

## Te Hiku

Te Arai Lake 6 (Aupouri), NRC Lake No. 45.



**Te Arai Lake 6.** A dune lake with scrub margins, note the extensive fringe of emergent kuta (Daniel Clements).

Summary	Lake Te Arai 6
<b>Surveyed:</b>	2019.
<b>Overall ranking:</b>	<b>Moderate:</b> water heavily stained with the invasive <i>Utricularia gibba</i> the only submerged species present amongst emergent kuta.
<b>Threats:</b>	Well buffered by a scrub catchment, limited risk of nutrient enrichment. Water levels appear to have declined. Low risk of introduction and establishment of invasive pests.
<b>Management recommendations:</b>	No monitoring recommended, apart from monitoring of the Nationally Endangered <i>Mazus novae-zeelandiae</i> ssp. <i>impolitus</i> .

## Description

This dune lake (2510021E 6722874N) is recorded as a 0.95 ha area in the NRC database, but the lake occupies c. 1.2 ha, with contiguous kuta dominated marginal fringe. The lake had a maximum depth of 2.6 m. The catchment is mostly scrub. There are no inlets or outlets. Access was gained through forestry roads and scrub covered tracks.

## Wetland vegetation

The lake was predominately vegetated with emergent kuta (*Eleocharis sphacelata*), with raupo (*Typha orientalis*) and *Machaerina articulata* (0 to 1.5 m deep). Additional tall emergent species included *E. acuta* and the sprawling *Persicaria decipiens*.

## Submerged vegetation

Lake water was heavily stained water with only 0.2 m underwater visibility. No submerged vegetation was found outside of the emergent zone, with sparse *Utricularia gibba* the only submerged species found amongst kuta.

## LakeSPI

No LakeSPI score was generated.

## Water birds

No birds were seen.

## Fish

No fish were seen.

## Aquatic invertebrates

No invertebrates were seen.

## Endangered species

*Mazus novae-zeelandiae* ssp. *impolitus* was located in scrub to the east of Lake Te Arai 6. It was assessed as Nationally Endangered (de Lange et al. 2018), with a total global area of occupancy  $\leq 10$  ha (0.1 km<sup>2</sup>) and a predicted decline of 10–50%.



***Mazus novae-zeelandiae* ssp. *impolitus***, located in scrub to the east of Lake Te Arai 6.

### Lake Ecological Value

The condition of Te Arai Lake 6 was scored as 7 (Moderate) in 2019, based on good buffering, but absence of submerged vegetation. The nationally rare *Mazus novae-zeelandiae* ssp. *impolitus* contributed to the derivation of this score.

### Threats

Few invasive threats were noted due to difficult lake access, but water levels have receded historically.

### Management recommendations

No monitoring recommended, apart from monitoring of the Nationally Endangered *Mazus novae-zeelandiae* ssp. *impolitus*.