

Taharoa Domain Fish and Game Trout Release May 2020

Meeting: Taharoa Domain Governance Committee
Date of meeting: 28 May 2020
Reporting officer: Mark Schreurs, Policy Analyst

Purpose/Ngā whāinga

To seek approval from the Taharoa Domain Governance Committee for the Northland Fish and Game Council (Fish and Game) to proceed with the annual release of trout into Lakes Taharoa and Waikare in 2020.

Executive summary/Whakarāpopototanga

The Taharoa Domain Governance Committee (the Committee) has received a letter from the Northland Fish and Game Council (Fish and Game) dated April 21, 2020 (**Attachment 1**). In this letter, Fish and Game requests permission to release young trout into Lake Taharoa and Lake Waikare in 2020. This proposed release is part of a programme of annual releases which sustains the trout population in these Lakes. As trout cannot breed in the lakes, without these annual releases of young trout, the trout population would gradually die out within about three years.

A decision of the Committee is now sought to allow this proposed release of trout.

As these releases are an annual occurrence, the Committee faced a similar decision at its 10 May 2018 meeting and the year prior at its 23 June 2017 meeting. At these meetings, the Committee resolved to allow the release to proceed. This was because of the uncertainty remaining over what effect removing trout from the Lakes would have on the native species that reside there. In particular, there are concerns over a small native fish; the Dune Lakes Galaxias (DLG). While efforts are underway to better understand the effects of trout on this and other species, the recommendation derived from a review of the scientific literature (Gee and Franklin, 2017) is that the present balance that exists between species in the lakes should not be altered by removing trout until more is known about how this will affect the DLG.

It is therefore recommended that the Committee takes a similar approach this year to last year and the year before. It is noted that the Kai Iwi Lakes Dune Lakes Galaxias Working Group (Working Group) is working to make more information available. This information is anticipated to be available by the end of 2020.

Recommendation/Ngā tūtohunga

That the Taharoa Domain Governance Committee:

- a) Approves the release of trout into Lake Taharoa and Lake Waikare in 2020.

Context/Horopaki

The Dune Lakes Galaxias (*Galaxias sp.*) (here after referred to as the DLG) is a small native fish. It is a subset of inanga (*Galaxias gracilis*) that is found only in the Kai Iwi Lakes.

Rainbow Trout (*Oncorhynchus mykiss*) were introduced to the Kai Iwi Lakes in 1968 by the then Acclimatization Society; now the Northland Fish and Game Council (Fish and Game). Regrettably, within a few years of trout being released, an unauthorised individual released the pest fish Gambusia (*Gambusia affinis*) into the Lakes as well.

Since then, concerns have emerged for the survival of the DLG. It has become extinct in Lake Kai Iwi and there are concerns over its remaining populations in Lakes Taharoa and Waikare.

In response to this problem, the Kai Iwi Lakes (Taharoa Domain) Reserve Management Plan (RMP) included the direction that trout releases cease from 2018. As trout are a predator of DLG it was hoped that removing the trout would result in an increase in the population of DLG.

However, the *Gambusia* are a complicating factor. They are known to compete with the DLG for habitat and food and are suspected to predate the DLG's young. Hence while some studies have hypothesised that removing trout will result in an increase in the DLG population through removal of a predator (e.g. Rowe and Chisnall 1995 and Allen and Turner 1971), others (e.g. Rowe 1998 and Rowe, Champion & de Winton 1999) have argued that the trout are also keeping the *Gambusia* population in check through interactive segregation (i.e. *Gambusia* do not use the full range of habitats for fear of predation by trout). This leads to the competing hypotheses that exclusion of trout could result in an increase in *Gambusia* and a consequent decline in the population of DLG. For instance, the extinction of DLG in Lake Kai Iwi occurred following trout being removed from that lake.

Because of this uncertainty, a recent literature review by Gee & Franklin (2017) suggested that the wholesale exclusion of trout from the Lakes, beginning in 2018 as was directed by the RMP, should not be undertaken until more information were available on what effect this would have. It was instead suggested that a detailed study be designed and undertaken which recognises these competing hypotheses.

In response, Te Kūihi, Te Roroa, Kaipara District Council, Northland Fish and Game Council, Northland Regional Council and the Department of Conservation have formed a Kai Iwi Lakes Dune Lakes Galaxias Working Group (Working Group). This Working Group is working to undertake a study to identify what actions can be taken to save this species. NorthTec is also heavily involved in this work.

The Working Group is making good progress however have yet to identify if excluding trout from the lakes would be beneficial or detrimental to the DLG. Their work is focused on progressing a series of actions agreed under the Dune Lakes Galaxias Monitoring Strategy which was endorsed by the Committee on 10 August 2017. The Monitoring Strategy is the fulfilment of an action under the RMP. It contributes to Aim 3 of the RMP: *"Complete knowledge about Kai Iwi Lakes will enable effective protection and enhancement of its natural environment and pristine waters."*

Discussion/Ngā kōrerorero

The Committee has received a letter from Fish and Game dated April 21, 2020 (**Attachment 1**). In this letter, Fish and Game request permission to release approximately 2,000 trout fingerlings into Lake Taharoa and 300 into Lake Waikare (the same numbers as last year). If approved these releases will take place in May-June 2020. This proposed release for 2020 is part of a regular programme of annual releases which sustains the trout population in these Lakes. As trout cannot breed in the Lakes, the trout population would decline and disappear from the Lakes without these annual releases.

A decision of the Committee is now sought to allow this proposed release of trout.

As we have seen from the background information provided above, it is currently unknown if the presence of trout in the Lakes is beneficial or detrimental to the DLG population. However, it has been observed that the DLG have survived alongside trout and *Gambusia* in reasonable numbers for some 50 years. It is therefore recommended that whatever balance currently exists between DLG, trout and *Gambusia* not be disturbed until more is known about what effect such management interventions would have. This is an interim measure until sufficient information is available.

Options

The Committee has the following options:

Option A: Grant permission for trout to be released into Lakes Taharoa and Waikare in 2020.

Option B: Refuse to grant permission for trout to be released into Lakes Taharoa and Waikare in 2020.

Assessment of options

Option A: would be consistent with the approach taken by the Committee in previous years. It would allow for the existing balance between trout, DLG and Gambusia to continue unchanged until more information is available.

Option B: would be consistent with the direction previously set out in the RMP. However, ceasing trout releases while Gambusia are present in the lakes will have unknown effects on the survival of the DLG, and could potentially lead to their extinction.

Policy and planning implications

Departure from the direction in the RMP is considered warranted, because new evidence has been provided (the Gee & Franklin 2017 report) and further investigation is ongoing (the work of the Working Group under the Dune Lakes Galaxias Monitoring Strategy).

Financial implications

There are no financial implications for Kaipara District Council.

Risks and mitigations

It should be noted that, following the adoption of the RMP which included the direction that trout releases cease from 2018; Fish and Game presented Council with a draft Statement of Claim regarding a judicial review of the RMP process and outcome that would stop the release of trout by 2018. This Claim, however, was not lodged with the Courts. Rather a meeting was held with representatives of Fish and Game and the Committee on 02 May 2017. The outcome of that meeting was:

- Agreement by both parties of the importance of the abundance and long term survival of DLG;
- That a research monitoring programme needed to be designed and funded, which included input from Fish and Game, Te Roroa, Te Kuihi, Kaipara District Council, Northland Regional Council and the Department of Conservation, and that a working group be set up for this purpose; and
- That cessation of trout stocking in Lakes Waikare and Taharoa from 2018 would be deferred in light of new information received from NIWA (Gee & Franklin 2017 report), and provided the Committee was satisfied with progress with the research monitoring programme.

Significance and engagement/Hirahira me ngā whakapāpā

The decisions or matters of this report do not trigger the significance criteria outlined in Council's Significance and Engagement Policy, and the public will be informed via agenda on the website.

Next steps/E whaiake nei

Staff will write to Fish and Game informing them of what decision the Committee reached.

Attachments/Ngā tapiritanga

| | Title |
|---|---|
| A | Letter from the Northland Fish and Game Council dated April 21, 2020. |