Central and East Northland

Lake Manuwai (Central Northland), NRC Lake No. 146

Summary 2001

Overall ranking

Moderate: This artificially dammed reservoir has limited ecological value.

Threats

Probably low impact of invasive species due to steep topography.

Management recommendations

No monitoring.

Description

This reservoir (1678437E 6107774N) is formed from a dam on the Waipapa River. The lake is 133 ha in size and over 10 m deep. Surrounding catchment is mostly pasture and forest. The reservoir is open to the public where boat access is easy with a concrete ramp provided.

Wetland vegetation

Emergent vegetation is sparse due to the steep topography and exposed nature of the lake. *Eleocharis sphacelata* and *Typha orientalis* were present growing to 1.8 and 1.4 m respectively.

Submerged vegetation

A turf community was also present in the shallows (to 1.5 m deep) consisting of *Glossostigma submersum, Myriophyllum propinquum* and the regionally significant *Gratiola sexdentata*. Below this vegetation consisted of a charophyte meadow (predominantly *Nitella* aff. *cristata*) extending from 1 to 4 m deep with scattered plants to 6.1 m. *Potamogeton ochreatus* emerged from this vegetation (up to 1.5 m tall) at low density.

LakeSPI

LakeSPI score is not generated from previous survey data.

Water birds

The restricted emergent vegetation would provide limited water bird habitat, but the lake is fairly isolated. Only common species were recorded by the recent OSNZ survey.

Fish

Gambusia affinis were seen.

Aquatic invertebrates

Dragonfly (*Odonata*) larvae were recorded.

Endangered species

No threatened species were reported.

Lake Ecological Value

Lake Ecological Value score for Lake Manuwai is estimated as 6 “Moderate”. Diversity is low, but charophyte meadows extend to 4 m deep. Water quality of this lake has been sampled twice a year since 1991. Previous Secchi data (1.0-2.2 m) suggest low water clarity. There is no evidence of a change in water quality. Current nutrient and chl a levels are within the range previously recorded (TN <50-800 mg N m^{-3}, TP <4-574 mg P m^{-3}, chl a <3-<10 mg m^{-3}) with the lake being eutrophic.

Threats

Egeria densa was sampled in neighbouring streams and dams but should this or other weeds establish the probable impact would be low due to steep topography.

Management recommendations

No monitoring.