

----- Forwarded message -----

From: Peter Blackwood <Peter.Blackwood@boprc.govt.nz>

To: Ken Tarboton <Ken.Tarboton@boprc.govt.nz>

Cc: Peter West <Peter.West@boprc.govt.nz>, Martin Butler <Martin.Butler@boprc.govt.nz>, Mark Townsend <Mark.Townsend@boprc.govt.nz>

Bcc:

Date: Tue, 20 Jun 2017 05:04:59 +0000

Subject: FW: Information Request 20170616 1701

Hi Ken,

Another one.

Pete

[Peter Blackwood](#)

Principal Environmental Engineer

Bay of Plenty Regional Council Toi Moana

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Thriving together – mō te taiao, mō ngā tāngata

**From:** Peter West

**Sent:** Tuesday, 20 June 2017 3:11 p.m.

**To:** Peter Blackwood

**Cc:** Martin Butler; Mark Townsend

**Subject:** RE: Information Request 20170616 1701

Peter,

Attached results from DHI this morning for the information request below (5:01pm 16 June 2017). The attached workbook includes our Te Teko model inflow hydrograph (sent to DHI yesterday) and a chart showing the dam management outputs.

Our work on this yesterday found that an increase to 550m<sup>3</sup>/s at 6:15pm on the 5<sup>th</sup> (phone request confirmed by email at 6:13pm) instead of at about 8:15pm (what actually happened) would have caused the lake level to reach a minimum

of 71.19mRL at 9:45pm, instead of 71.57mRL (0.383m lower; all other actions held constant). This scenario leads to a 12am on the 6<sup>th</sup> April dam management tool result for optimum peak discharge at of 677m<sup>3</sup>/s (8m<sup>3</sup>/s less than the actual (archived) tool result). The inflow hydrograph sent to DHI therefore has been scaled down at the peak by 8m<sup>3</sup>/s from our earlier estimate of what actually flowed past Te Teko.

Workbook notes:

The second modified scenario hydrograph is scaled at the request (5:01pm 16/6/2017) of Kyle Christensen to represent an alternative dam management scenario: Likely dam management decision if BOPRC's 6:13pm 5th April phone and email request for 550m<sup>3</sup>/s had been actioned promptly. Dam management analysis finds a lake level difference of 0.383m leading to an effective 8m<sup>3</sup>/s reduction in the 12am 6th April dam management decision.

A -8m<sup>3</sup>/s peak scaling has been applied to the proportion of the hydrograph above 400m<sup>3</sup>/s.

Peter

[Peter West](#)

Bay of Plenty Regional Council Toi Moana

**P:** [0800 884 880](tel:0800884880) **DD:** [0800 884 880](tel:0800884880)

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Thriving together – mō te taiao, mō ngā tāngata

**From:** Martin Butler

**Sent:** Friday, 16 June 2017 5:19 p.m.

**To:** Kyle Christensen

**Cc:** Frances Skilton; [charlie.price@stantec.com](mailto:charlie.price@stantec.com); Michael Cullen; Mark Townsend; Peter West; Peter Blackwood

**Subject:** RE: Information Request

Request received and transmitted onwards; I can't offer a response delivery time yet.

Kind regards

Martin Butler Information Liaison  
Regional Planner  
Bay of Plenty Regional Council Toi Moana

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Thriving together – mō te taiao, mō ngā tāngata

**From:** Kyle Christensen [<mailto:kyle@christensenconsulting.co.nz>]  
**Sent:** Friday, 16 June 2017 5:01 p.m.  
**To:** Martin Butler  
**Cc:** Frances Skilton; [charlie.price@stantec.com](mailto:charlie.price@stantec.com); Michael Cullen; Mark Townsend; Peter West; Peter Blackwood  
**Subject:** Re: Information Request

Thank you Martin.

I also have one further request.

Can you please run a scenario where the dam discharge is increased to 550m<sup>3</sup>/s at 1800 on 5 April. I would like to know what dam reservoir level could have been achieved with this outflow and then on that basis what the optimised peak dam outflow would then have been. I would also like the modelled water level time series for MIKE 11 model chainage RANGITAIKI 13868 for this scenario.

Thanks and regards

**Kyle Christensen**

Rivers & Stormwater Engineer

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From: Martin Butler <[Martin.Butler@boprc.govt.nz](mailto:Martin.Butler@boprc.govt.nz)>  
Date: Friday, 16 June 2017 at 2:59 PM  
To: Kyle Christensen <[kyle@christensenconsulting.co.nz](mailto:kyle@christensenconsulting.co.nz)>  
Cc: Frances Skilton <[frances@tregaskisbrown.com](mailto:frances@tregaskisbrown.com)>, "[charlie.price@stantec.com](mailto:charlie.price@stantec.com)" <[charlie.price@stantec.com](mailto:charlie.price@stantec.com)>, Michael Cullen <[honmichaelcullen@gmail.com](mailto:honmichaelcullen@gmail.com)>, Mark Townsend <[Mark.Townsend@boprc.govt.nz](mailto:Mark.Townsend@boprc.govt.nz)>, Peter West <[Peter.West@boprc.govt.nz](mailto:Peter.West@boprc.govt.nz)>, Peter Blackwood <[Peter.Blackwood@boprc.govt.nz](mailto:Peter.Blackwood@boprc.govt.nz)>  
Subject: RE: Information Request

Hi Kyle

Our Engineers and consultants are working on this and hope to have your answer after the weekend.

Kind regards

[Martin Butler](#)  
Regional Planner  
Bay of Plenty Regional Council Toi Moana

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Thriving together – mō te taiao, mō ngā tāngata

**From:** Kyle Christensen [<mailto:kyle@christensenconsulting.co.nz>]  
**Sent:** Friday, 16 June 2017 2:06 p.m.  
**To:** Martin Butler  
**Cc:** Frances Skilton; [charlie.price@stantec.com](mailto:charlie.price@stantec.com); Michael Cullen; Mark Townsend; Peter West; Peter Blackwood  
**Subject:** Information Request

Hi Martin,

I wish to request a modelled water level time series for MIKE 11 model chainage RANGITAIKI 13868 for a dam outflow of 680 m<sup>3</sup>/s. Please use a scaled inflow hydrograph based on the analysis presented by Peter West on 8 June, reference - Retrospective analysis of dam management Scenario B Part 2 lake prep level at 70.0 mRL.

Best regards

**Kyle Christensen**

Rivers & Stormwater Engineer

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