

Fisheries Panel Meeting

Offices of Bay of Plenty Regional Council, 5 November 2019

Present	Matt Osborne (ERFG), Justine Randell (BOPRC), Andy Bruere (BOPRC), Ian Kusabs (Fisheries Panel Member/Consultant), Brendan Hicks (UoW), Dave Rowe (Fisheries Panel Member/Ex NIWA), Michel Dedual (Fisheries Panel Member/DOC) and Anthony Waiomio (Ngāti Pikiao, Te Takinga marae)
Chair	Andy Woolhouse (BOPRC Contractor)
Scribe	Karla Kereopa (BOPRC)
Apologies	Hohepa Maxwell (Tapuika); Cindy Baker (NIWA)
Karakia	Anthony Waiomio

ACTION POINTS (From November 2018 minutes):

- 1. Compliance monitoring programme to be distributed once draft completed – Andy W**
 - This is the programme that we've undertaken this year - completed
- 2. See if we can get some more photographs of the Channel and if we can get a date for the other photo (helicopter) – Andy W**
 - Photos not available
 - Justine has aerial drone photos of the Channel
- 3. Find the old Channel velocity information and circulate – Andy W**
 - Profiles and flows for 2012,14 & 15 hard copy available on web site
 - All the time they have been doing measurements its hasn't changed
- 4. Circulate updated otolith report - Brendan**
 - Has data but has not had time (other priorities) to analyse them but looking to undertaking the analysis over the summer break and available February 2020
- 5. Circulate report and MSc summary on catfish**
 - Refer to report (pg. 11, table 9 summary of 11 years of fishing)
 - Bullies numbers are back up
 - Refer to report (pg. 5 figure 1, site 11)
 - Refer to report (pg.15)

The presence of cat fish in increasing numbers in Lake Rotoiti and now Lake Rotorua could pose a significant threat to the ecology of the lakes

- 6. Undertake velocity measurements at the Weir and Fish passes – Andy B**
 - Two constructed fish passes estimated it to be about 0.1 m/s
 - Niroy had them constructed but they were designed to be <0.3m/s. The one that was formed naturally was gauged at 0.18 m/s
 - The two constructed passes should be tested
 - Highlighted points from Ohau wall fish panel assessment page 2

7. Talk to Te Arawa Lakes Trust to see if we are able to find someone who is willing to help out with some observations while fishing trout creel surveys – Ian

- Spoke with Nicki (TALT) but they don't have the capacity at the moment
- Talk with William as to capacity

8. Request that website is checked to ensure documents can be accessed and circulate minutes - Karla

- Due to website administrative issues the minutes from last meeting were not able to be uploaded and website access needs to be upgraded

Item 1: Confirmation of meeting notes 21 November 2018 and matters arising

- All matters in minutes were accepted as written

Item 2: NIWA Smelt Report – Andy Woolhouse on behalf of Cindy Baker

- Refer to Executive summary handout – from full report
- Interesting comparison of smelt numbers 34 smelt/minute pre wall and post wall 38 s/m, more recently 48 s/m and in 2018, 3s/m but this massive variability is within the variation of the runs observed
- Need to look at what we are getting from this survey in terms of additional information on effects of the diversion wall on smelt movements.

Item 3: Electric Fishing results- Brendan Hicks (University of Waikato)

ELECTRIC FISHING PRESENTATION: Catfish spread in lakes Rotoiti and Rotorua and environmental DNA

- Spread of catfish
- Will be analyzing another 9 months of Geoff's data in future

As per the monitoring programme, there was no electric fishing undertaken in December 2018.

- Refer to action point 5 above

Item 4: Trout Fishery Data – Matt Osborne (Fish and Game)

- Refer to Powerpoint presentation
- Talked about liberation strategies in past years (Rotoiti, Tarawera and Okataina)
- 2015 got rid of November/December portions of the activity
- 2015 -17 reduction in condition factor for 2 year old hatchery fish
- 1 October 2018 significantly improved
- 1 October 2019 it looks like the condition factor for the 2 years old has gone up
- Decrease in wild fish, importance of lake Rotorua tributaries for spawning, 2018/19 summer creels show increase again
- Summer catch rates in Rotoiti, the overall catch rates were down and 2 year fish size was down compared to previous year
- Other lakes were the same this past winter
- Rotorua fish were shorter but heavier, much improved and better than in previous years
- 2018/19 opening in the Ohau, smelt were present early October highly abundance in early November
- Fish stats – Ohau channel catch, brown trout smaller, lighter, poorer condition factor; 9 brown trout

measured 22 during season

- Angler perceptions, catch rate as being much poorer than the past few seasons as picked up through surveys
- Fish size looks similar, Angler satisfaction was slightly down but they are more satisfied than dissatisfied
- Detractions 5% lack smelt and other 5% saying a shag was in the Channel
- Surveyor comments (start 2019/20) A quiet opening, 10 pound brown caught during the first week, the smelt are present, water level high but clear, a feeling quality of fish improved

Item 5: Kōura and Kakahi Update - Ian Kusabs

- Koura
 - Refer to report
 - 3 tau kōura sites,
 - Decrease of 63% on 2017/18
 - Lowest number of kōura ever recorded in May and August 2019
 - Significant declines in kōura abundance (Ōkere and Te Akau) and biomass at all 3 sites
 - But Ōkere highly variable – CPUE of 72 koura whakaweku in December 2017
 - Catastrophic collapse at Te Akau could be due to increased catfish predation similar shift in lake Rotorua and reduced lake productivity
 - Relative CPUE of koura in 15 Rotorua Te Arawa lakes (Rotomā, Tarawera, Okataina, Tikitapu, Okareka, Rerewhakaaitu, Rotoiti, Rotokakahi, Rotorua and Rotoehu)
- Kākahi
 - Designed by NIWA for community groups
 - Shallow water less than 1.2 m deep
 - Five monitoring sites
 - Seasonal sampling
 - 51 surveys, change in Okawa Bay which is going down due to turf species growth

Item 6: Discussion of monitoring results

- Refer to notes from Fisheries Panel Meeting 22 November 2018 page 4
- General discussion around the presented reports and whether they should initiate any changes to the monitoring programme.

Smelt Monitoring – NIWA

The monitoring confirmed earlier results that the wall does not appear to be affecting smelt movement but isn't providing new information on possible effects of the wall.

Andy Bruere outlined proposal to temporarily drop the lake level in response to cultural concerns. This will require resource consent and if obtained will likely occur in autumn. This will expose beaches, but the draw down is only likely to be for 1 week. Michel suggested that any changes resulting from the drawdown could take years to show in monitoring. The current NIWA contract is to June (the end of the financial year). Agreed that the programme will be extended to November 2019 to give a full year of results which can be reviewed by the panel at the November 2019 meeting for a decision on a future programme.

Anthony indicated the Pamauri pa site on Ohau River, pre the wall there was seasonal movement of smelt close to the southern end of the wall. Water quality is priority but inanga and koura are also very important, it was a place where his kuia and kaumatua lived.

Electric Fishing UoW

It was agreed that the electric fishing is not providing new information and the programme should not be continued.

The explosion in catfish numbers is likely to affect the ecological balances within both lakes and the channel. Geoff Ewert has been providing data from his catfish removal programme to Brendan, although this is beyond the potential effects of the diversion wall it was agreed that Brendan's analysis work should continue under this programme. NB The contract for catfish netting is currently under review and it wasn't clear if Geoff has the contract or not.

The large increase in goldfish numbers was not anticipated early in the programme. There was discussion around if the wall could provide a protected environment for goldfish which occurred predominantly in the 'oxbow' but are now spreading out. Ian suggested that the increase in goldfish may be due to warm summers, and fencing of the adjacent paddocks.

Koura and Kakahi

There has been a catastrophic collapse of both populations which Ian believes are due to the explosion in catfish numbers. And that this is a biosecurity issue rather than one linked to the wall.

There is data in Laura's thesis which shows what that koura made up 6% of catfish diet.

Interesting find at Rotomā, small juvenile koura were caught at 33 metres depth, possibly being safe from catfish predation.

Although the monitoring isn't contributing new information of the effects of the wall, it is providing useful data on a number of other projects, eg alum dosing and is also part of a larger monitoring programme in a number of lakes. It is also a useful monitoring tool from a cultural context so it was agreed that the programme should continue.

Trout

Matt commented that the quality of fish in Rotoiti and angler perception was generally good and that the wall did not appear to be impacting on these. The parts of the F&G report on the Rotorua and Rotoiti fishery are part of F&G's own monitoring programme. The Ohau Channel component is separate and the aspect that last year was proposed to be undertaken by Te Arawa, but they did not have the capacity. It was agreed that Andy B should approach Te Arawa again to see if they have capacity to undertake the Ohau Channel fishery monitoring.

There are still some questions about the numbers of wild Rotoiti fish but Andy B suggested that there could be discussion between ERFG and BOPRC about bolstering hatchery fish numbers in the channel if that would be useful. It was agreed that this discussion should take place.

One factor from the installation of the wall is the loss of the delta as a high quality angling location. As a general comment, the delta is getting bigger, raupo beds have disappeared and some of the kakahi habitats are becoming colonized with aquatic plants.

Summary of Proposed monitoring programme Current programme in black, proposed changes in red below

Species	Agency/ Responsibility	Location	Programme
Smelt	NIWA Cindy Baker	Upper Ōhau Channel	2 sample locations upper Ohau Channel using traps. Monthly monitoring (6 sample periods) March, April, May, September, October and November. Current programme in place until June 2019. Smelt monitoring to continue until November when the next panel meeting can decide if the programme is to continue – Justine will sort contract extension.
All Species	University of Waikato Brendan Hicks	Ōhau Channel	Electric Fishing – 11 sites within the length of the Ōhau Channel No sampling December 2018, Review other data in September 2018 then decide if electric fishing is to be undertaken December 2019 Electric fishing to discontinue as it's not providing new information of the effects of the wall. Brendan to complete analysis of Geoff's catfish netting data (including bi-catch) and then be able to see whether we continue in the future or not. Keep in touch with Shane or Lucas from Biosecurity.
Kōura and Kakahi	Ian Kusabs & Associates	Within Diversion wall and Lake Rotoiti	Koura 3 locations seasonal sampling per year Kakahi 5 locations, seasonal sampling per year continue as before Add DO monitoring and undertake one off sediment sampling. Programme to continue unchanged.
Brown and Rainbow trout	Fish & Game / Ian Kusabs	Ōhau Channel (Rotorua outlet)	Angler survey, catch measurements, wild vs. hatchery fish comparison. Work to be undertaken by Te Arawa graduates. Surveys monthly in October, November, April, May and June. Ian Kusabs to organize. Ōhau Channel monitoring to continue. Andy B to liaise with Te Arawa Lakes Trust to see if they have resources available to undertake the surveys.
	BOPRC/Andy Bruere	Within Wall – Fish Passes and existing hole	Undertake water velocity measurements through the three holes (2 constructed passes and existing hole). BOPRC will measure the velocity at the two constricted fish passes and distribute results in an email.
	BOPRC/ Andy Bruere	Rotorua/ Ohau Channel Weir	Dave and Michel to provide Andy W with required measurement parameters that were not provided by EDS in the flow data. AW to pass on to EDS.
			The three Fisheries Panel members are to review the minutes and proposed changes to the monitoring programme, which will then be forwarded to BOPRC compliance as the proposed monitoring programme for the next year.

Item 7: Cultural Advisory Panel

Background – Andy Bruere

- Previous resource consent condition to have a cultural advisory panel. This was prior to the wall being constructed.
- This consent is different because the wall is in place
- Joe Tahana suggested including the Cultural Advisory Group into our Fisheries meeting
- Advisory reps Anthony Waiomio and Keith Waka – Lake Rotoiti area from Ngāti Pīkiao and Hohepa Maxwell from Tapuika – as per Condition 11 in the consent.
- Resource consent condition 11.3 states that after a period of 7 years a cultural review of effects on our activity must be undertaken. Although we have 5 years left we need to be mindful of that requirement and then working out if there are things that are required to get us to that point in time
- Also a requirement to have ‘mauri’ monitoring of trout pools

Anthony Waiomio - Ngati Pīkiao representative

- Joe has a good grasp on this I am new to this
- We want better outcomes around water quality, kōura, inanga and kakahi as these fish are a food source
- It would be good to come to our marae (Te Takinga) at some stage so we can hear kanohi ki te kanohi
- Liaise with Joe Tahana directly and then he will filter through to me

Item 8: Other business

- No other business

Item 9: Actions: Summary of meeting actions

Action No.	Action	Responsible
1	Velocities of the Weir, Brendan will send email to AW requesting further information	Brendan Hicks
2	Brendan to complete Otolith analysis/report and circulate by February	Brendan Hicks
2	Velocity information from the 2 constructed fish passes to be undertaken and distributed by email	Andy Bruere
3	Smelt monitoring will continue until November next year and the Fisheries Panel will make a decision at our next meeting whether or not to continue for another year	Justine Randall
4	Electric Fishing to stop but Brendan to analyse catfish data and provided to the Fish Panel	Brendan Hicks
5	Koura and Kakahi Ian Kusabs & Associates work to continue	Ian Kusabs
6	Trout Talk to Fish and Game regarding stockings	Andy Bruere
7	Andy B to liaise with Te Arawa Lakes Trust regarding 2020/2021 summer monitoring in the Channel (for Te Arawa students)	Andy Bruere

8	Arrange a marae hui and field trip - details to be worked through at a later date	Andy Bruere
9	Cultural advisory group to work on mauri monitoring	Andy Bruere
10	Request that website is checked to ensure documents can be uploaded and circulate minutes	Karla Kereopa

Next Meeting Date: Tuesday 10 November 2020 start 12 noon for lunch venue to be confirmed.