OBJECTIVE 3

Habitat

Maintain or restore wetland ecosystem condition.

Ō TŪ WHAREKAI / REPORT CARD 2015

Ō Tū Wharekai contains some of the best examples of high country lakes in New Zealand. In their natural state the lakes are dominated by native aquatic plants, which regulate water quality by binding sediment together, absorbing nutrients, and producing oxygen to support aquatic life.

LakeSPI monitoring

We assess the health of aquatic plants in the Ashburton Lakes based on LakeSPI (Lake Submerged Plant Index). LakeSPI surveys were completed by NIWA in 2007 and 2012 at 11 Lakes.

What do the LakeSPI scores mean?

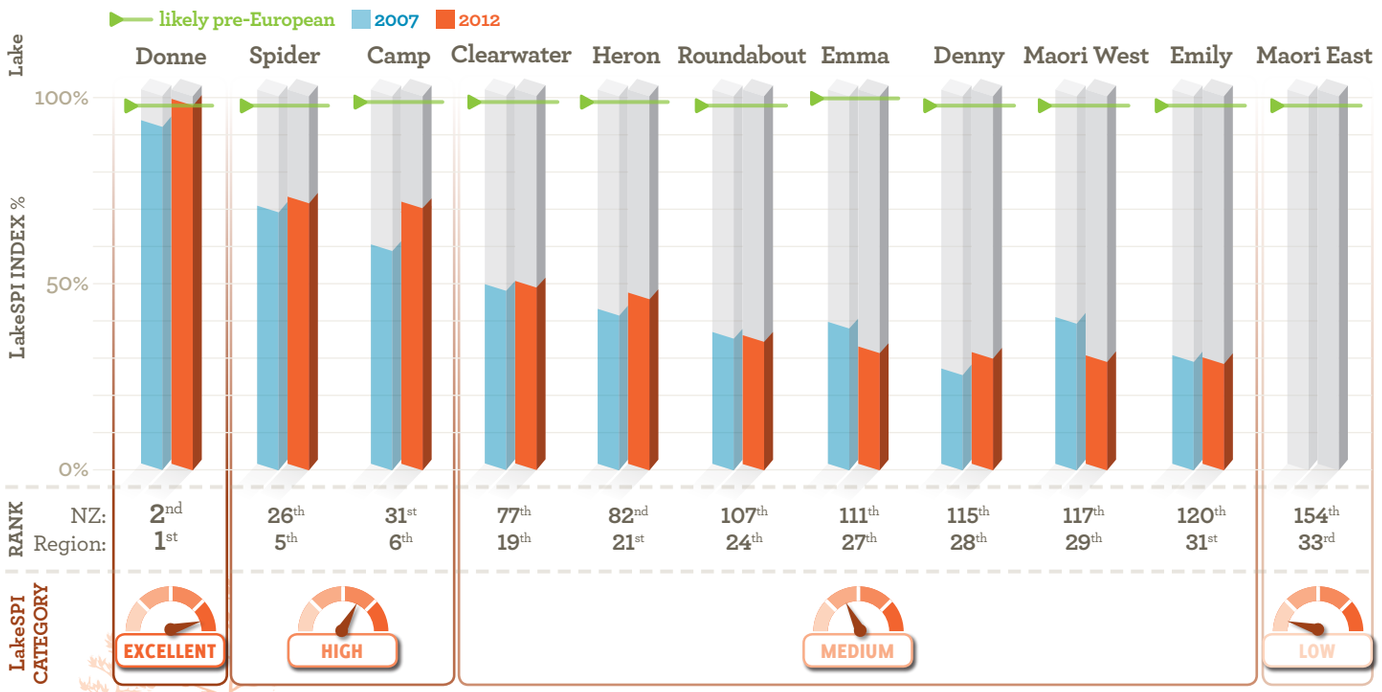
LakeSPI Score close to 100% = healthy aquatic plant community (based on both native and exotic species). An example of a high lake SPI index is Lake Donne. Its SPI index is 97% due to its diversity of native aquatic plants and the absence of exotics.

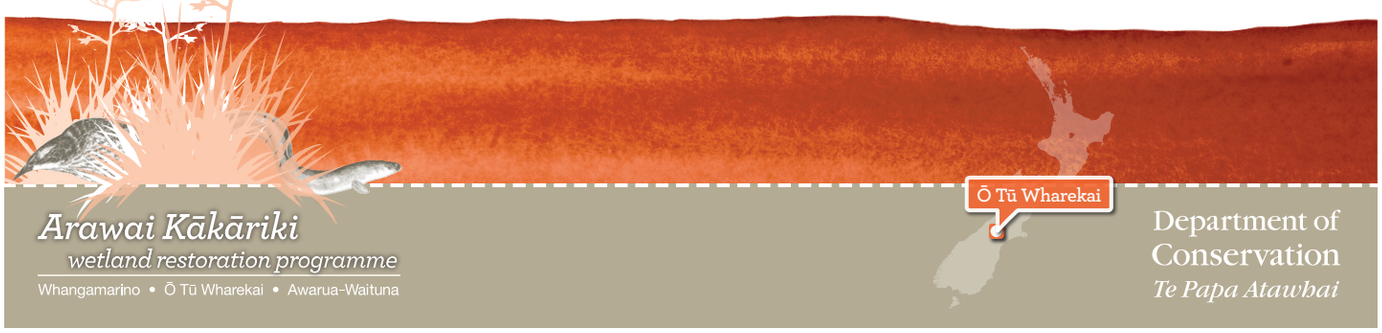
KEY FINDINGS

The Ashburton Lakes support a range of native and exotic aquatic plants. LakeSPI scores indicate that some lakes are in good condition (Donne, Spider, Camp) and others are in poor condition (Emma, Denny, Emily, Maori Lake West). Maori Lake East (0% LakeSPI) was in very poor health. The results were consistent between 2007 and 2012.

How do the Lakes compare to other sites?

We compared the Ashburton Lakes to other lakes in Canterbury (total 33) and New Zealand (total 238). Lake Donne is close to pristine and ranks amongst the best lakes in NZ. Lake Emily is at the other end of the spectrum.





Arawai Kākāriki
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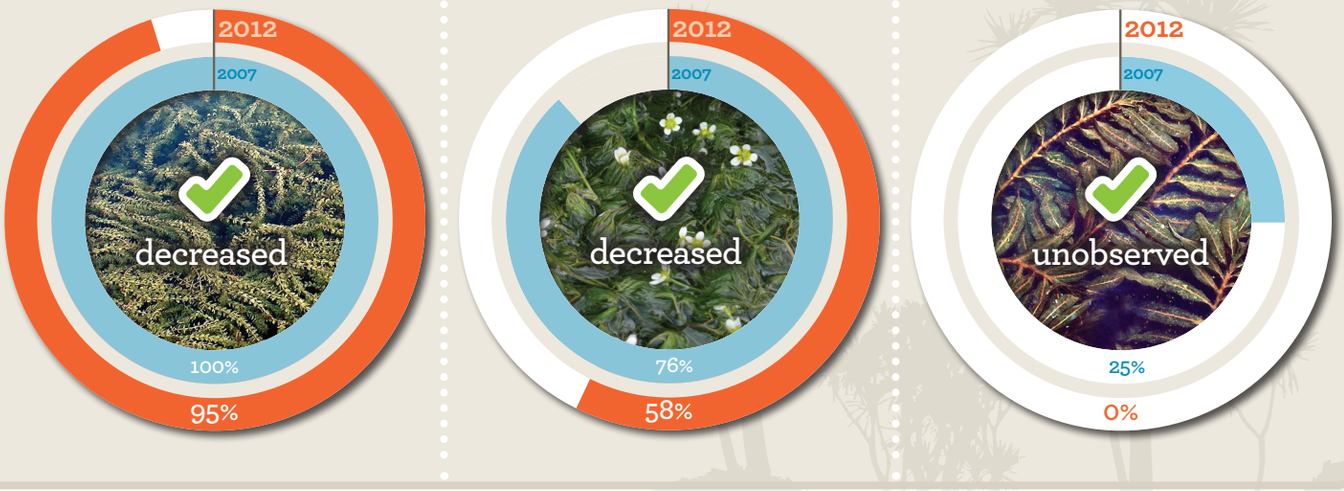
Te Papa Atawhai

Aquatic weeds

Exotic weeds are a problem for many ecosystems, and lakes are no different. Weed species can dominate our native plants leading to degradation of the ecosystem.

There has been an increase in the distribution of aquatic weeds in most lakes. New weed incursions have been observed in Lakes Emma and Camp – where *Elodea canadensis* and *Ranunculus trichophyllus* have established themselves.

EXOTIC WEED DISTRIBUTION
(% of profiles surveyed)



More information...

De Winton M, J Clayton, D Sutherland, 2013. Ecological Condition of the Ō Tū Wharekai lakes based on LakeSPI. Prepared for the Department of Conservation by NIWA. 40 pages.

NEXT ACTIONS...

It is important to maintain submerged aquatic plants in high-country lakes, to help manage water quality and provide habitat for aquatic species. Changes in water quality (nutrient and sediment loads) may negatively impact aquatic plants, and favour the growth of algae or unwanted exotic weeds.

Restore...
reduced nutrient and sediment loads entering the Lakes where possible

Watch for...
new incursions of invasive exotic plants, and eradicate if necessary

Monitor...
abundance of native and exotic species

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