



Lake Rotorua

Site Number:	SNA116
Ecological District:	Rotorua Lakes
Source of Information:	None
Digital Scale:	1:2,000
Data Source:	RDAM 2006
Regional Council:	Bay of Plenty
1998 Site Number:	Not identified as a site in Shaw and Beadel (1998)
Current Tenure:	Unprotected
Site Area:	8,061.0 ha
Altitude Range:	280-300 m
Bioclimatic Zone:	Lowland
Grid Reference:	NZTM E1886985, N5779888

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	Open water	Open water	8,061.0 ha

Indigenous Flora: In 1988, emergent vegetation dominated by *Eleocharis sphacelata*, *Juncus* species, and raupo was uncommon on the edges of the lake, covering c.1% of the lake margin. Submerged macrophytes averaged c.3% cover in the first meter of the littoral zone and 19% in the second meter. *Ruppia polycarpa* and *Myriophyllum triphyllum* represent the main indigenous submerged macrophytes.

(from Clayton *et al.* 1989)

Eleocharis pusilla ('At Risk - Data Deficient' in de Lange *et al.* 2009) recorded from turf communities adjacent to Mokoia Island.

No threatened or at risk species as listed in de Lange *et al.* (2009) have been recorded from this site.

Fauna: Provides habitat for threatened and at risk indigenous bird species, including black-billed gull ('Threatened - Nationally Endangered' in Miskelly *et al.* 2008), red-billed gull, Caspian tern, New Zealand dabchick, banded dotterel (all 'Threatened - Nationally Vulnerable'), pied stilt ('At Risk - Declining'), black shag, little black shag, and little shag (all 'At Risk - Naturally Uncommon'). Grey duck and white heron (both 'Threatened - Nationally Critical') are known to occasionally utilise the lake and its margins, but this site is not important for their protection on a nation-wide basis.

Notes on Overall Condition: An important habitat for indigenous fauna. Regular algal blooms are common, particularly associated with increased inputs of nitrogen and phosphorus into the lake. Large nutrient inputs are also associated with inflows from Hamurana and Taniwha Springs (White 1977 in Clayton *et al.* 1989).

The current Trophic Level Index for the lake is 4.9 (Environment Bay of Plenty 2008a) indicating a eutrophic state.

Change Relative to Shaw and Beadel (1998): Unknown

Threats/Modification/ Vulnerability:	<p><i>Invasive Exotic Plants:</i> <i>Lagarosiphon major</i>, <i>Elodea canadensis</i>, and <i>Egeria densa</i> were common within the littoral zone of the lake in 1988 often covering large areas of lake bed up to 5 m water depth (Clayton <i>et al.</i> 1989). However, the current abundance of these pest plants is not known, although Clayton <i>et al.</i> (1989) suggest that Lake Rotorua’s exposure limits the spread of invasive macrophyte populations.</p> <p><i>Human impacts:</i> Threatened by nutrient inputs from farmland, industrial sites, and urban areas in its catchment.</p>
Risk Assessment:	Unknown
Significance Level:	National (Appendix 4 - Table 1 - Criteria 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13; Table 2 - Factors N9, N12, N13).
Significance Justification:	This site is of national significance as it is a relatively large lake providing significant habitat to threatened and at risk bird species.
Fieldwork Required:	No fieldwork is required to assess ecological values of this site.
Notes:	None
References:	Clayton <i>et al.</i> (1989); White (1977); Environment Bay of Plenty (2008a).