Jenny Clarke

From: Craig Putt
Sent: Sunday, 16 December 2012 10:18 p.m.
To: Andy Bruere
Subject: RE: Flow velocity monitoring Ohau Weir
Attachments: Ohau at Lake Rotorua Outlet - Centre of Weir 20120612 edit.xlsx

Andy,

I've condensed the 3 data files into one and drawn the cross section with velocity over-plotted. Hopefully this is more useful. See attachment. Note there are gaps in the velocity profile where soundings were made, and where the measurement method changed from mechanical current meter (for shallow, low velocity water), to Doppler (for deeper, higher velocity water), then back to mechanical meter.

Craig Putt | Environmental Data Officer | Rotorua | Extn: 7579

From: Andy Bruere
Sent: Friday, 14 December 2012 9:08 a.m.
To: Craig Putt
Subject: RE: Flow velocity monitoring Ohau Weir

Hey thanks Craig,

Yeah I still pretty confused on the data.

Some questions:

1. Ōhau Channel much wider than 5 m???
2. The depth showing is 1.5 m but the shallow weir section is not 1.5m deep,
3. Flow rate in centre section (deep section) I would expect to be much higher than the two shallow sections, this data does not show that.

I don't think you have given me data for the full width of the weir…???

Andy Bruere | Lake Operations Manager | Bay of Plenty Regional Council | Rotorua, New Zealand | Ph: 0800 884 881 x7497 | Web: www.boprc.govt.nz
Please consider the environment before printing this email

From: Craig Putt
Sent: Thursday, 13 December 2012 5:04 p.m.
To: Andy Bruere
Subject: RE: Flow velocity monitoring Ohau Weir

Andy,

See attached files for velocity data. Let me know if you have any queries about interpreting them.

Craig Putt | Environmental Data Officer | Rotorua | Extn: 7579

From: Craig Putt
Sent: Thursday, 13 December 2012 3:26 p.m.
To: Andy Bruere
Subject: RE: Flow velocity monitoring Ohau Weir

Andy,

See attached report for data we collected in relation to the Ohau Channel Flush Monitoring (Fish & Game Consultation) in June-July 2012.

Let me know when you wish to repeat the measurements without the stop logs in place. We have a couple of other projects brewing early in the new year, so plenty of advance warning would be appreciated.

Thanks,

Craig Putt | Environmental Data Officer | Rotorua | Extn: 7579

From: Andy Bruere
Sent: Wednesday, 12 December 2012 3:20 p.m.
To: Craig Putt
Cc: Graeme ORourke
Subject: Flow velocity monitoring Ohau Weir

Hi Craig,

I am wanting to get some measurement of flow velocity over the Ohau weir at a time when the stop logs are in place as well as when they are removed. The logs are in place now so can you start this job before Christmas while they in place pls.

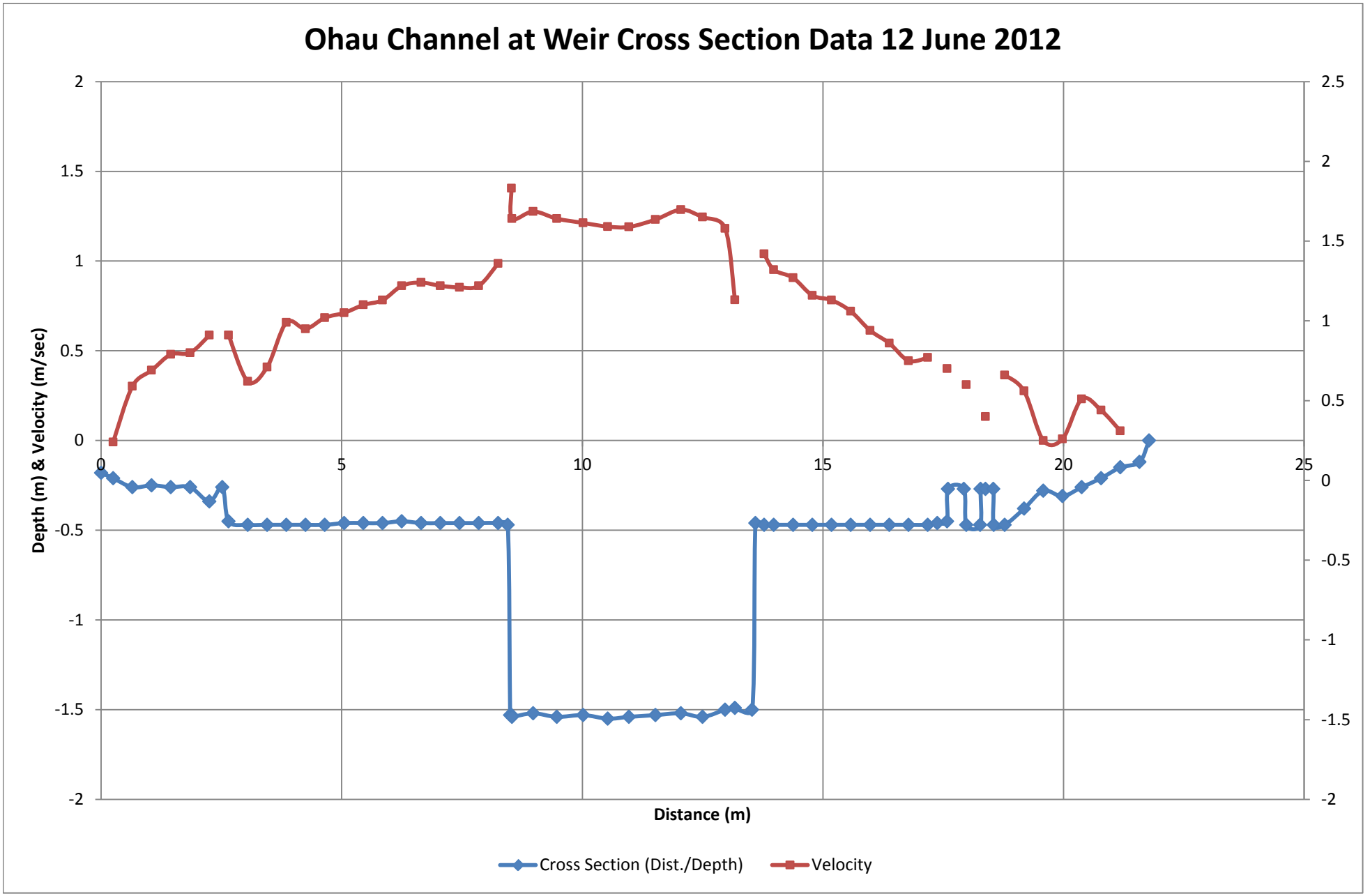
The place to get velocity is right across the weir width say at regular intervals, maybe every ½ M, at a point representative of the highest velocity at that point.

I have attached a diagram for you to see what I think is required:

Hope you like it, I did

Thanks

Andy Bruere | Lake Operations Manager | Bay of Plenty Regional Council | Rotorua, New Zealand | Ph: 0800 884 881 x7497 | Web: www.boprc.govt.nz
Please consider the environment before printing this email


Ohau Channel at Weir Cross Section Data 12 June 2012
Depth (m) & Velocity (m/sec)
Distance (m)
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
2.5
0
5
10
15
20
25
Cross Section (Dist./Depth)
Velocity

Distance m	Depth m	Mean Velocity m/s	Comments
			Small Oss Mechanical Current Meter Section Begins.
0	-0.18		True Left Bank.
0.25	-0.21	0.24	
0.65	-0.26	0.59	
1.05	-0.25	0.69	
1.45	-0.26	0.79	
1.85	-0.26	0.8	
2.25	-0.34	0.91	
2.52	-0.26		Sounding
2.65	-0.45	0.91	
3.05	-0.47	0.62	
3.45	-0.47	0.71	
3.85	-0.47	0.99	
4.25	-0.47	0.95	
4.65	-0.47	1.02	
5.05	-0.46	1.05	
5.45	-0.46	1.1	
5.85	-0.46	1.13	
6.25	-0.45	1.22	
6.65	-0.46	1.24	
7.05	-0.46	1.22	
7.45	-0.46	1.21	
7.85	-0.46	1.22	
8.25	-0.46	1.36	
8.45	-0.47		Small Oss Mechanical Current Meter Section Ends
			Accoustic Doppler Current Profiler Section Begins.
8.5	-1.53		Main Channel Begins.
8.53	-1.53	1.831	
8.54	-1.54	1.641	
8.98	-1.52	1.686	
9.47	-1.54	1.641	
10.02	-1.53	1.614	
10.53	-1.55	1.591	
10.97	-1.54	1.589	
11.52	-1.53	1.635	
12.05	-1.52	1.697	
12.5	-1.54	1.65	
12.97	-1.5	1.579	
13.17	-1.49	1.132	
			Accoustic Doppler Current Profiler Section Begins.
13.53	-1.5		Main Channel Ends.
13.6	-0.46		Small Oss Mechanical Current Meter Section Begins
13.78	-0.47	1.42	

13.98	-0.47	1.32	
14.38	-0.47	1.27	
14.78	-0.47	1.16	
15.18	-0.47	1.13	
15.58	-0.47	1.06	
15.98	-0.47	0.94	
16.38	-0.47	0.86	
16.78	-0.47	0.75	
17.18	-0.47	0.77	
17.38	-0.46		Sounding
17.58	-0.45	0.7	
17.6	-0.27		Sounding
17.93	-0.27		Sounding
17.98	-0.47	0.6	
18.27	-0.47		Sounding
18.28	-0.27		Sounding
18.38	-0.27	0.4	
18.54	-0.27		Sounding
18.55	-0.47		Sounding
18.78	-0.47	0.66	
19.18	-0.38	0.56	
19.58	-0.28	0.25	
19.98	-0.31	0.26	
20.38	-0.26	0.51	
20.78	-0.21	0.44	
21.18	-0.15	0.31	
21.58	-0.12		Sounding
			Small Oss Mechanical Current Meter Section Ends.
21.78	0		True Right Bank.