

## Jenny Clarke

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**From:** Craig Rowson  
**Sent:** Tuesday, 5 February 2013 8:44 a.m.  
**To:** Andy Bruere  
**Cc:** Brent Hutchby; Lisa Bevan  
**Subject:** RE: Rotomahana Outlet

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Andy,

It was still flowing in Jan but I wouldn't mind betting it has stopped now. We are due to visit again 20<sup>th</sup>/21<sup>st</sup> Feb.

We have measured the flow on two occasions 16<sup>th</sup>/17<sup>th</sup> Dec and 12/13<sup>th</sup> Jan.

In Dec the outlet from Rotomahana was 149 L/s and the stream flowing into Tarawera was 118 L/s (water lost to ground)

In Jan the flow had decreased markedly, in line with the drop in lake level which was noticeable between visits. 11.5 L/s from Rotomahana and only 5.4 L/s into Tarawera (again water lost).

16/01/2013	1041	Lake Rotomahana at Inflow to Tarawera	0.0054
17/01/2013	0844	Lake Rotomahana Outlet	0.0115
20121212	0936	Lake Rotomahana at Inflow to Tarawera	0.1180
20121213	0842	Lake Rotomahana Outlet	0.1490

**Craig Rowson** | Environmental Data Officer | Bay of Plenty Regional Council | Whakatane, New Zealand | Ph: 0800 884 881 x9475 | Cell: 029 201 3967 | Web: [www.boprc.govt.nz](http://www.boprc.govt.nz)  
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**From:** Andy Bruere  
**Sent:** Tuesday, 5 February 2013 8:29 a.m.  
**To:** Craig Rowson  
**Subject:** RE: Rotomahana Outlet

Hi Craig,

Would you be able to tell me if the outlet is still flowing and provide a table of outflow measurements since this memo please,

Thanks,

**Andy Bruere** | Lake Operations Manager | Bay of Plenty Regional Council | Rotorua, New Zealand | Ph: 0800 884 881 x7497 | Web: [www.boprc.govt.nz](http://www.boprc.govt.nz)  
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**From:** Craig Rowson  
**Sent:** Friday, 14 December 2012 10:43 a.m.

**To:** Andy Bruere  
**Subject:** RE: Rotomahana Outlet

Yes we will do the flow gaugings and sampling monthly until flow stops.

**Craig Rowson** | Environmental Data Officer | Bay of Plenty Regional Council | Whakatane, New Zealand | Ph: 0800 884 881 x9475 | Cell: 029 201 3967 | Web: [www.boprc.govt.nz](http://www.boprc.govt.nz)  
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**From:** Andy Bruere  
**Sent:** Friday, 14 December 2012 10:20 a.m.  
**To:** Craig Rowson  
**Cc:** Brent Hutchby; Ross Powell  
**Subject:** RE: Rotomahana Outlet

Hi Craig,

Yes you are right, Castle Corp opened the channel as the lake level approached the outlet structure.

Yes your gauging seems to fit with what I would have expected, there is likely to be springs in the stream bed that would normally carry some flow.

Thank you for that info, I think you have on-going gauging planned for the NERMN programme until the flow stops?

Cheers,

**Andy Bruere** | Lake Operations Manager | Bay of Plenty Regional Council | Rotorua, New Zealand | Ph: 0800 884 881 x7497 | Web: [www.boprc.govt.nz](http://www.boprc.govt.nz)  
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**From:** Craig Rowson  
**Sent:** Friday, 14 December 2012 9:53 a.m.  
**To:** Andy Bruere  
**Cc:** Brent Hutchby; Ross Powell  
**Subject:** Rotomahana Outlet

Andy,

This may not be news to you, but from your initial email about this outlet starting to flow it sounded like it had occurred naturally. But from what I saw yesterday, it seemed like a channel had been dug from the lake to the first culvert, about 40-50 m from shore. It seemed like loose pumicey shingle in uneven shovel piles lined the edge of this section.

Would you agree Ross?

Interestingly, from our flow gaugings we measured more flow at the outlet from Rotomahana than the inlet into Tarawera. 150 L versus 120L. Tarawera end measured on Wed. The 150 L at the outlet was measured yesterday after the rain we had but I wouldn't think the lake level would have risen by enough to cause that flow increase. Perhaps water is lost to the ground through the usually dry pumice bed?

Cheers

**Craig Rowson** | Environmental Data Officer | Bay of Plenty Regional Council | Whakatane, New Zealand | Ph: 0800 884 881 x9475 | Cell: 029 201 3967 | Web: [www.boprc.govt.nz](http://www.boprc.govt.nz)  
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