *Fimbristylis velata*, *Glossostigma elatinooides*, *Centipeda aotearoana* and *Alternanthera nahui*. Introduced species included *Ludwigia palustris* and *Cyperus sanguinolentus*.

Submerged vegetation

Sparse covers of *Glossostigma elatinooides*, *Myriophyllum propinquum*, and *Ludwigia palustris* were present to 0.4 m deep (but water level was high). In 2005, there were *Potamogeton ochreatus*, *P. cheesemanii* and *Chara australis* to 0.7 m.



Onepū. Yellow line tracks the areas surveyed by shore (dotted) and divers (solid) in 2017.

LakeSPI

Lake Bulrush Submerged Plant Indicators

Survey Date	Status	LakeSPI %	Native Condition %	Invasive Impact %
March 2017	Non-vegetated	0%	0%	0%

We covered areas of the eastern shore and well out into the lake. No submerged macrophytes were recorded below 0.4 m deep and those present were below 5% cover. A LakeSPI score of 0 is therefore generated.

Water birds

Common water birds present including black swan, paradise shelduck and the invasive Canada geese. Five dabchick (*Poliiocephalus rufopectus*) were also recorded.

Fish

No fish seen.

Aquatic invertebrates

The snails *Potamopyrgus antipodarum* (indigenous) and *Physella acuta* (exotic) were common.

Endangered species

Fimbristylis velata is an At-Risk Nationally uncommon annual sedge found for the first time at lake Bulrush in 2017. It was common amongst other annual species.

Five At-Risk Recovering dabchick were seen in 2017, but not seen in 2005.

Lake Ecological Value

The condition of Onepū is assessed as "Moderate to Low" A greater number of indigenous plants were found in 2017 (14) and presence of *Fimbristylis velata* elevates the Lake Ecological Value to 5.

Threats

Risk of pest introduction is moderate, with a well-formed track through private land affording relatively easy access and some invasive species could establish. However current indigenous values are minimal. Prolonged cattle access to this lake has removed emergent vegetation and the lake appears to be highly nutrient enriched.

Management recommendations

No monitoring recommended. Riparian restoration is recommended after fencing to exclude livestock.