

AUCKLAND/WAIKATO FISH & GAME

A Meeting of Council will be held at the
NZ Deerstalkers Hall, Wairere Drive, Hamilton,
on Saturday 9 April 2016 commencing at 11a.m.

AGENDA

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M. Young
Chairman

29/03/2016

AUCKLAND/WAIKATO FISH & GAME

Minutes of a Meeting of Council
held at the NZ Deerstalkers Hall, Wairere Dr, Hamilton,
on Saturday 13th February 2016 commencing at 11.00am.

PRESENT:

Chairman: D. Cocks.

Councillors: C. Carey, W. Howard, C. Sherrard, B. Smith, S. Smith, E. Williamson,
G. Annan (11.30), P. Shaw (11.30).

Staff: B. Wilson, A. Daniel (11.30).

Visitor: M. Fitchett (Auckland Conservation Board), Paul Hardy (DoC).

1. APOLOGIES:

M. Young, N. Juby, A. Daniel (lateness), D. Klee, J. Dyer, G. Annan (lateness),
P. Shaw (lateness).

It was moved;

that the apologies be accepted.

Annan/Sherrard CARRIED

2. POSSIBLE CONFLICTS OF INTEREST ARISING FROM MEETING
AGENDA:

None declared

3. MINUTES OF PREVIOUS MEETINGS OF 5th DECEMBER 2015:

It was moved;

that the minutes of the meeting of 5th December 2015 be accepted as a true
and correct record.

B. Smith/Sherrard CARRIED

4. MATTERS ARISING FROM PREVIOUS MINUTES:

None.

5. COUNCIL CORRESPONDENCE:

Nil

6. **CHIEF EXECUTIVE'S BI-MONTHLY REPORT AND FINANCIAL STATEMENTS:**

Councillor Sherrard observed that the comparatively low number of ducks banded at Glen Murray was due to haymaking activities next door and there were large number of birds in the area.

Councillor Williamson updated the meeting on the Te Kauwhata WWTP consents and expressed his frustration at the procrastination by the district council as little progress had been made towards a permanent solution. He noted that the district council favoured a rapid filtration system which was obviously unsuitable as it would discharge into shallow groundwater and thus still impact on Lake Waikare. Councillor Sherrard informed the meeting that the population of Te Kauwhata was predicted to grow by 50% in the next ten years.

In reply to a question Mr Wilson stated that no decision had yet been received from the commissioners hearing the AFFCO Meatworks consent application.

General discussion ensued on Lake Waikare. A public meeting is to be held on the 16th March in Te Kauwhata to discuss the problems facing the lake.

Councillors Annan and Shaw, and Adam Daniel joined the meeting.

Mr Wilson updated the meeting on the moratorium on new buildings in the Waikato Delta. Mr Dyer would be carrying out regular visits to the F&G land and the district council was still active on the issue of sewage disposal from baches.

Dr Daniel gave an extensive update on the proposed silver carp and grass carp farm near Taupo. A closed aquaculture system was being considered with no discharge to natural waterways. Dr Daniel considered the possibility of carp escaping to be remote and stated that they would not breed in Lake Taupo. It was observed that grass carp had been present in the lower Waikato River for over 30 years and breeding had not occurred.

Councillor Annan advised that the Eastern F&G hatchery's fishout ponds could be booked by clubs for a day. The Te Awamutu club had recently organised a kids fishing day with the help of volunteer anglers and the assistance of Eastern F&G staff who also provided a tour of the facilities.

Mr Wilson advised that there had been no complaints from farmers over the nominal charge (\$2 per day) for the hire of the zon guns.

The decision to replace the Mitsubishi's utes with Ford Rangers was briefly discussed.

It was moved;

that the Chief Executive's Bi Monthly Report and Financial Statements be accepted.

Annan/Williamson CARRIED

7. **LAND & WATER HABITAT TRUST:**

General discussion on the financial accounts with several Councillors concerned over the high cost of the audit.

It was moved;

that a new auditor be considered for the LWHT accounts.

Kerr/Williamson CARRIED

It was moved;

that the LWHT Financial records be accepted.

S. Smith/Annan CARRIED

8. **OSH UPDATE:**

Councillor Cocks suggested that a meeting should be held soon with the executive of the various wetland associations to discuss Health and Safety issues. Mr Wilson agreed that such a meeting would be very useful now that draft safety plans for the wetlands had been prepared.

It was moved;

that the OSH Report for February 2016 be accepted.

B. Smith/S. Smith CARRIED

9. **GENERAL BUSINESS:**

The boundaries of Lake Waikare were discussed with it noted that large areas of farmland were within the lake's boundaries. It was emphasised that this was an issue that F&G should not be directly involved with. The property boundaries are shown on the Walking Access Commission website. (wamz.org.nz)

Councillor Howard informed that a local hunter was interested in carrying out a trapping programme in the Piggott Wetland. It was noted that permission should be sought from the Piggott Wetland user group.

Councillor Howard put forward the recommendation from the Franklin Acclimatisation Society that the Piggott Wetland be renamed the Madsen Wetland to honour the efforts of recently retired F&G Councillor Dan Madsen. It was agreed that this recommendation should be placed on the agenda of the April meeting and Councillor Howard was requested to prepare a written recommendation. Several Councillors and Mr Wilson observed that Mr Madsen had provided his considerable expertise and labour as a surveyor to the Council at no cost for many years.

Councillor Annan informed that he had recently visited the landowner at Toa Bridge to see whether they were willing to discuss the issue of angler access. The French

family had not changed their decision to ban anglers, albeit the occasional overseas angler was allowed to fish.

Mr Fitchett thanked Councillors for his invitation to the meeting and noted that the concerns raised at the previous F&G meeting he had attended were considered by the Auckland Conservation Board. The issue of feral cats had been included in the recent review of the Auckland Regional Pest Management Strategy.

There being no further business the meeting concluded at 12.30pm

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Ngā Maunga Whakahii o Kaipara Investment Ltd

P O Box 315, Kumeu, 0810 Tamaki Makaurau

19th February 2016

Fish & Game Auckland/Waikato Region
156 Brymer Road
R D 9
Hamilton
Att Ben Wilson

Tēnā koe Ben

Thank you for your email requesting permission to issue permits for the 2016 Pheasant Shooting Season. As you are aware Woodhill Forest has had a long relationship with Fish & Game with many hunters enjoying a day out in the forest.

However this year we have reviewed the situation and have decided not to proceed with permitting of Pheasant Shooting in Woodhill Forest for the following reasons:

- Significant changes to the Health & Safety Act places a greater responsibility on Land Owners for safety of all users. And unfortunately the significant safety risks out way the benefits in this situation.
- Increased harvesting activity is placing a greater demand for the use of the land for other activities.

We wish Fish & Game the very best for the future.

Nāku, nā

Andrea Thomas
Kaiwhakahaere Ngahere/Forest Manager

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INFORMATION**

Contact

**MEDIA RELEASE
For immediate release
Friday 18 March 2016**

Contact confirms it does not expect proposed Taupo carp farm to proceed

Contact Energy, who signed an agreement with Golden Harvest Aquaculture to lease land and provide geothermal heat for the carp venture, will not extend deadlines in those commercial agreements and therefore believes the proposed Taupo carp farm will not proceed.

Mike Dunstall, Contact's Wairakei-based General Manager of Geothermal Resources and Development, said: "Having carefully considered the feedback from the community, local and national authorities, iwi, hapu and business partners, we have decided not to extend our commercial agreement with Golden Harvest Aquaculture beyond a shortly-approaching deadline, where the venture is required to have all necessary approvals and permits."

"This decision has been a difficult one for Contact. As with any commercial venture, we always aim to balance and respect the interests of our communities, support our business partners, operate in a sustainable manner, and maximise the value and use of the resources that we manage."

"Contact saw merit in exploring the carp farm project due to the promised creation of around 20 jobs, the new economic activity for the region and improved efficiency of use of geothermal energy."

"However, as a sustainable and responsible company we know the importance of robust and open debates on issues. It's clear to us, based on the concerns raised about the carp farm, that there's still a way to go to resolve questions about any proposed aquaculture ventures in the region."

ENDS

Any questions about the venture's deadline for approvals and permits should be directed to Golden Harvest Aquaculture.

About Contact

Contact operates five geothermal power stations near Taupo and is a major employer in the region, with a team of around 150 based in Wairakei. Contact is one of New Zealand's largest electricity generators and retailers, powering over 550,000 customers across the country with electricity, natural gas and LPG supported by a team of around 1,000 based in communities throughout New Zealand. www.contact.co.nz

Media enquiries:

Shaun Jones
Head of Communications, Contact Energy
021 204 4521

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INFORMATION**



Important health and safety changes that business owners can't afford to ignore



The Health & Safety at Work Act 2015 will come into force on April 4th 2016 and will replace the Health and Safety in Employment Act 1992. It should be stressed that this Act and its accompanying set of regulations is not simply an update of the old regime. Businesses and individuals will face an increased regulatory responsibility that includes bigger fines and up to five years in jail for individual company officers, employers and employees.

Businesses of all sizes will be required to have an effective strategy to manage workplace safety and also engage employees in that process.

PCBU

In order to reflect the fact that not all working relationships come under the heading of "Employer – Employee", the new legislation creates replaces the term "employer" with **Person Conducting a Business or Undertaking (PCBU)**.

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This term will include employers, principals and the self-employed of any company, trust, partnership, joint venture or sole trader, conducting a business or undertaking, whether for profit or not. A body corporate may also be a PCBU in relation to common areas and when contractors or staff are on site.

Due Diligence / Duty of Care

A director, CEO or officer of any company has a duty to exercise 'due diligence' to ensure that their business complies with the Act. Any individual who hold positions that allow them to "...exercise significant influence over the management of the business." are defined under the Act as "Officers" and can be held personally liable if they fail to exercise due diligence in this area.

A PCBU has a primary duty of care to ensure the health and safety of workers, as far as is "reasonably practicable". PCBU's who don't comply face a range of sanctions including both fines and imprisonment.

Reasonably Practicable

The "reasonably practicable" replaces the old definition of "all practicable steps" in the old legislation and is defined as a situation where all relevant factors must be taken into account, and evaluated including;

- The likelihood of that risk occurring,
- The potential harm posed by each risk,
- How that risk may be reduced or eliminated.

Obviously this needs to be documented as part of an ongoing risk management plan.

Workers

The new Act will require workers to take reasonable care for their own health and safety and that of others. The new Act will oblige employers to support and encourage worker participation and consultation in workplace risk management. This will include the ability for employees to seek the election of workplace health and safety representatives.

Penalties

Maximum Penalties

Category	Corporation	Individual as PCBU or Officer	Individual/Employee
1. Reckless Conduct, Exposing Someone to Death/Serious Injury	\$3m fine	\$600,000 fine, Five years in jail, or both	\$300,000 fine, Five years in jail, or both
2. Failure to Comply, Exposing Someone to Death/Serious Injury	\$1.5m fine	\$300,000 fine	\$150,000 fine
3. Failure to Comply with a Health & Safety Duty	\$500,000 fine	\$100,000 fine	\$50,000 fine

The agency charged with enforcing the new Act, WorkSafe New Zealand, will have up to two years to investigate any incidents.

Personally Liable

It is worth repeating that whatever your role in the workplace, **you are personally responsible** for monitoring health and safety.

- **As a PCBU**, you have a "duty of care" to ensure the safety of anyone in the workplace.
- **As a Director** you must carry out "due diligence" to ensure that the company is managing its health and safety risks effectively.

- **As an Employee**, you must take "reasonable care" in respect of your own health and safety and that of others in the workplace.

Insurance Response

As with the outgoing law, it will remain illegal to insure against fines levied under health and safety legislation. However, it is still possible to insure for defence costs involved in investigations and prosecution brought by Worksafe NZ and for reparations and damages awarded by the court.

Cover for unintentional breaches of NZ health & safety legislation is provided by a Statutory Liability or Management Liability insurance policy.

Commentary

Ignoring this law change is a very risky option. In the event of an incident, a company will need to be able to show that it has:

- Developed and implemented a risk management plan.
- Worked with management and employees to identify and, where practicable, mitigate or remove workplace health and safety risks.
- Implemented a complaint accident reporting program.

It is important to remember that as a PCBU, you have a "duty of care" to ensure the safety of anyone in the workplace, and as a Director you must carry out "due diligence" to ensure that the company is managing its health and safety risks effectively.

The new Act is more rigorous than previous legislation and it is expected that enforcement will be more frequent and more complex (i.e. more expensive) so we **strongly recommend a review of sums insured** for Statutory Liability / Management Liability insurance programs. SME business commonly have \$250,000 to \$500,000 coverage in this area, which is likely to be inadequate.

It is expected that WorkSafe NZ will be issuing a guide to the Health and Safety at Work Act to be released mid-March.

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PH: 07 903 5000 | Email: info@frankrisk.co.nz

15 Clifton Road, Hamilton 3204

www.frankrisk.co.nz

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Bi Monthly Managers Report**Auckland/Waikato Fish & Game Meeting April 2016**

OUTPUT 1: SPECIES MANAGEMENT**Project 1111 Drift diving**

Two Awakino drift dives were completed along with the installation of 8 access signs on Gribbon Road.

The Mangatutu drift dive was abandoned for a second time due to poor water quality. A river survey was done on the spot to determine the cause in the reduced visual clarity and Adam found a fence down with stock in the stream.

Project 1112 Banding

We were happy with the total number of ducks captured during this summer's programme at 5 out of the 6 sites. For some reason, the Wellsford site has failed to produce the numbers we require for the past few years and we may need to look at shifting locations or dropping the site completely if no alternatives are found.

All in all, 21 Auckland Zoo staff assisted us duck banding this year to obtain their banding certificates from DoC. Just one missed out when we had to postpone the last site due to a "weather-bomb".

Project 1113 Transects

Mallard Transects. David Klee met with Eastern Region staff to discuss a number of inter-regional issues relating to game bird monitoring and management. As councillors will be aware we are moving towards a management approach whereby we will use underlying biological and climatic drivers to manage our populations rather than arbitrary regional boundaries. As such, David, Matt McDougall, and possibly staff from Taranaki, the Hawkes Bay and Northland will be developing monitoring plans where DMUs (Duck management units) overlap regional council boundaries. As a starting point David and Matt will be conducting aerial transects in April this year in the Eastern, Hawks Bay, Auckland/Waikato and Northland regions. Matt is working on a project to determine spatial distributions of sub populations based on band returns in order to help validate DMU boundaries. If this proves useful we will do the same which will require going through all the banding records and entering grid references for hunter returns. With over 7000 returns this would take some time and effort. We plan to continue with transects and compare results to banding data which will be used to try and validate the approaches being used.

Project 1115 Fish Population Surveys

The wild and hatchery trout returns were entered into the database. The Wild Trout Report will be updated again to include competition tagging information.

Adam completed the Auckland reservoirs report.

Adam requested and analysed the spill data from Lake Arapuni to determine if a potential change in spill volume had reduced the number of wild fish in Arapuni and no link was found.

Project 1117 Gamebird Research

PhD Project Mallard Productivity: Our last tracking day in the Waikato was 4 March. By the end only 7 birds could be heard with very faint signals implying that the batteries in the transmitters were nearly flat, which was expected. Of the 44 birds we were able to track from January to early March, 2 were recaptured during February banding (batteries already flat), 6 females died, and the rest eventually went missing (likely due to flat batteries). The cause of the high female mortality so late in the season is unknown as many end up in the middle of lakes and we are unable to retrieve the carcasses. However, we suspect botulism or algal poisoning may have caused some of these deaths, whereas others may be attributable to the late moulting of females which raised ducklings, making them easy targets for predators. Jenn Sheppard has started plugging away at the data analysis and at the time of writing some preliminary results are being written up.

Masters Project Heavy Metal Concentrations. Mallard researchers Jenn, Evan, Katie and some of her friends came to banding at the Finch and Shaw properties. In total we collected blood from 170 birds in order to augment the pre-breeding samples taken during Jenn's study. By doing so we hope to get a more complete picture of contaminants throughout the annual cycle. The next phase will be to collect hunter shot birds from within the study area and an article has been written for the Newsletter outlining what we require. These samples will be used for gizzard analysis as well as tissue, bone or feather samples. If any hunters who use the study area (Te Awamutu, Rukuhia, Cambridge, Pirongia) would be willing to help, please contact the office.

Project 1121 Harvest Surveys

Cameras: Adam downloaded about three quarters of the cameras in National Park and unfortunately two cameras were found to have been stolen.

Project 1161 Trout Releases

Lake Pupuke: Adam is in the planning phase for the Pupuke release and has ordered the fish for 2016/17 from the hatchery.

Project 1162 Pheasant Releases

The regional F&G managers have agreed that the Director-General of Conservation be requested to give written authority to F&G to allocate permits to raise and release gamebirds. John Dyer has the following comments on the existing situation:

It seems that someone is very active on Facebook, telling everyone that has an interest in quail breeding that they need to have a DoC permit to sell them – or else. Ironically DoC are reputed to have told one of those so scolded that they only need such a permit if they are raising large numbers for release on shooting preserves. In fact, everyone who raises gamebirds without DoC authority faces a maximum \$5,000 fine plus a further \$100 for each head of game or eggs that they have. DoC are charging more than \$400 for these permits. As one recent complainant pointed out; for 2 Californian and 3 bobwhite quail, this just isn't likely to happen. Ironically the Wildlife Act specifically states:

S.53(3) The Director-General may give to any Fish and Game Council any written authority that may be given under subsection (1) or subsection (2) in respect of game.

This delegated authority would surely be the simple way that we can help out interested small-breeders of gamebirds, as we used to in years past, and let DoC get on with their core-work. We would assume that most DoC staff issuing these permits have never raised gamebirds in their life and have no experience or advice about in such. This bureaucratic requirement seems to have no discernible purpose beyond revenue gathering.

The National Gamekeepers Organization in the UK has just published a summary of some important new research work by Mark Whiteside of Exeter University in association with the Game and Wildlife Conservation Trust. This shows firstly that, if pheasant chicks that are artificially raised in coops have roosts provided, they are much more likely to later use trees as roosts post release. Flying into roosts makes them stronger birds too. As a result predation, which can be as high as 25% in the first 2 months, is significantly reduced.

Mark also exposed them to a more natural diet that included live wiggly mealworms. The young pheasants, that would otherwise have only been fed poultry crumbs, thus learnt to recognize insects post release as an important food. So much so that their guts were 5% smaller than crumb-fed birds because they were better adapted to high-protein insects. When shown crickets, they had little trouble recognizing them as food – unlike their uneducated crumb-fed mates. Birds that are better fed spend less time feeding out of cover where they are at risk of being predated. What all this means is that, the appalling losses of young released pheasants post-release can in part be overcome by more natural raising methods. If there is any purpose for issuing permits to backyard gamebird breeders, it is surely be to get messages like this out there to better guide them to success. Who knows, we might one day have a new species like bobwhite quail establish, based simply on such adaptive release techniques.

Project 1181 Gamebird Control

John Dyer has been experimenting with a new rat bait called D-Block Extreme, (containing Diphacinone). This has an LD50 to rats of 0.3-7mg/kg. But if a mallard duck should happen to find some (though it's normally stored in locked rat-boxes in the field) then the LD50 to them is 3,158mg/kg. This means it is 450 to 10,500 times less toxic to ducks. When stoats were fed Diphacinone rats in pen trials, 71% of them died too. No poison is perfect, but this is safer than many. The alternate approach to poisoning rats is to catch them in a trap. Large scale tests in NZ have shown that any trap that catches a rat is at least twice as likely to catch a stoat. And any trap that catches a stoat is more likely to catch another stoat.

The Hunting & Fishing 'Swamp Comp' predator competition is snowballing with 2,071 ferret, stoat and weasel tails entered and counted in 2015, (compared to 1,155 in 2014 and 750 in 2014). We're proud to have played our role in securing this competitions' future. In turn, H&F through their catalogue have given us very good publicity regarding the mallard research project.

OUTPUT 2 HABITAT PROTECTION/MANAGEMENT

Project 1211 R.M.A.

Covenants on subdivisions next to the Dean Wetland: We were asked for comment on two subdivision proposals (4 sections in total) off McIntyre Road across from our Dean Wetland. We have requested that the new titles have covenants that recognisest:

1. That a great many rural activities in this area frequently include intrusive noise,
2. That recreational gamebird hunting with shotguns is a very longstanding, ongoing and intrinsic use of the adjoining Fish and Game Council land,
3. Machinery use associated with farming activities and also with wetland conservation, is also a very long established prior and ongoing use of adjoining land.

The proposed covenants have been accepted by the applicant. Thanks to former F&G Councillor Dan Madsen for his assistance and advice on this matter.

Lake Waikare/Whangamarino Flood Scheme: David has been giving input into the hydrological conferencing and options assessment which form the basis of the adjournment. A comprehensive list of options has been developed and now the feasibility aspects need to be evaluated and modelled to determine the sediment reduction targets.

Open Country Dairy Factory Submission: A submission was lodged opposing the consent renewal of the Open Country Dairy Factory near Waitoa discharging into the Waitoa/Firth of Thames catchment.

Inghams pre application liaison: Another application which is seeking to ramp up discharges. We have reviewed the draft AEE and requested a bunch of further information. Unless there are substantive changes to the application it is likely we will need to oppose this application.

Max Birt and Lumbercorp: Pre application Liaison with both companies in regards to re-consenting of their discharge next to Lake Waikare.

Legal Costs: Interested F&G staff around NZ have been circulated for comment regarding our National Office submission to the Wildlife (Powers) Amendment Bill. This will now allow DoC officers to detain offenders – but Fish & Game staff have been specially denied the same authority by the Bills' drafters. Yet not being able to legally detain offenders has long been a problem in some F&G cases. Likewise only DoC staff are now being given new powers to establish a person's true identity, yet F&G are often given false details by an offender. Although we have ways of dealing with this more authority would certainly help. Likewise, with licences now being done online and receipts sent by email before any written confirmation arrives, we need access to these electronic devices to confirm this. But once again only DoC is being given this new authority to look at these. If we're doing the same job as DoC, often over the same fully protected species, then it only makes sense that we should have the same authority in these three new areas. In contrast, we wonder how many offenders will now get away in a new scenario, that of F&G staff waiting for DoC personnel to arrive.

AFFCO: Adam gave a talk on the AFFCO case at Waikato Uni along with Tim Manukau of Tainui.

Grass Carp: Adam assisted Eastern F&G on a national level with the grass carp farm political blowout with a technical fact sheet.

Consent Renewals: Adam has commented on three gravel pit consent renewals and reviewed a department of justice water discharge consent. Adam will likely need to travel to National park for Iwi consultation for the draft Whakapapa Village water treatment plant consent.

Project 1221 Council Land

Waikato Islands: TBfree NZ has been told that that any possum control works on the islands cannot proceed until well after duck shooting. They have asked about September - October 2016. They're looking at one intensive 2-3 month poisoning programme on the islands using a second generation anticoagulant in pellet form contained with bait stations. The toxin Feratox® an encapsulated cyanide pellet would also be used as supplementary control. The Feratox® toxic baits are the size of a small pea coated in a cereal base designed to be eaten by possums in their back jaw with a 4 kg cracking pressure, and therefore have low risk to other species. Feratox® baits are usually contained within a peanut butter matrix within a biodegradable bag. All toxins and bait stations would be removed at the completion of control.

North & Central Shepherd: This Council leases the paddock north of Oram Road, next to the Whangamarino radial arm weir as part of a larger portfolio of railway land in the area. This was extensively disturbed by machinery when the replacement railway bridges were built adjacent and gorse and other weeds have re-established and flourished. This has since been sprayed by John Dyer, and in particular, the yellow flag iris there is now all dead. This maintenance is not only necessary as a lease condition but should also improve access for the numerous coarse fishers that use this popular area.

Piggott Block: Around 1,000 litres of spray has been used on a large, long wall of pampas in this block to better provide for machinery access when the consent is exercised there – and also to make it easier for hunters walking down the creek stopbank. Also found were numerous patches of yellow flag iris in the swamp which have also been sprayed. There are other patches further in and we need to locate them and then get a sprayer to them in this overgrown area. We have also been in contact with Watercare and DoC about controlling the alligator weed floating down from upstream of our boundary creek. A half dozen swan in this creek are doing quite a good job of devouring it along with the biological control beetles later in the season. However it would be good to spray it out in the early season when there is a risk of flood waters moving it into the Waikato Delta. We could easily do this, but to legally spray Metsulfuron over water would take a month of consultation with all the iwis and kiwis in order to do 30 minutes work. DoC already have this authority and it's much easier just to open the padlocked gate and let them use our easy access to this stream. A key has been supplied to them to do so.

Someone has recently damaged the upper weir in this stream by removing all but one of the boards. Fortunately there is a coffer dam above this and it was just a case of topping this up with some clay and metal to repair it. If anything this should improve fish access for whitebait, but it is nonetheless a significant cost (for machinery hire) that we do not need. The wetland levels have been re-established by this work in good time before the gamebird season and water is now flowing over the bottom weir again. Someone has also been cutting locks inside the block, ironically only to find there was nothing to steal. Of course, lock replacement is a cost just the same. Anyone using this or any of our blocks is advised to display their entry permit in their vehicle window or be subject to very close scrutiny. Also on this block someone is leaving dead koi around to become flyblown, though it was not the bow-hunter who was stopped and checked recently who had a valid F&G permit.

Several of our blocks have wasp issues, notably the Piggott Block just past the bottom weir, (on the east-west stopbank just to the right of the eastern-end gate) and also the North Emmett Block boat ramp. Doubtless there are others. Staff have used Permethrin, (Permethrin-based) to try and kill these nests and also Diesel, but these two nests are both in very awkwardly sloped locations. One German wasp nest and two large paper-wasp nests have however been

successfully destroyed. If hunters in our blocks are allergic to wasps it would pay to carry appropriate medication at all times as it is very easy to inadvertently step on a nest.

Dean Block: Experiments have been done using Basal-X spray (a chemical form of ring-barking) to kill multi-stemmed dense willows in canals near the BOW pond. Care is needed spraying the willows here so as not to inadvertently kill nearby pin oaks from spray-drift. These dense willow clumps are awkward to get at being in the middle of deep canals and it remains to be seen how effective this technique is when the far side of these trees is not able to be directly sprayed. By opening these canals up waterfowl including broods can move through the area more easily in response to food availability, to hide from predators etc. Water can also ebb and flow to reduce any tendency to stagnate.

Electricity workers cutting down willows to protect power transmission lines were told they did not need access past the Dean Block metal gate by the weir there. It was only a few meters for them to walk from this gate to where they needed to be. However, they decided to cut the padlock chain and drive in anyway. The chain was nailed back to the post when they left, which is far from secure and has since been replaced. But they also managed to get their vehicle stuck driving up the stopbank to turn around. The damage left has also since been repaired.

McKenzie Block: Long-time friend of Fish & Game, Mr Peter Nola has been collecting plywood for grey teal nest boxes and this has since been collected and delivered by staff with a sample box to another seasoned supporter, Mr Eric Best for making up.

Project 1231 Non Council Land

WCEET wetlands: By the end of this summer the earthworks component of the majority of the WCEET funded wetlands on private land will be completed. Further site visits have been conducted and another suite of applications will be lodged shortly in order to assist landowners wanting to create game bird habitat on their properties.

Waikare Wetland: David worked with Waikato Regional Council staff and wrote letters of support for funding applications in order to help create further wetlands and conduct riparian restoration projects. We are developing a good working relationship with a number of the catchment management officers and the success of these smaller scale projects will help grow enthusiasm.

Consent Requirements: Councillor Carey will be able to give his perspective as a landowner in regards to the consent requirements to create a wetland on his property.

NZTA Wetlands: David has attended multiple meetings in order to iron out a few outstanding points of difference with NZTA contractors for the Evans road wetlands. The last remaining issue relates to bund heights and potential for flooding on adjoining properties. We are confident that these issues can be resolved. The project should be ready to commence during next summer's construction window.

The Fisher road site is more complex and the contractors design team came up with a novel approach to try and maintain water levels which involved putting in approximately 1Ha of liner. Whilst this may achieve water levels, the proposed design would move away from the concept of a ground water controlled system and would require divergence from the contractor's principle requirements. Liners only have warranty of 20 years and whilst we are

assured they tend to last much longer than this we will not accept a wetland design with increased risk for our future management of the site.

Botulism: John Dyer investigated a botulism outbreak at Waitakaruru and were closely assisted by DoC Thames and also the Miranda Shorebird Trust to find, bag-up and dispose of putrid dead birds. These dead canal birds consisted of pukeko, paradise shelducks, stilts, herons, mallard and grey duck as well as grey teal. The adjoining canal had but a single dead bird which was removed. The main outbreak site was inspected a number of times as was the nearby wading bird roost some 10km away where wrybill, NZ dotterel, ruddy turnstones, red knots and several grey teal were also found dead. A series of local waste water treatment plants; Thames, Kerepeki, Ngatea, Turua and Paeroa were all checked several times, but no additional sick or dead birds were found. Likewise surrounding canals and headwaters were checked. The outbreak seems to have been entirely localised. A few birds were found next to a farm pond some distance away, but were picked up and buried by our Hauraki volunteers. We also had the SPCA and Bird Rescue on standby but botulism is fast acting and the only still alive bird was too far gone to save. Several of the fresher birds were sent off by DoC to a laboratory for confirmation that it was Type-C botulism.

Small numbers of birds have also been noticed, collected and disposed of by Watercare staff at Tuakau Waste Water Treatment Plant proving that our Botulism Plan is working well there. Even the details from a banded bird were sent in. Likewise some Auckland city areas where botulism is seen most years have cropped up again. Cool mornings since mean that the water temperature is now falling and this coupled with some heavy rain should mean we're seeing the last of the botulism this year. It could have been much worse and intervention has likely helped avert this.

OUTPUT 3 PARTICIPATION

Project 1311 Access negotiation

Awakino River: Adam Daniel installed 8 angler access signs on Gibbons Road and talked with the local land owner.

Limeworks Loop Rd: Adam visited a property with trespassing issues and agreed to post an angler access sign directing people to a nearby DoC access point.

Project 1331 Magazines/newsletters

The pre-season newsletter should be out by the time of the meeting.

Reel Life: Produced each month as usual.

OUTPUT 4 PUBLIC INTERFACE

Project 1431 Liaison Advocacy

Adam has done talks at the University of Waikato for their MSc program.

Adam gave a talk to the Tokoroa fishing club

Lets talk Water: This is an attempt by the Waikato Regional Council to “*have a regional conversation around water management*”. I went to the first meeting on this new project but

it wasn't very informative about the process or how it fitted in with the Healthy Rivers Plan change.

Ministry of the Environment meeting: I attended a public hui at Hopuhopu (Tainui meeting room) where the Minister of the Environment, Nick Smith, talked about the proposed changes to the RMA. I later meet with the Minister and discussed local issues along with his secretary, Neil Deans (former manager of Nelson/Marlborough F&G)

Project 1442 Public awareness

Botulism Media Release: We issued a media release on the botulism outbreak in the Waitakaruru canal and Miranda area. As councillors will recall we also had a major outbreak in the lower Piako in 2011. At that time we warned authorities that in future the Miranda shorebird centre could be at risk from such events. Once again a wide range of species succumbed including some classified as being threatened or endangered. There are multiple reports which warn of the deteriorating quality of the Firth, in particular the potential for the Firth to 'tip' with more frequent low oxygen events which are often linked to botulism outbreaks.

OUTPUT 5 LAW ENFORCEMENT

Project 1511 Ranging

Nicholson Sentencing: Nicholson had previously been found guilty, following a defended hearing, of obstruction of rangers and having more than one fishing rod.

Our lawyer supplemented her written submissions with brief oral submissions. Before proceeding to sentencing the Judge sought clarification from the Probation Service that Nicholson could do community work so he could consider that as a sentencing option. Probation confirmed Nicholson could but because of his medical condition (not specified in the court) such community work was limited to light duties only.

The Judge on sentencing him stated that the fines sought were unrealistic in relation to his personal and financial circumstances as the Judge noted he was obliged to take into account the defendant's means, and that the Conservation Act provided for community work as an option in sentencing. The Judge noted that such community work was limited noting the defendant's medical condition to what he could do and that it was possible for lighter duties to be found, so, in the circumstances, community work was an appropriate sentence.

The Judge sentenced Nicholson on the Obstruction of a Ranger to 150 hours community work, and on the charge of more than one fishing rod 50 hours community work, being cumulative so total of 200 hours community work. His Honour said that it was appropriate that Nicholson pay something towards costs of prosecution however taking into account his means he ordered him to pay \$500 towards costs of prosecution (the amount in savings that his counsel indicated to the court Nicholson had).

Special Parrie Season: We issued 111 permits for the Special Paradise Shelduck Season this year, down from 121 in 2015. Mr Dyer ranged the Port Albert, Hoteo, Wharehine and Glorit areas, among others, checking out many likely ponds. In one case it was apparent that a particular shooter and sharemilker was disturbing a pond fairly regularly throughout the year without having a permit to do so. He was eventually tracked down and spoken to about this.

Otherwise everyone checked out, albeit that some forgot to carry their permit on them, and so their details taken and confirmed on Monday.

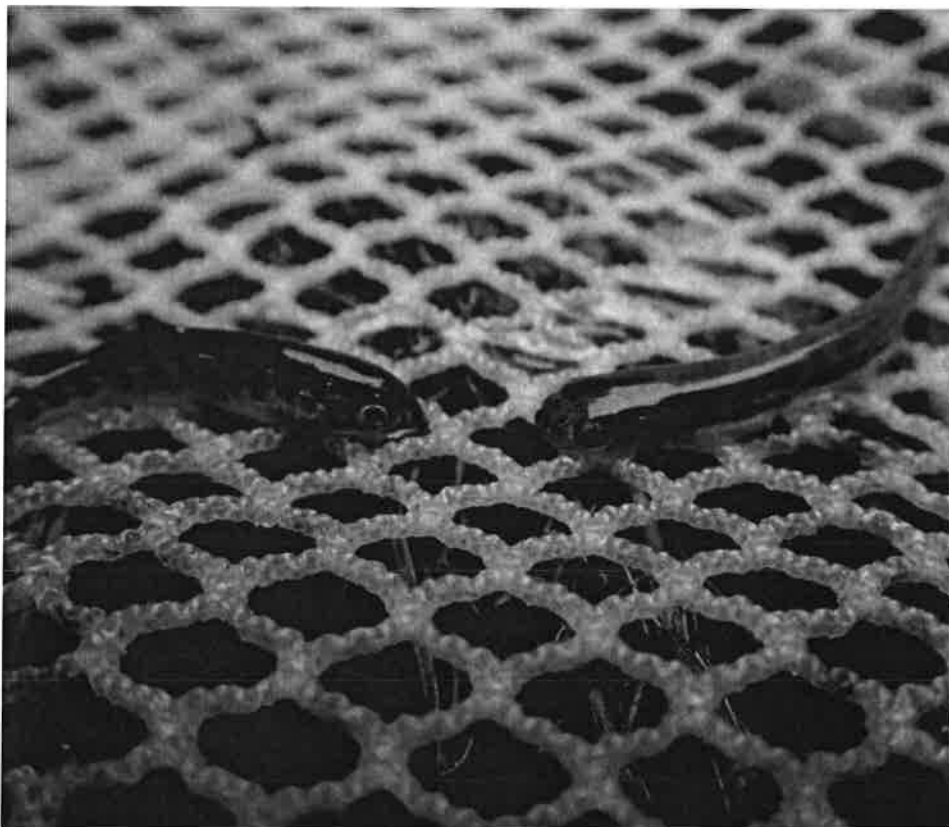
Adam checked two licences on the Whanganui and did ranging during the Awakino and Mangatutu drift dives.

Project 1520 Ranger Training

Adam Daniel conducted a one day fish ranger training course at the Hamilton office in February 2016. Although the course was mainly for a new coarse fishing ranger, Kyle Hawkrige, all rangers were invited to attend. However the only other ranger to attend was Theunis Miedema. The course covered the entire ranger training manual and highlighted the way we do business in the Auckland/Waikato region. After the classroom session they went to the Hamilton Lake where they did mock interviews on the lake and attempted to interview an actual angler but there were none present. Both Kyle and Theunis are now up to date on the fishing regulations and our field procedures including relevant parts of the Search and Surveillance Act, Conservation Act and Fisheries Act. Health and safety were also a key topic and Adam explained that the use of personal vessels was not permitted unless the vessel was in survey and the operator was qualified under our part 35 exemption through Maritime NZ.

B. Wilson
Chief Executive.

Mangatangi and Mangatawhiri Reservoir fish surveys 2014 & 2015



Rainbow trout captured with a juvenile Galaxiid in the upper Mangatawhiri River.

Prepared by Adam Daniel

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1 Introduction

1.1 Background

The main Hunua streams, including Wairoa, Mangatawhiri and Mangatangi Streams, supported recreational trout fisheries before they were dammed for bulk water storage in the 1960s and 1970s. Public calls for fishing in the Hunua reservoirs go back to the time when the dams were first built. In 1988 the Auckland Regional Authority (ARA) tentatively looked at restoring trout fishing but was unable to agree to a change of policy. Due to the lack of trout fishing opportunities in the Auckland Region the loss of these two fisheries was and still is of major concern to Fish & Game.

The Mangatangi Reservoir is the largest reservoir in the Auckland Region with an open surface area when full of 185 ha and a maximum depth of approximately 54 meters (Figure 1). In 1993, after submissions from F&G and the Auckland Freshwater Anglers Club as part of the resource consent renewal process for the Mangatangi Dam, Watercare agreed to allow trout fishing, restricted to the dam face, on a trial basis. Watercare's Recreational Fishing Operational Plan judged the trial fishery to be a success with no detrimental effects on water quality detected and gave permission for ongoing access to the Lake Mangatangi fishery. The fishery was successful due to drive-up access and the use of a small boat left at the dam.

Angler use dramatically declined between 2001 and 2007 with Mangatawhiri declining by 86% and Mangatangi by 63% (Unwin and Image 2009). Anglers now have to park and walk uphill a considerable distance to fish either reservoir. The lack of drive-up access and limiting the fishing area to the dam faces has likely caused the decline in angler use at the reservoirs. Anglers currently only have access to the riprap dam faces of the Mangatawhiri and Mangatangi Reservoirs. Limiting the fisheries to the dam faces has dramatically reduced the positive experience associated with scenic rivers and lakes that was once enjoyed by anglers fishing the Mangatawhiri and Mangatangi Streams. The association between a positive fishing experience and scenic value of a fishing location is well documented (Holland and Ditton 1992, Unwin 2013)(Unwin 2013) and likely another key factor in the continued reduction in the use of both fisheries.

The Mangatawhiri River was also one of the only lower Waikato River Tributaries to contribute naturally spawning rainbow (*Oncorhynchus mykiss*) and brown trout (*salmo trutta*) to the Waikato River population. The Lower Waikato River has the highest angler use in the Auckland/Waikato region and is a vital regional fishery. Due to low residual flows downstream of the dam, reduced habitat and lack of downstream passage the contribution of the Mangatawhiri River to the lower Waikato River has been greatly reduced or eliminated. Similarly the reduced flow and lack of cool water for summer refuge have led to the extinction or near extension of trout in the lower Mangatangi River. The reservoirs and dams create a barrier that does not allow naturally spawning fish in the upper river to contribute to the lower river population or to feed in the lower river during cooler months. The dams also create an upstream barrier for trout living in the lower river trying to move upstream to escape high water temperatures, now exacerbated by the lack of residual flow.



Figure 1. Map of Hunua Ranges reservoirs including Mangatawhiri and Mangatangi.

2 Trout fisheries of the Mangatangi Reservoir

2.1 Stocking history

Mangatangi Stream was first stocked with rainbow trout in the 19th century. F&G has continued to irregularly supplement the Mangatangi fishery with hatchery-reared rainbow trout (*Oncorhynchus mykiss*) since the 1990s with the last stocking in 2009. The Mangatawhiri reservoir has had good natural production in the free flowing river above the reservoir that has not required stocking.

2.2 Methods

Fish & Game staff surveyed the Upper Mangatawhiri and Mangatangi Reservoirs December 10 & 11 of 2013. Set nets were used to evaluate if there were healthy adult and juvenile trout populations in the Reservoirs. Two small mesh (40 mm) and two large mesh (80 mm) 20 m long trammel nets were used to survey Mangatawhiri reservoir and identical trammel nets with the addition of a large mesh (80 mm mesh) mullet net were used in Mangatangi Reservoir. Nets were set overnight at the locations shown in figures 2-4.

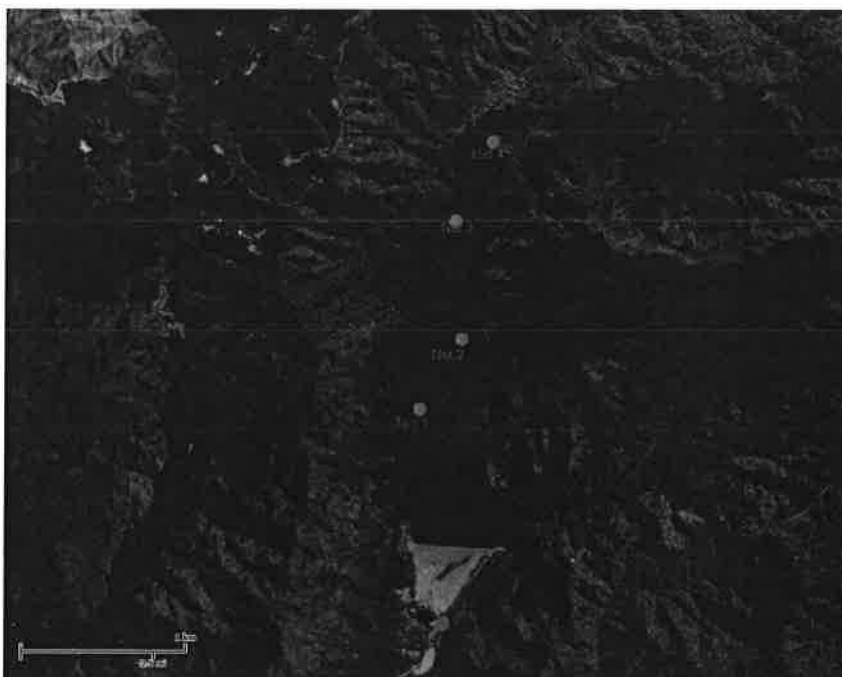
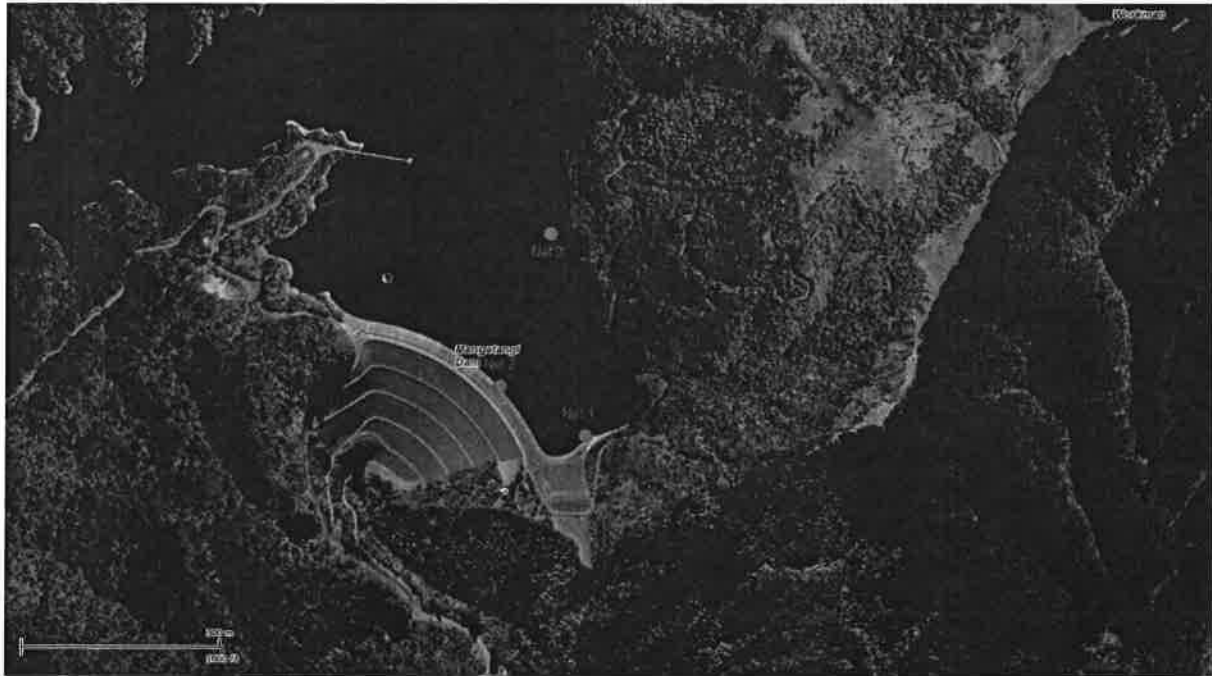


Figure 2. Netting sites on Mangatawhiri Reservoir 10 December 2013.



Mangatangi Reservoir netting sites 11 December 2013.



Figure 4. Netting sites 4 and 5 on Mangatangi Reservoir 11 December 2013.

Backpack electrofishing (Figure 5) was conducted in 2013 and 2015 in the Mangatangi stream and Mangatawhiri River to determine if trout were naturally spawning. Both surveys were rushed due to time constraints and in 2013 spot electrofishing was conducted in the Mangatangi stream and Mangatawhiri River in the reaches shown in Figures 6 and 7. During the 2015 backpack electrofishing surveys were conducted at four sites in the Mangatawhiri River (Figure 8) and five sites (Figure 9) in the Mangatangi Stream. Each site surveyed in 2015 consisted of a single pass over 20 m reaches. Galaxiids and bullies were not identified to species due to time constraints, the

objectives of the studies and the vast number of fish captured. Both the 2013 spot survey and 2015 survey of 20m reaches were conducted with a hand held block net with electrofishing settings of 375v 12% at 30hz. Visual clarity in Mangatangi Stream was far better at 4m vertical secchi than the 1.5m recorded at Mangatangi Stream.



Figure 5. Staff member Adam Daniel backpack electrofishing.

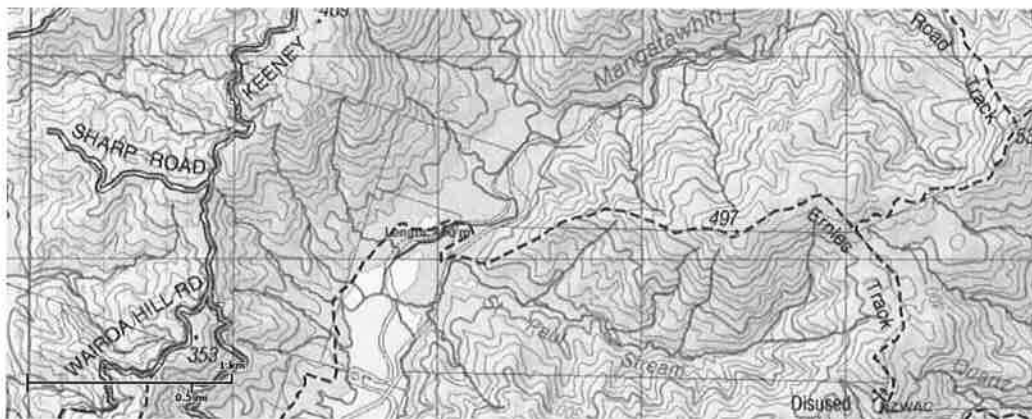


Figure 6. Spot Electrofishing locations reach Mangatawhiri River 10 December 2013.



Figure 7. Spot Electrofishing reach Mangatangi Stream 11 December 2013.

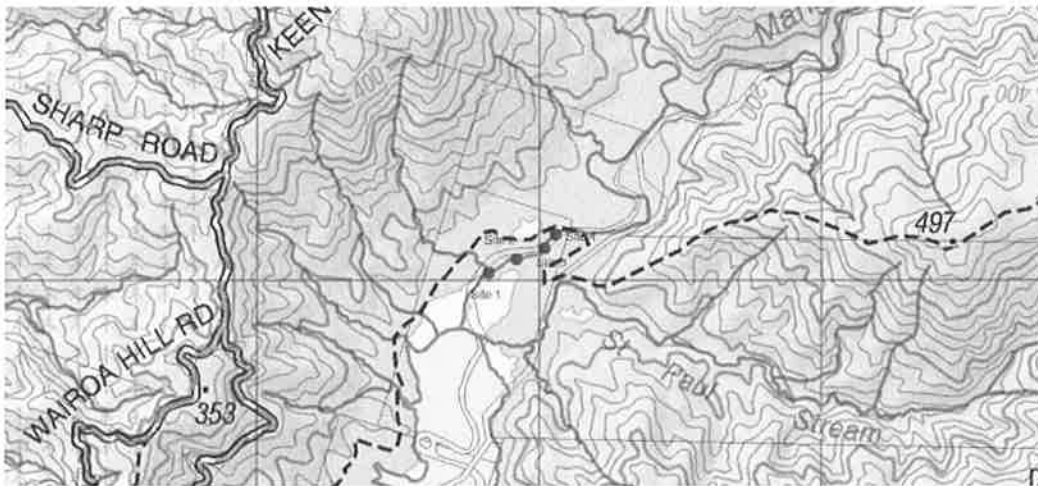


Figure 8. Electrofishing locations Mangatawhiri River 9 December 2015.

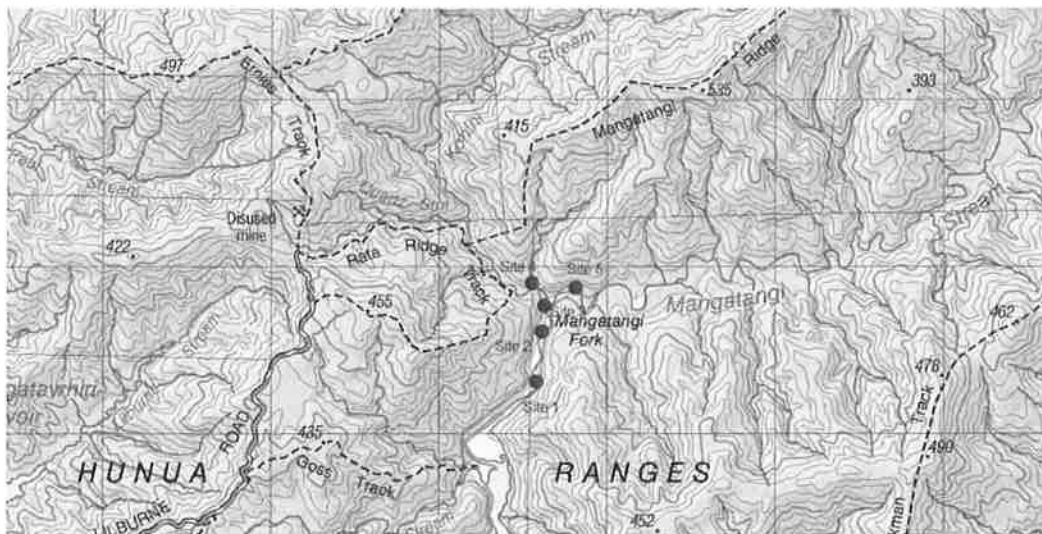


Figure 9. Electrofishing locations Mangatangi Stream 10 December 2015.

Schools of unidentified galaxiids were spotted near the boat ramp in the Mangatawhiri Reservoir during the 2013 survey prompting a fyke net survey in 2015. Overnight sets of Fyke nets (3-15 mm mesh) were used in three locations near the boat ramp in Mangatawhiri reservoir and four locations in Mangatangi Reservoir (Figures 10 & 11).



Figure 10. Fyke net locations for overnight sets 9 December 2015 Mangatawhiri Reservoir.



Figure 11. Fyke net locations for overnight sets 10 December 2015 Mangatangi Reservoir.

2.3 Results 2013 netting and 2015 fyke net surveys

The results of the netting surveys indicated that both reservoirs had healthy and self-sustaining populations of rainbow trout with ample fish in the 35-45 cm range (figure 12). The biggest catches made during the survey were from the south end of the Mangatangi dam face indicating a viable recreational fishery exists. Measurable rainbow trout ranged from 27-41 cm with an average of 3.4 fish per net night⁻¹. Rainbow trout in Mangatawhiri reservoir ranged from 35-45 cm with an average of 3 fish per net night⁻¹.

Fyke nets set in 2015 only captured bullies in Mangatangi reservoir. Mangatawhiri reservoir catches included one large shortfin eel (*Anguilla australis*; > 700 mm), one longfin eel (*Anguilla dieffenbachia*; >900 mm), two bullies and a single tadpole.

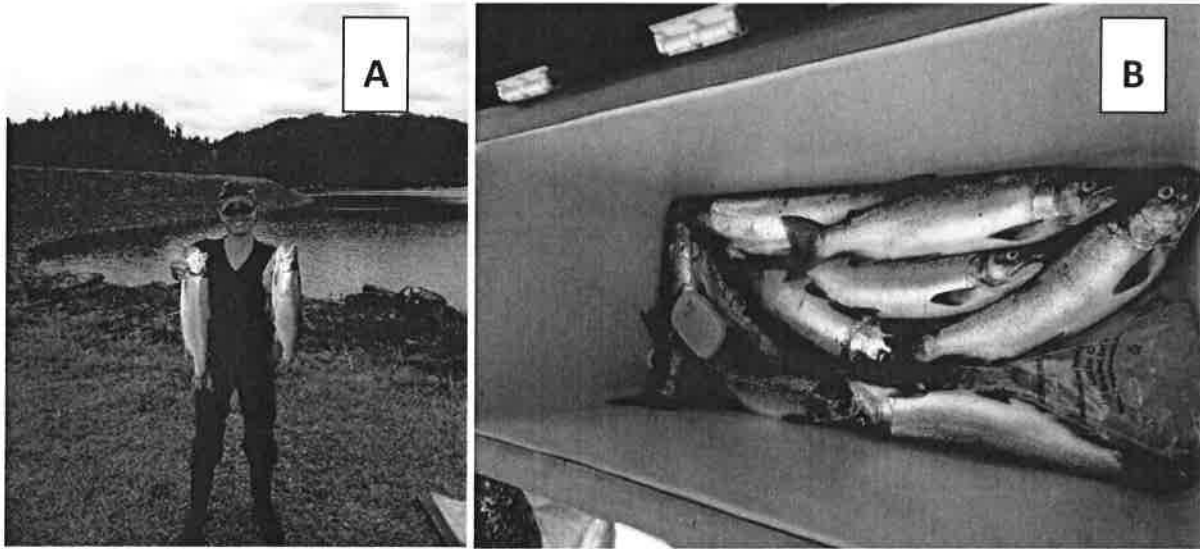


Figure 12. (A) Jen Troop with two large Rainbows and (B) a chilly bin full for large trout netted off the Mangatangi Dam wall 11 Dec. 2013.

2.4 2013 & 2015 electrofishing surveys

Despite using different methods in 2013 (spot fishing) and 2015 (20m reaches) the species detected were identical (Table 1) and similar to those found in other surveys with the absence of Shortjaw Kokopu (*Galaxias postvectis*). The Mangatawhiri River had an extremely high number of galaxiids (Banded Kokopu, *Galaxias fasciatus* and Koaro, *Galaxias brevipinnis*) with an average of 13 adult and 23 juvenile per 20 m reach (Figure 13). Low numbers of large shortfin (*Anguilla australis*) and longfin (*Anguilla dieffenbachia*) eels were detected all in excess 700 mm. In stark contrast the Mangatangi Stream had very limited diversity with only rainbow trout, longfin eels and bullies.

Table 1. Species detected during Dec 2013 and 2015 electrofishing surveys of Mangatawhiri River and Mangatangi stream.

	Adult RBT	Juv. RBT	Longfin eel	Shortfin eel	Koura	Koaro	Banded kokopu	Shrtjaw kokopu	Bully
Mangatawhiri	X	X	X	X	X	X	X		X
Mangatangi	X		X		X				X

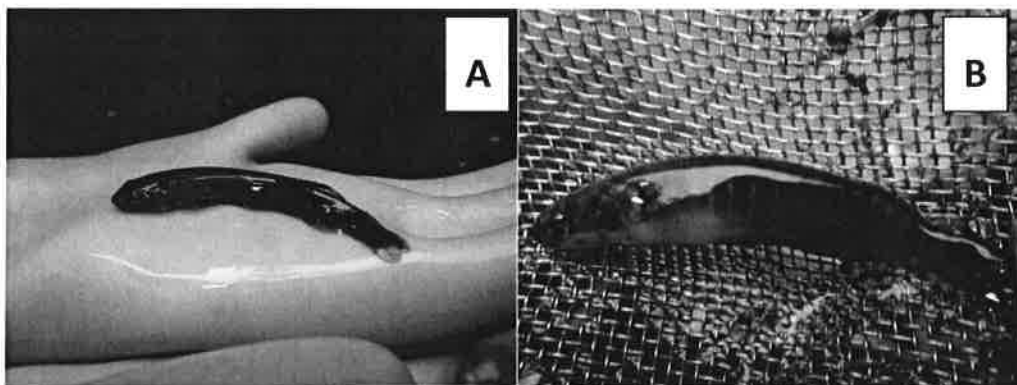


Figure 13. (A) Koaro (*Galaxias brevipinnis*) and (B) Banded Kokopu (*Galaxias fasciatus*) captured electrofishing Mangatawhiri River 9 December 2015.

3 Recommendations and discussion

3.1 Recommendations & Discussion

Both Mangatawhiri and Mangatangi reservoirs have self-sustaining trout populations for the current low level of angler use. Unfortunately the lack of access to the reservoirs and the limited fishing area are not compensating for the loss of fishing opportunity caused by the construction of the dams. Limited residual flows and lack of natural production of trout that would have entered the lower reaches of the Mangatawhiri River and Mangatangi Stream are also not being mitigated for in the current consent conditions. Although Watercare continues to provide F&G with access to the Mangatawhiri and Mangatangi Reservoir for the purposes of stocking the reservoir with rainbow trout the cost benefit of stocking the reservoirs is prohibitively expensive for Fish & Game considering the difficult access for anglers, limited fishing area and low ascetic value. The fishery would be more suited to a put and take style fishery where bait or a trout feeding station would be required to hold fish near the designated fishing area.

Although the upper Mangatawhiri River has a thriving fish population, the upper Mangatangi Reservoir has a limited trout and native fish populations. The absence of galaxiids is puzzling considering that both reservoirs have very similar physical characteristics including well intact headwater streams and good water quality. Although the upper Mangatangi Reservoir is a good candidate for galaxiid introduction the upstream trap and transfer system on both reservoirs poses the treat of inadvertently introducing invasive species. If eels are transferred they may impact the galaxiid population of Mangatawhiri Reservoir or inhibit the introduction galaxiids of Mangatangi Reservoir. The trap and transfer off eels is also pointless without downstream passage. The effort and money would likely be better spent on galaxiid introductions in the Mangatangi stream.

The 2008 NiWA study found Mangatawhiri Reservoir contained the “highest diversity of all sites with all six native fish species and trout” unfortunately the report then made the unfounded recommendation that trout stocking should be stopped and the reservoir should be stocked with existing native fish that are already in high densities (Baker et al. 2008). If the Reservoir holds a trout population and a thriving galaxiid population reducing stocking or spending money on native fish stocking is pointless.

The NiWA report (Baker et al. 2008) stated the upper Mangatawhiri Reservoir holds some of the larges densities of native fish in the region and has a low density of eels due to a lack of fish passage. The link between low densities eels and or gambusia and native fish populations has also been documented at Lake Otatoa (Dwarf inanga), Kaiwi Lakes (Dwarf inanga) and the Upper Waihou River (Dwarf galaxias). It is quite possible that the lack of competition with small eels has allowed galaxiids in Mangatawhiri Reservoir to thrive and altering the current fish population by adding eels from an upstream trap and transfer program passage is a risky move. With the absence of an effective downstream passage program for eels the current fish program may be putting the galaxiid population at risk with no benefit to the eel population. The future and purpose of the trap and transfer program should be discussed with regional fish managers including Fish & Game, DoC, Regional Council and Iwi representatives to ensure program goals are being met.

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Acknowledgements

This project was made possible with help from Watercare staff, Jenn Troup, Matt Knox and Ben Wilson.