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## Murphy's Springs

<b>Site Number:</b>	SNA 801
<b>Ecological District:</b>	Atiamuri
<b>Source of Information:</b>	Wildland Consultants (2009 & 2014); Paul Cashmore (pers. comm. 2006 in Wildland Consultants (2007a).
<b>Digital Scale:</b>	1;5,000
<b>Data Source:</b>	WRAPS 2012
<b>Regional Council:</b>	Waikato
<b>1998 Site Number:</b>	Not identified as a site in Shaw and Beadel (1998).
<b>Current Tenure:</b>	Unprotected
<b>Site Area:</b>	c.0.2 ha
<b>Altitude Range:</b>	c. 370-380 m
<b>Bioclimatic Zone:</b>	Lowland
<b>Grid Reference:</b>	NZTM E1880736, N5745776

VEGETATION		LANDFORM	EXTENT
CODE	TYPE		
1	<p><b>Mixed indigenous shrubs/mixed fern species shrubland</b></p> <p>A few plantation pines are emergent over mixed broadleaved and shrubland species including kōhūhū, karamū, mānuka, whekī, and <i>Coprosma propinqua</i> over an understorey of ferns dominated by bracken, kiokio, and <i>Deparia petersenii</i> subsp. <i>congrua</i>, and tūrutu. <i>Carex geminata</i> and <i>C. secta</i> are common on stream margins. In 2010 pines had recently been felled into the site, and black nightshade, exotic grasses (particularly Yorkshire fog), and lotus (<i>Lotus pedunculatus</i>) were common in recently disturbed areas. <i>Christella</i> aff. <i>dentata</i> ("thermal") is common in steam alongside geothermal springs and stream margins.</p>	Gully	c. 0.2 ha

**Indigenous Flora:** *Christella* aff. *dentata* ("thermal") (At Risk-Naturally Uncommon), is common alongside geothermally heated stream margins. An estimated 100 plants are present. Other species typical of geothermal habitats present include mānuka, bracken, and tūrutu.

**Fauna:** No threatened or at risk bird species as listed in Robertson *et al.* 2013 have been recorded from this site. Common indigenous and exotic bird species typical of the habitats are present. Fantails were recorded during the 2010 survey.

Possum sign. Cattle have had access to site, and damage from cattle is particularly notable on site margins.

**Notes on Overall Condition:** The site is currently in a poor ecological condition, pine plantation trees have been recently felled into the site and stock have access to site. The site has the potential to recover well if it is fenced.

**Change Relative to Shaw and Beadel (1998):** Unknown

**Threats/Modification/Vulnerability:** No invasive pest plants were recorded at this site.

Trees had been felled into the site in 2010. The site is not fenced, and cattle

have had access to the site following tree felling in 2010, and conversion of neighbouring land to pasture.

**Risk Assessment:** Plantation forest management: Risk to site - low; Timeframe - low.  
Grazing: Risk to site - medium; Timeframe - medium.

**Significance Level:** Regional (Appendix 7 - Table 1 - Criteria 3, 5; Table 2 - Factor L).

**Significance Justification:** Murphy's Springs is a regionally significant site because it is a habitat of importance for an 'At Risk' species, *Christella* aff. *dentata* ("thermal"), known from only 15 other sites in New Zealand.

**Field Work Required:** No field work required.

**Notes:** In 2010 the pine plantation around the site had been harvested, and the adjacent land was in the process of being converted into pasture. Mapping is based on GPS waypoints obtained during the 2010 field survey.

A geophysical assessment of the surface geothermal manifestations at this site is presented in Appendix 4 (Wildland Consultants 2014a). This assessment was undertaken in 2010.

**References:** Wildland Consultants (2007b, 2009, & 2014).