

I hereby give notice of the following Ordinary meeting:

<b>Meeting</b>	Taharoa Domain Governance Committee
<b>Date</b>	Tuesday 14 May 2019
<b>Time</b>	2.00 pm
<b>Venue</b>	Northern Wairoa War Memorial Hall – 37 Hokianga Road, Dargaville

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## **Open Agenda**

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### **Membership**

Chair: Ric Parore  
Members: Alan Nesbit  
Councillor Karen Joyce-Paki  
Councillor Andrew Wade

Jason Marris  
**General Manager Governance, Strategy and Democracy**

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## **Ordinary meeting of Taharoa Domain Governance Committee**

**Tuesday 14 May 2019**

### **1 Opening**

#### **1.1 Karakia**

#### **1.2 Present**

#### **1.3 Apologies**

#### **1.4 Confirmation of agenda**

The Committee to confirm the Agenda.

#### **1.5 Conflict of interest declaration**

Committee members are reminded of the need to be vigilant to stand aside from decision-making when a conflict arises between their role as a committee member and any private or other external interest they might have. It is also considered best practice for those members to the Executive Team attending the meeting to also signal any conflicts that they may have with an item before the Committee.



## 2 Presentations



### **3 Minutes**

#### **3.1 Confirmation of Taharoa Domain Governance Committee minutes 12 February 2019**

**General Manager Governance, Strategy and Democracy** **1606.18**

##### **Recommended**

*That the unconfirmed minutes of the Taharoa Domain Governance Committee meeting held 12 February 2019 be confirmed as a true and correct record.*





**Taharoa Domain Governance Committee**

Ordinary meeting held

<b>Date</b>	Tuesday 12 February 2019
<b>Time</b>	Meeting commenced at 2.10pm Meeting concluded at 3.40pm
<b>Venue</b>	Lake Waikare Centre, Taharoa Domain
<b>Status</b>	Unconfirmed

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**Minutes**

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**Membership**

Chair: Ric Parore  
Members: Alan Nesbit  
Councillor Karen Joyce-Paki  
Councillor Andrew Wade

**Staff and Associates:**

Parks and Recreation Manager, Financial Services Manager, Policy Analyst, Governance Advisor  
(Minute-taker)

Jason Marris  
**General Manager Governance, Strategy and Democracy**

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Unconfirmed

**Minutes of the Ordinary meeting of Taharoa Domain Governance Committee**
**Tuesday 12 February 2019, Taharoa Domain**
**1 Opening**
**1.1 Karakia**

Iwi Relations Manager opened the meeting with a karakia.

**1.2 Present**

Ric Parore (Chair), Councillor Karen Joyce-Paki, and Councillor Andrew Wade

In attendance	Designation	Item(s)
Tanya Cook	NorchTec	4.0, 4.4
Hamish Watson	Parks and Recreation Manager	All
Andrew Howells	Domain Manager	All
Kathie Fletcher	Policy Manager	All
Mark Schreurs	Policy Analyst	All
Francis Toko	Iwi Relations Manager	All
Tanya Wilson	Governance Advisor	All
Lisa Hong	Governance Advisor	All (minute-taker)

**1.3 Apologies**

**Moved Parore/Joyce-Paki**

*That the apology of Sonny Nesbit be received.*

**Carried**

**1.4 Confirmation of Agenda**

**Moved Wade/Parore**

*That the Taharoa Domain Governance Committee:*

- 1 *Confirms the agenda of 12 February 2019 with the addition of the tabled report 'Kai Iwi Lakes Food Web Studies' to the agenda as item 4.0; and*
- 2 *Notes that the aforementioned report was not included in the agenda as this matter was brought to Council after the agenda was published; and*
- 3 *Notes that the decision could not be delayed until the next meeting as it pertains to potential work to be undertaken before the next meeting on 14 May 2019.*

**Carried**

## 1.5 Conflict of Interest Declaration

Nil.

## 2 Deputations and Presentations

Nil.

## 3 Confirmation of Minutes

### 3.1 Taharoa Domain Governance Committee minutes 15 November 2018

General Manager Governance, Strategy and Democracy 1606.18

Moved Joyce-Paki/Wade

*That the minutes of the Taharoa Domain Governance Committee meeting on 15 November 2018 be confirmed as a true and correct record.*

Carried

## 4 Decision/Information

### 4.0 Kai Iwi Lakes Food Web Studies

Policy Analyst 4702.24.05

Moved Joyce-Paki/Parore

*That the Taharoa Domain Governance Committee delegates the Chief Executive, in consultation with the Chair, to approve or deny authorisation under section 50 of the Reserves Act 1977 for the Northland Fish and Game Council and NorthTec to take samples of macroinvertebrates from the Kai Iwi Lakes as part of their research, after receiving recommendations from the Dune Lakes Galaxias Working Group (to be determined at the Working Group's meeting on 26 February 2019).*

Carried

### 4.4 Kai Iwi Lakes Dune Lakes Galaxias Working Group update

[Secretarial Note: Tanya Cook from NorthTec spoke to this item. This item was taken out of order to facilitate the external presenter, Tanya Cook (NorthTec).]

Policy Analyst 4702.24.05

Moved Wade/Joyce-Paki

*That the Taharoa Domain Governance Committee notes the 'Kai Iwi Lakes Dune Lakes Galaxias Working Group update' report giving an update on the work of the Kai Iwi Lakes Dune Lakes Galaxias Working Group and its members.*

Carried

#### 4.1 Taharoa Domain Operations Update - November 2018 to January 2019

**Parks and Recreation Manager 4702.24.02.02**

[Secretarial note: The Committee requested staff to urgently prioritise biosecurity projects (including boat inspections and possible construction of a cleaning station), prior to further investigating the construction of a boat ramp. The Committee requested that information regarding helicopters and drones be added to the booking confirmation email, website and other public communication (e.g. signs, pamphlets).]

**Moved Joyce-Paki/Parore**

*That the Taharoa Domain Governance Committee notes the 'Taharoa Domain Operations Update - November 2018 to January 2019' report.*

**Carried**

#### 4.2 Financial report for the period ended 31 December 2018

**Financial Services Manager 4702.24.02.01**

**Moved Joyce-Paki/Parore**

*That the Taharoa Domain Governance Committee notes the 'Financial report for the period ended 31 December 2018'.*

**Carried**

#### 4.3 Taharoa Domain – Camping Facilities

**Parks and Recreation Manager 4702.24.02**

**Moved Joyce-Paki/Wade**

*That the Taharoa Domain Governance Committee notes the 'Taharoa Domain – Camping Facilities' report.*

**Carried**

#### **Closure**

Iwi Relations Manager closed the meeting with a karakia.

**Meeting closed at 3.40pm.**

**Confirmed** .....

**Chair** .....

**Kaipara District Council**

**Dargaville**



## 4 Information





## **Taharoa Domain Operations Update February 2019 to April 2019**

**Meeting:** Taharoa Domain Governance Committee  
**Date of meeting:** 14 May 2019  
**Reporting officer:** Hamish Watson, Parks and Recreation Manager

### **Purpose/Ngā whāinga**

To present the operational report for the Kai Iwi Lakes (Taharoa Domain) for the February 2019 to April 2019 period so the Committee can be well-informed.

### **Executive summary/Whakarāpopototanga**

Below is a summary of activities, operations and maintenance work carried out over the months of February 2019 to April 2019.

### **Recommendation/Ngā tūtohunga**

That the Taharoa Domain Governance Committee:

- a) Notes the Taharoa Domain Operations Update – February 2019 to April 2019 report.

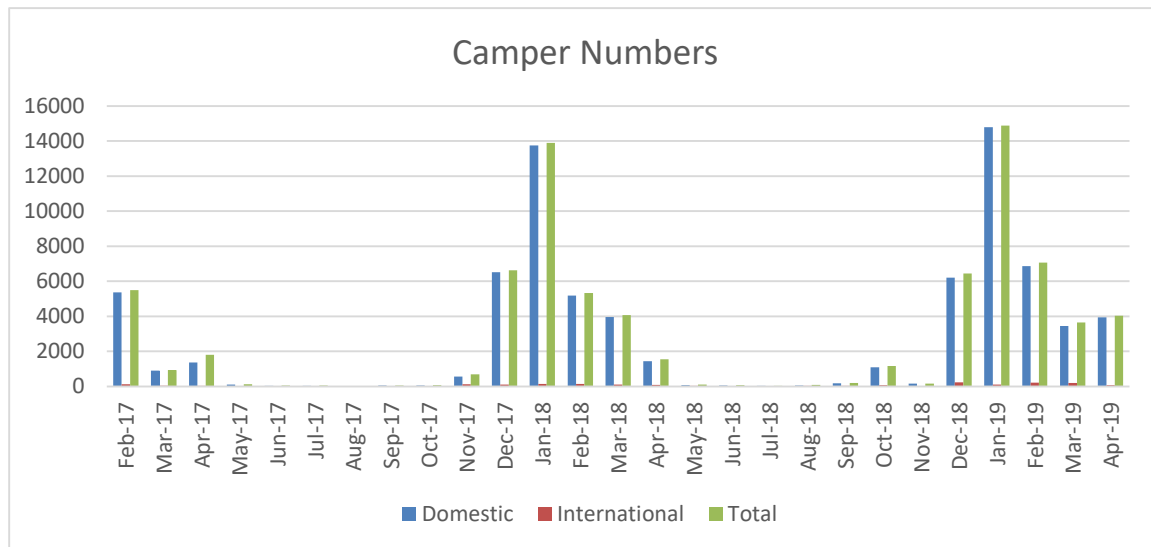
### **Context/Horopaki**

The Kai Iwi lakes are among the best known dune lakes in New Zealand. It is the intent of the Reserve Management Plan (RMP) to enable the Lakes and its surrounds to be enjoyed by all visitors while simultaneously enhancing the area and reducing risks through knowledge and active management.

### **Discussion/Ngā kōrerorero**

- Cook Costello Consultants have been engaged to look at options for boat Biosecurity before they enter the Lake.
- The Taharoa Domain Manager and Assistant Camp Ground Manager resigned in March. Trent Bradley and Anna Castricum have stepped in to manage the camp ground with assistance from Council staff.
- Pest plant removal and spraying has continued throughout the Domain.
- General garden tidying up has been done around the camp ground at Pine Beach.
- General track maintenance has continued, mostly being cutting back vegetation.
- Planting of Flax, Cabbage trees, Manuka and Kanuka has started, focusing on the area between Lake Kai Iwi and Domain Road.
- Camper numbers were still high through March and April with the warmer weather. A lot of these were drive-ins looking to stay a night while travelling around.
- The final design for the new toilet disposal system at Lake Waikare has been agreed with Te Roroa, and work will begin shortly to complete this project.
- Repairs to the pontoon have been completed including replacing the anchor chain.
- New security cameras have been installed in the main office with more to be placed around the camping area.

### Camper numbers:



Month	Total visitors	Domestic visitors	International visitors
April 2019	4,026	3,949	77
March 2019	3,658	3,451	207
February 2019	7,072	6,856	216
January 2019	14,880	14,778	102
December 2018	6,448	6,216	232
November 2018	170	160	10
October 2018	1,170	1,099	71
September 2018	209	175	34
August 2018	85	50	35
July 2018	43	31	12
June 2018	73	59	14
May 2018	109	78	31
April 2018	1,544	1,446	98
March 2018	4,066	3,953	113
February 2018	5,331	5,188	143
January 2018	13,884	13,739	145
December 2017	6,626	6,514	112
November 2017	689	561	128
October 2017	74	64	10
September 2017	63	55	8
August 2017	27	12	15
July 2017	53	32	21
June 2017	47	29	12
May 2017	129	114	15
April 2017	1,816	1,376	33

### Policy and planning implications

It is the Park and Recreation Manager's responsibility to ensure all operations are conducted within budget

### Financial implications

The financial budgets are set within the LTP and respective Annual Plan.

### **Risks and mitigations**

The RMP was developed using a public process and reflects the views of the community and other stakeholders at the time of its development.

### **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**

Council officers will continue to implement the RMP.

Hamish Watson, 29 April 2019



## 4.2 Financial report for the period ended 31 march 2019

Financial Services Manager                      4702.24.02.01

### Recommendation

*That the Taharoa Domain Governance Committee receives the Financial Services Manager's report 'Financial report for the period ended 31 March 2019'.*



**Taharoa Domain**

**Financial Summary Report for the period ended 31 March 2019**

Revenue	Kai Iwi Camp	Taharoa Domain	ACTUAL	BUDGET
			6 months to 31.03.2019	12 months to 30.06.2019
			\$	\$
Camping fees	438,851	30,000	468,851	434,500
Other Income	-		-	-
<b>TOTAL</b>	<b>438,851</b>	<b>30,000</b>	<b>468,851</b>	<b>434,500</b>

Expenditure	Kai Iwi Camp	Taharoa Domain	ACTUAL	BUDGET
			6 months to 31.03.2019	12 months to 30.06.2019
Description			\$	\$
Transport costs	773	8,443	9,217	17,856
Resource Consents	-	472	472	840
Grounds maintenance	23,252	87,513	110,765	167,000
Building maintenance	24,720	19,766	44,486	60,500
Professional service	52,065	2,099	54,164	51,416
Advertising and promotion	184	1,439	1,623	1,584
Staff salaries and employee costs	151,174	60,453	211,627	211,785
Insurance	822	1,376	2,199	4,381
Power and water costs	15,990	2,421	18,411	12,384
Refuse disposal	10,400	-	10,400	30,000
Sundry	21,378	-	21,378	40,491
<b>TOTAL</b>	<b>300,758</b>	<b>183,984</b>	<b>484,742</b>	<b>598,237</b>

Capital Expenditure	Kai Iwi Camp	Taharoa Domain	ACTUAL	BUDGET
			6 months to 31.03.2019	12 months to 30.06.2019
			\$	\$
10087 Kai Iwi facilities			16,591	180,000
10705 Public Toilets - Lake Waikare			16,829	40,000
10706 Taharoa Domain RMP			2,674	34,000
11019 Implement RMP			62,315	100,000
<b>TOTAL</b>			<b>98,409</b>	<b>354,000</b>





## **Kai Iwi Lakes Dune Lakes Galaxias Working Group update**

**Meeting:** Taharoa Domain Governance Committee  
**Date of meeting:** 14 May 2019  
**Reporting officer:** Mark Schreurs, Policy Analyst

### **Purpose/Ngā whāinga**

To update the Taharoa Domain Governance Committee (the Committee) on the work of the Kai Iwi Lakes Dune Lakes Galaxias Working Group (the Working Group) and its members.

### **Executive summary/Whakarāpopototanga**

The Kai Iwi Lakes Dune Lakes Galaxias Working Group (the Working Group) last met on 26 February 2019. The meeting notes from that meeting are presented with this report as **Attachment A**. This report provides a summary of the key matters discussed at the 26 February 2019 meeting and an update on the Working Group's key projects.

The 26 February 2019 meeting was an opportunity for the Working Group to take stock of their progress to date, discuss their research priorities and direction for the next five to 10 years, consider how the partnership is working and what changes should be considered. On the whole the Working Group members were pleased with the Working Group's structure and felt they had made good progress on their research projects considering their limited resourcing. However, the Working Group also noted the need for better engagement with Mana Whenua, the need to build the capacity of Mana Whenua and the need to better incorporate Mana Whenua values and Mātauranga Māori into the Working Group's projects.

The Working Group also considered if its scope should be expanded or if a separate working group should be established to investigate concerns over growing pressures on the Lakes' ecosystem as a whole. It was noted that taking an ecosystem approach is more conducive to Mātauranga Māori and the Māori world view. This matter is being investigated further.

The Working Group's key projects currently remain the otolith research programme and the trout diet study. The otolith research programme seeks to better understand the age structure of the Dune Lakes Galaxias (DLG) population, including when they spawn and how fast they grow. The trout diet study has recently been expanded to also study the diets of other species as well as prey availability. This is anticipated to give a clearer picture of food-webs in the Lakes.

### **Recommendation/Ngā tūtohunga**

That the Taharoa Domain Governance Committee notes the 'Kai Iwi Lakes Dune Lakes Galaxias Working Group update' report giving an update on the work of the Kai Iwi Lakes Dune Lakes Galaxias Working Group and its members.

### **Context/Horopaki**

The DLG (*Galaxias* sp.) is a small native fish found only in the Kai Iwi Lakes and there are fears its population is declining. In response to this problem, Te Roroa, Te Kuihi, Kaipara District Council (KDC), Northland Fish and Game Council (Fish and Game), Northland Regional Council (NRC), NorthTec and the Department of Conservation (DOC) have formed the Kai Iwi Lakes Dune Lakes Galaxias Working Group (the Working Group). The members of this group

are making a co-ordinated effort to better understand the DLG, its ecology, interactions with other species and what management actions will be successful in promoting its survival.

## Discussion/Ngā kōrerorero

The Working Group last met on Tuesday 26 February 2019. The meeting notes from this meeting are included with this report as **Attachment A**.

The following is a summary of what was discussed at the 26 February 2019 and how the Working Group's projects are progressing.

### Mana Whenua values and Kaitiakitanga

The Working Group discussed how Mana Whenua values are being applied to their work, including kaitiakitanga and the interaction between Mātauranga Māori and western science.

On the whole it was considered that the Working Group's collaborative approach is beneficial and should continue. All members have remained focused on the desired outcomes and progress has been made despite limited resources.

That said, the Working Group recognised there needs to be better communication with Mana Whenua and better engagement.

In addition, the Working Group noted the need to take an ecosystem approach to understanding the DLG. That is; it is not sufficient to consider only the interactions between the DLG and other species without considering the effects of its wider environment. The ecosystem approach is more aligned to the holistic approach taken in Mātauranga Māori.

This direction is consistent with the Working Group's direction to expand the trout diet study to look at lake food webs and to reanalyse the DLG spotlight monitoring data set to also look at environmental factors.

### The need to explore wider environmental pressures on the Taharoa Domain

The Working Group noted that visitor pressures on the Taharoa Domain are increasing and the Committee has a desire to better understand the environmental impacts this is having on the Kai Iwi Lakes. Researching these matters is outside the scope of the Working Group so it was suggested that the Working Group's focus could be broadened to include the wider environment or that a separate working group with similar membership be established to investigate this. The Working Group suggested Council staff provide a discussion paper and options on a new structure or group for the Committee to discuss. This discussion paper is being developed.

Further discussions with Mana Whenua and key stakeholders are needed to investigate how an ecosystem approach to research is best implemented and managed. The Policy team is currently arranging further meetings with Te Roroa and Te Kūihi to discuss a possible pathway forward. Once the Policy team better understands Iwi aspirations and priorities, the Policy team will then engage with NRC, DOC, NorthTec and Fish and Game for their input to a discussion paper that fully examines a more comprehensive ecosystem approach to a research strategy for the Lakes. It is envisaged this strategy will provide a sound platform for Mātauranga Māori and scientific evidence to be utilised as support for future Taharoa Domain management including policy development and regulation.

### Building the capacity of Mana Whenua.

The Working Group discussed the need to build the capacity of Mana Whenua to participate in research and act as kaitiaki. It was considered that the best way to do this was to engage tamāriki from a young age in environmental stewardship. Enthusiasm was expressed for additional environmental programmes in schools.

A meeting will be set up with different interested parties to discuss opportunities for building the capacity of children and young people, particularly Mana Whenua, to be good environmental stewards.

### **Research priorities and direction for the next five to 10 years**

The Working Group took this meeting as an opportunity to take stock of their progress to date and their research priorities and direction for the next five to 10 years.

The Working Group's work has been guided by the DLG Monitoring Strategy since it was endorsed by the Committee on 10 August 2017. The Working Group agreed that the priorities and direction in the monitoring strategy are still relevant and sufficient for the next five to 10 years.

### **Otolith study and supporting larval fish monitoring**

The Working Group's otolith study is progressing well. This project involves collecting samples of DLG at different times of the year and analysing their otoliths (a bony structure in the ear/gill of the fish) to determine the fish's age and growth rate.

### **Expansion of Trout Diet Studies including a request for authorisation under section 50 of the Reserves Act 1977.**

The Committee passed the following resolution at its 12 February 2019 meeting:

*That the Taharoa Doman Governance Committee delegates the Chief Executive, in consultation with the Chair, to approve or deny authorisation under section 50 of the Reserves Act 1977 for the Northland Fish and Game Council and NorthTec to take samples of macroinvertebrates from the Kai Iwi Lakes as part of their research, after receiving recommendations from the Dune Lakes Galaxias Working Group (to be determined at the Working Group's meeting on 26 February 2019).*

The Working Group discussed the request from NorthTec and Fish and Game to take a sample of macroinvertebrates from the Kai Iwi Lakes. The Working Group, with the support of Mana Whenua reached the consensus that approval should be given under section 50 of the Reserves Act 1977 for Fish and Game and NorthTec to take samples of macroinvertebrates from the Kai Iwi Lakes as part of their research. This approval has since been granted through the Chief Executive in consultation with the Chair.

This study into how the diet of trout varies over the course of a year and at different phases in their lives, will now be expanded to also look as how prey species composition changes in the Lakes over the course of a year. In addition, work will also be done to look at the diets of DLG and Gambusia. Together, this information will contribute towards a greater understanding of food webs in the Lakes.

### **Update from DOC on revision of DLG monitoring methods.**

DOC is continuing to review the methods they use to monitor the abundance of DLG. This includes a statistical reanalysis of the data set to see if the fluctuations observed in the DLG's population correlate to environmental variables.

### **Possibility of translocating DLG to another lake.**

The Working Group will continue investigating the possibility of establishing a new population of DLG in another lake to reduce the species' vulnerability to extinction.

No progress has been made on this since the discovery of Gambusia in Black Lake (the Greer Lake). The Working Group will discuss other opportunities at their next meeting.

### **Discussion on eDNA and working with the Cawthorn Institute**

An opportunity has arisen to work with the Cawthorn Institute to use Environmental DNA (eDNA) to test for the presence or absence of DLG. This may help to answer questions such as:

- Are any DLG still surviving in Lake Kai Iwi?
- Did the translocation of DLG to Lake Te Riu truly fail or is there a small surviving population?
- Are there any pest fish or other fish present in those lakes to which a DLG translocation might be considered?

The Working Group will work with the Cawthorn Institute to progress this.

### **Possibility of releasing tuna into the Kai Iwi Lakes**

The direction was given by Mana Whenua that the possibility of releasing tuna into the Kai Iwi Lakes not be explored further at this time. This acknowledges that this is a substantial area of research and the Working Group's resources are already stretched.

### **The effects of sunscreen on lake ecosystems.**

The Committee previously raised concerns over the effects of sunscreen on water quality. A preliminary review of the literature undertaken by Council staff has determined that the Committee's concerns are valid and deserving of further investigation. However, enquiries to NIWA and the University of Waikato have revealed it is not possible to undertake a study into this matter at this time. The effects of sunscreen on the Lakes' environment therefore remains unknown.

### **Next meeting**

The next meeting of the Working Group was intended to be held in April 2019 however it was not possible to find a suitable meeting date. The next meeting will instead be held in May 2019 and hosted by Kaipara District Council in Dargaville.

## **Significance and engagement/Hirahira me ngā whakapāpā**

These matters do not trigger Council's Significance and Engagement Policy.

### **Next steps/E whaiake nei**

The Working Group will continue to meet as required to discuss progress on these projects, opportunities for collaboration and to reprioritise where needed. The findings of the Working Group's studies will be reported to the Committee as they become available via regular updates following each meeting of the Working Group.

### **Attachments/Ngā tapiritanga**

Number	Title
A	26 February 2019 Kai Iwi Lakes Dune Lakes Galaxias Working Group Meeting Notes

Mark Schreurs, 25 April 2019

## Meeting Notes

### Kai Iwi Lakes Dune Lake Galaxias Working Group

**Date** : Tuesday 26 February 2019  
**Time** : 11:00 am start, concluded at 2:50 pm  
**Venue** : Lake Waikare Centre, Kai Iwi Lakes Road, Dargaville

#### Attendance

Will Trusewich	Northland Regional Council
Lisa Forester	Northland Regional Council
Tom Drinan	Department of Conservation
Andrew Knock	Department of Conservation
Ric Parore	Te Kuihi
Mark Schreurs	Kaipara District Council
Francis Toko	Kaipara District Council
Kathie Fletcher	Kaipara District Council
Pamela Henare	Kaipara District Council
Tanya Cook	NorthTech
Rudi Hoetjes	Northland Fish and Game Council
Taoho Patuawa	Te Roroa
Snow Tane	Te Roroa
David Parore	Public
John Parore	Public

#### Opening

Mark welcomed everyone.

Francis opened the meeting with a karakia at 11:00 am.

Everyone present was invited to introduce themselves.

Mark introduced Kathie and invited her to facilitate the meeting.

#### Mana Whenua values and Kaitiakitanga

Kathie introduced this topic and its importance. There was some discussion on Mana Whenua values including:

- What are Mana Whenua values;
- What do Mana Whenua values mean to the partner organisations in the Group;
- Interaction between Mātauranga Māori and western science – there was discussion how it is important to respect that the two are distinct, born out of different worldviews. It is important for the

Group and researchers to provide the mechanisms and processes where they can co-exist in an authentic way. Mātauranga Māori enables kaitiakitanga and can enrich western science. Western science can inform kaitiakitanga, adding value to Mana Whenua observations, cultural knowledge and practices.

The concept of kaitiakitanga was discussed. Kaitiakitanga refers to Mana Whenua's place as guardians of their rohe and the resources and taonga it contains. Mana Whenua need to be able to exercise kaitiakitanga over the Lakes. This is a central part of their mana over the whenua. They can contribute to the protection of the Lakes in many ways including reporting breaches of rules, helping develop research strategies and participating in governance.

The role of Mana Whenua as Kaitiaki needs to be acknowledged at all levels of research being undertaken. The best way to do this is to include Mana Whenua as partners in any project from its inception. The preferred practice is to contact Taoho Patuawa ([tpatuawa@teroroa.iwi.nz](mailto:tpatuawa@teroroa.iwi.nz)) and copy in Snow Tane ([gm@teroroa.iwi.nz](mailto:gm@teroroa.iwi.nz)).

There was some discussion on how successful the Working Group has been at achieving partnership and recognising Mana Whenua values. It was recognised that there needs to be better communication with Mana Whenua and clearer processes to enable decisions about research priorities and participation in research projects.

It was considered that the Working Group's collaborative approach is beneficial and should continue. All members have remained focused on the desired outcomes and progress has been made despite limited resources.

There was some discussion on the need to take an ecosystem focus to the kaitiakitanga and the management of the Lakes rather than looking at management options that solely focus on the interactions between just a few species. The ecosystem approach is more aligned to the holistic approach taken in Mātauranga Māori. This would require the Working Group's focus to broaden to look at wider ecosystem pressures on e.g. climate and human impacts on water quality, biodiversity health and not solely the health of the Dune Lake Galaxias (DLG). Under such an approach, the DLG would be treated as an indicator species to understand a possible tipping point for the Lakes' health status. An ecosystem approach would acknowledge there would be other research questions needing to be answered to inform management actions e.g. are nanoparticles from sunscreen accumulating in the lakes and causing harm to the environment? This research focus could be applicable to protecting the DLG e.g. are nanoparticles from sunscreen disrupting the development of young DLG. It was suggested that the DLG could be used as an indicator or flagship species to promote the research of the wider ecosystem.

The Working Group was reminded of the reasons for its formation and the agreed focus on protecting the DLG. The consensus was reached that the focus must remain on protecting the DLG and answering questions around its ecology, however this should be done taking a holistic approach, acknowledging that the factors contributing to its wellbeing may be many and varied.

There was some discussion on if another group should be formed to advise the Taharoa Domain Governance Committee on other areas of environmental policy. It was considered that rising visitor numbers were putting pressure on the Lakes and surrounding Taharoa Domain and good information was needed to guide evidence-based policy decisions. The consensus was that the establishment of a new structure or group to provide an ecosystem management approach be explored, allowing this Group to remain focused on the DLG. It was also agreed the new structure or group needed to have representatives from mana whenua and all bodies that have a legal obligation or jurisdiction to the Lakes (Te Roroa, Te Kuiuhi, KDC, NRC, Fish and Game, DOC etcetera).

**Action: That KDC staff provide a discussion paper and options on a new structure or group to discuss with the Taharoa Domain Governance Committee which will enable an ecosystem management approach.**

Questions were raised over whether the Working Group's current structure is appropriate. Currently the Working Group exists as a working group of staff. It has no requirement to follow formal process other than good professional practice and has no ability to pass resolutions. The consensus was reached that the current structure is appropriate. The current structure allows staff from all member organisations to collaborate, seeking advice from one another and structuring their research activities so as to realise shared outcomes. This has allowed the activities of individual members to contribute to an overall greater understanding. It was noted that the Working Group is supported by independent scientists and others who have kindly been contributing their advice. Increasing ecosystem pressures however suggest a complimentary structure is needed, which would support the Working Group to continue to remain solely focused on DLG research. The outcomes which could then provide a piece of a puzzle to contribute to a bigger picture and more coordinated ecosystem approach to management of and policies for the Lakes.

***The Working Group broke for lunch at 12.30 pm***

***The meeting resumed at 13.10 pm***

### **Building the capacity of Mana whenua**

Kathie introduced this topic and invited Snow, Taoho, and Ric to share their views. Ric, Snow and Taoho cited the need to engage tamāriki from a young age in environmental stewardship in order to build capacity. Enthusiasm was expressed for additional environmental programmes in schools. There was some discussion on what members of the Working Group were doing to build the capacity of children and youth to be good stewards of the environment.

The NRC has its EnviroSchools project and receives funding from the Freshwater Improvement Fund to improve environmental understanding.

The DOC has a limited involvement in delivering programmes in schools. That said they have collaborated with Te Roroa to deliver some small scale environmental modules.

Fish and Game has a small budget for training and education. Previously they introduced children to freshwater fishing on school camps, including provision of an educational fishing licence for events they hold.

NorthTec has had some involvement with school aged children. However, as a tertiary education provider their primary focus is on school leavers and young adults.

Taoho has previously worked with schools in Te Roroa's rohe to deliver environmental education programmes. However, the lack of resources available to him made this project difficult.

Kathie suggested more strategic co-ordination between agencies to better deliver educational material.

Kathie and Snow reiterated the importance of value-based knowledge from a Mana Whenua perspective and how this can be incorporated continuously and consistently.

Snow has raised the process around gathering research information and that there is a process in place.

It was also suggested that projects which can be attended by members of the public should be considered.

**Action: KDC to organise a meeting with different interested parties to discuss opportunities for building the capacity of children and young people, particularly Mana Whenua, to be good environmental stewards.**

### **Research priorities and direction for the next five to 10 years**

The Working Group's work has been guided by the Dune Lakes Galaxias Monitoring Strategy since it was endorsed by the Committee on 10 August 2017. The Working Group was asked if the priorities and direction in the monitoring strategy were still relevant and if they were sufficient for the next five to 10 years.

The Working Group agreed that the monitoring strategy was still relevant. They noted that the strategy was ambitious given the limited resources available. It was understood that implementation would take time.

Despite this, the Working Group noted that progress was being made with several workstreams now progressing well.

The need to be flexible/agile was identified. That is, members of the Working Group need to be able to work quickly to take advantage of opportunities e.g. opportunities to secure funding or take advantage of research opportunities that may arise through third party studies. This might occasionally require redefining the scope of a project while still being consistent with the direction agreed to in the monitoring strategy.



It was highlighted that an opportunistic approach often does not provide adequate time for Mana Whenua to be aware of and make informed decisions on research activities or changes to projects. Where possible, Mana Whenua want to be involved in all research activities. It was also expressed that lack of resources forces researchers to be open to opportunities at short notice facilitating financial and resource investments that would otherwise not be available. A preferred approach by Mana Whenua is that all research follows an agreed strategic programme. There was some discussion on how Mana Whenua can best be kept informed of research actions given that some of these need to be planned and undertaken quickly. For example, many forms of monitoring and sample collection are very weather dependent and may need to be pursued quickly when the opportunity presents. Ongoing and better communication was agreed to between researchers and Mana Whenua especially in cases where a project deviates from its previously agreed course.

Snow and Taoho noted that communication with Te Roroa regarding research activities need to be communicated more than three working days in advance. Such correspondence should be directed to Taoho Patuawa ([tpatuawa@teroroa.iwi.nz](mailto:tpatuawa@teroroa.iwi.nz)) with Snow Tane copied in ([gm@teroroa.iwi.nz](mailto:gm@teroroa.iwi.nz)).

It was also suggested that a calendar be compiled showing the proposed dates for when research would be undertaken. This could then be made available to Mana Whenua to allow them to be informed of forthcoming research actions well ahead of time. It was noted that some actions might need to be listed as occurring during a given month rather than on a specific day i.e. because they are dependent on the weather or the availability of staff and equipment. This was considered satisfactory provided Mana Whenua are given as much notice as possible when times are confirmed.

**Action: A six monthly calendar is to be established and shared, listing what type of research will be undertaken, when and where. Mark is to collate this.**

### **Expansion of Trout Diet Studies including a request for authorisation under section 50 of the Reserves Act 1977**

Mark introduced this topic and Rudi and Tanya explained further. NorthTec and Fish and Game have been conducting a study on trout diet over the past year. To date this has been limited to looking at gut content samples from trout caught in Lake Taharoa and Lake Waikare. Recently, an opportunity has arisen to work in with a national level trout diet study. This will make additional resources available to expand the current study to include isotope analysis and investigating prey species abundance.

Part of this work requires the taking of a sample of macroinvertebrates. That requires approval under section 50 of the Reserves Act 1977 from the administering body of the reserve.

A request for this permission has been made to the Committee who have passed the following resolution in response.

*That the Taharoa Doman Governance Committee delegates the Chief Executive, in consultation with the Chair, to approve or deny authorisation under section 50 of the Reserves Act 1977 for*

*the Northland Fish and Game Council and NorthTec to take samples of macroinvertebrates from the Kai Iwi Lakes as part of their research, after receiving recommendations from the Dune Lakes Galaxias Working Group (to be determined at the Working Group's meeting on 26 February 2019).*

The Working Group discussed this application. It was noted that no additional DLG will be required for the expansion of this study as flesh samples for radio isotope analysis can be taken from those DLG collected for the otolith study.

There was some discussion on whether an understanding of macroinvertebrate populations are a gap in studies of the Kai Iwi Lakes' ecosystem to date. Lisa said she was aware of only a few studies that had looked at this.

**Action: Lisa is to send previous Kai Iwi Lakes macroinvertebrate studies to the members of the Working Group.**

It was noted that this is a good example of where Mana Whenua should have been approached directly to discuss the proposed research. It was suggested that NorthTec and Fish and Game should meet with Te Roroa to discuss this project further. It was acknowledged that giving approval under section 50 of the Reserves Act 1977 is only one step and there will be continued opportunities to work together as this study progresses.

The Working Group, with the support of Mana Whenua reached the consensus that approval should be given under section 50 of the Reserves Act 1977 for Fish and Game and NorthTec to take samples of macroinvertebrates from the Kai Iwi Lakes as part of their research.

**Action: The KDC Chief Executive, in consultation with the Chair of the Taharoa Domain Governance Committee, is to give authorisation under section 50 of the Reserves Act 1977 for the Northland Fish and Game Council and NorthTec to take samples of macroinvertebrates from the Kai Iwi Lakes as part of their research.**

#### **Update from DOC on revision of DLG monitoring methods**

DOC is continuing to review the methods they use to monitor the abundance of DLG. The review is progressing, including a statistical reanalysis of the data set. They hope to have more to share by the next meeting.

#### **Discussion on eDNA and working with the Cawthorn Institute**

An opportunity has arisen to work with the Cawthorn Institute to use Environmental DNA (eDNA) to better understand the DLG. However, this requires a sample of DLG flesh in order to get the DLG's DNA. The Working Group agreed that fish collected for one purpose (such as the otolith project) could be used for other studies as well (such as that being undertaken by the Cawthorn Institute). This avoids having to kill more DLG.

That said, it was noted that any intention to use fish for additional purposes should involve consultation with Mana Whenua first.

Further approval from the Committee under s50 of the Reserves Act 1977 is not needed as no additional DLG will be required.

### **Otolith study and supporting larval fish monitoring project – update**

In the interests of time, Tanya will send out an e-mail update to the Working Group.

**Action: Tanya to e-mail the Group with an update on the otolith study and supporting larval fish monitoring project.**

### **Possibility of translocating DLG to another lake**

In the interests of time, this was deferred until the next meeting.

### **Possibility of releasing tuna into the Kai Iwi Lakes**

The direction was given by Mana Whenua that this research not be perused at this time. This acknowledges that this is a substantial area of research and the Working Group's resources are already stretched.

### **The effects of sunscreen on Lake ecosystems**

Mark gave an update. He has done a preliminary review of the literature and determined that the Committee has valid concerns. He has enquired with NIWA and the University of Waikato about the possibility of them undertaking a study into this matter. Mark is presently waiting to hear back.

### ***Francis closed the meeting with a karakia at 2:50pm***

Te Roroa will host the next meeting at the Waipoua Forest Visitor Centre. The next meeting will be held prior to the agenda closing for the 14 May 2019 Taharoa Domain Governance Committee meeting (the agenda closes on 06 May 2019).



## 5 Public Excluded agenda items 14 May 2019

### Recommended

*That the public be excluded from the following part of the proceedings of this meeting namely:*

- *Kai Iwi Lakes Camp Ground – Options Report*

*The general subject matter of each matter to be considered while the public is excluded, the reasons for passing this resolution in relation to each matter and the specific grounds under s48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:*

<b>General subject of each matter to be considered:</b>	<b>Reason for passing this Resolution</b>	<b>Ground(s) under Section 48(1) for the passing this resolution:</b>
<i>Kai Iwi Lakes Camp Ground – Options Report</i>	<i>Part 1, Section 7(2)(f) maintain the effective conduct of public affairs through (ii) the protection of such members, officers, employees, and person from improper pressure or harassment.</i>	<i>S48(1) (a) That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.</i>



## **6 Open agenda 14 may 2019**

### **Closure**

**Kaipara District Council  
Dargaville**