

# Ōhiwa Harbour Implementation Forum Rārangi Take (Agenda)

NOTICE IS GIVEN that the next meeting of the Ōhiwa Harbour Implementation Forum will be held in The Board Room, Te Rūnanga o Ngāti Awa, 4-10 Louvain Street, Whakatāne on:

TUESDAY 26 APRIL 2022 COMMENCING AT 9.30 AM

Fiona McTavish  
Chief Executive, Bay of Plenty Regional Council Toi Moana  
13 April 2022

# Ōhiwa Harbour Implementation Forum

## Membership

<b>Chairperson</b>  Elected by the Forum at its first meeting each Triennium	Cr Toi Kai Rākau Iti (Bay of Plenty Regional Council)
<b>Deputy Chairperson</b>	Mayor Lyn Riesterer (Ōpōtiki District Council)
<b>Council Members</b>  One representative each from:  Bay of Plenty Regional Council  Ōpōtiki District Council  Whakatāne District Council	Cr Bill Clark (Alternate)  Cr Debi Hocart (Alternate)  Cr Andrew Iles Cr Nāndor Tanczos (Alternate)
<b>Tangata Whenua Members</b>  One Tangata Whenua appointee representative each from:  Whakatōhea  Upokorehe  Ngāti Awa  Ngāi Tuhoe	Vacant  Trevor Ransfield Māui Manuel (Alternate)  Charlie Bluett Tuwhakairiora O'Brien (Alternate)  Hori Hillman Marewa Titoko (Alternate)
<b>Quorum</b>	Four members, consisting of more than half the number of members
<b>Meeting frequency</b>	Six monthly

## Purpose

Oversee and monitor the implementation of the Ōhiwa Harbour Strategy.

## Role

The Ōhiwa Harbour Implementation Forum:

- Is the sponsor of the Ōhiwa Harbour Strategy;
- Is responsible for overseeing the implementation of the actions in the Strategy;
- Has an overall monitoring role in terms of timeframes and deliverables;
- Maintains a general awareness of the issues surrounding the Ōhiwa Harbour Catchment; and
- Is responsible for reporting back to the strategic partners and to the community.

The Ōhiwa Harbour Implementation Forum will:

- Receive reports (including those prepared by staff of the three Councils) of what has recently been achieved with regards to implementing the Strategy, and outlining what the next targets for implementation could be;
- Provide a sounding board for officers to test implementation ideas against;
- Provide recommendations that can be reported back to councils; and
- Promote links with the Ōhiwa Harbour Catchment community.

## Forum Procedures

- The establishment and the need for and purpose of the Ōhiwa Harbour Implementation Forum is subject to review every three years following local authority elections.
- Subject to the Forum being re-appointed, member representatives are appointed by their respective appointing entities.
- The Forum may specifically invite attendance by organisations/groups which they believe will be interested (such as the Department of Conservation, Ministry of Fisheries, Nukuhou Salt Marsh Care Group).
- The meetings will also be publicly advertised so that members of the wider community can also attend.
- The Bay of Plenty Regional Council Standing Orders will apply, except as varied by these Terms of Reference or unless the members of the Forum unanimously agree to vary those standing orders as they apply to the Forum.
- The costs of meeting attendance lie where they fall. The exception to this is that a standard meeting fee will be provided for Tangata Whenua representation by the Bay of Plenty Regional Council.
- The actions to give effect to the strategy itself and costs associated with reporting to the Forum are funded from within the budgets of participating councils.

## Power to Act

To make all decisions necessary to fulfil the role and scope of the Forum subject to the limitations imposed.

The Ōhiwa Harbour Implementation Forum has no delegated authority for financial expenditure.

## Power to Recommend

The Ōhiwa Harbour Implementation Forum recommends and reports back to the respective organisations.

Recommendations in reports are not to be construed as Council policy until adopted by Council.

# Rārangi Take Agenda

## 1. Karakia Whakatuwhera Opening Prayer

## 2. Whakahoutanga Kōrero Verbal Updates

### 2.1 Chairperson's Report

Presented by: Chair Cr Toi Kai Rākau Iti

## 3. Ngā Hōnea Apologies

## 4. Wāhanga Tūmatanui Public Forum

## 5. Ngā Take Tōmuri Items not on the Agenda

## 6. Raupapa o Ngā Take Order of Business

## 7. Whakapuakanga o Ngā Take Whai Taha-Rua Declaration of Conflicts of Interest

## 8. Ngā Meneti Minutes

Kia Whakaūngia Ngā Meneti  
Minutes to be Confirmed

### 8.1 Ōhiwa Harbour Implementation Forum Minutes - 12 November 2021

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## 9. Ngā Pūrongo Reports

Ngā Whakatau e Hiahiatia Ana  
Decisions Required

### 9.1 Ōhiwa Website Development

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**Hei Pānui Anake  
Information Only**

<b>9.2</b>	<b>Nukuhou Water Quality Summary</b>	<b>23</b>
<b>9.3</b>	<b>Improving the Quality of Freshwater in the Ōhiwa Catchment</b>	<b>30</b>
<b>9.4</b>	<b>Essential Freshwater Policy Programme Update and Visions</b>	<b>37</b>
	Attachment 1 - Discussion document for Ōhiwa Harbour FMU long-term vision	42
<b>9.5</b>	<b>Update on the Ōhiwa Harbour Awhi Mai Awhi Atu, Sustainable Seas, National Science Challenge Project April 2022</b>	<b>45</b>
	<b>Decisions Required</b>	
<b>9.6</b>	<b>Work Programme Report to 31 March 2022 and Proposed Work Programme for 2022/23</b>	<b>47</b>
	Attachment 1 - Ōhiwa Harbour Strategy Annual Work Programme results to 31 March 2022	53
	Attachment 2 - Proposed Ōhiwa Harbour Strategy annual work programme 2022-23	62
<b>10.</b>	<b>Ngā Take Tōmuri Hei Whakaaroaro Consideration of Items not on the Agenda</b>	
<b>11.</b>	<b>Karakia Kati Closing Prayer</b>	

# Ōhiwa Harbour Implementation Forum

## Ngā Meneti Open Minutes

**Commencing:** Friday 12 November 2021, 9.30 am

**Venue:** Whakatāne District Council Chambers, 14 Commerce Street, Whakatāne

**Heamana  
Chairperson:** Cr Toi Kai Rākau Iti (Bay of Plenty Regional Council)

**Heamana Tuarua  
Deputy Chairperson:** Mayor Lyn Riesterer (Ōpōtiki District Council)

**Ngā Kopounga  
Members:** Charlie Bluett - Te Runanga o Ngāti Awa, Deputy Mayor  
Andrew Iles - Whakatāne District Council, Trevor Ransfield - Te Upokorehe, Josie Mortensen - Whakatōhea Māori Trust Board, Marewa Titoki - Alternate, Te Waimana Kaaku, Cr Nándor Tánczos - Alternate, Whakatāne District Council, Tu O'Brien (via Zoom) - Alternate, Te Runanga o Ngāti Awa

**Te Hunga i Tae Ake  
In Attendance:** Bay of Plenty Regional Council: Pim de Monchy - Coastal Catchments Manager, Tim Senior - Land Management Officer, Gemma Moleta - Senior Planner, Water Policy (via Zoom), Riki-Lee Ainsworth - Planner (via Zoom), Lisa Bevan - Environmental Data Officer (via Zoom), Amanda Namana - Committee Advisor

External: Gaylene Kohunui - Upokorehe (via Zoom), Ngaire Ngamoki - Upokorehe (via Zoom), Anita Lewis - University of Waikato (via Zoom), Mike Jones - Department of Conservation

**Ngā Hōnea  
Apologies:** Cr Debi Hocart - Alternate, Ōpōtiki District Council, Hori Hillman - Te Waimana Kaaku

## 1. Karakia Whakatuwhera Opening Karakia

A karakia was provided by Charlie Bluett.

## 2. Ngā Hōnea Apologies

### Resolved

That the Ōhiwa Harbour Implementation Forum:

- 1 Accepts the apologies from Cr Debi Hocart and Hori Hillman tendered at the meeting.

Riesterer/Iles  
CARRIED

## 3. Ngā Take Tōmuri Items not on the Agenda

### Resolved

That the Ōhiwa Harbour Implementation Forum:

- 1 Accepts the late item, appointment of the Alternate member for Te Waimana Kaaku
- 2 Agrees that the item cannot be delayed as the information has only just become available and this is the last meeting of 2021;
- 3 Agrees that the late item will be considered under the Chair's Verbal update.

Iles/Riesterer  
CARRIED

## 4. Whakapuakanga o Ngā Take Whai Taha-Rua Declaration of Conflicts of Interest

None declared.

## 5. Ngā Meneti Minutes

**Kia Whakaūngia Ngā Meneti  
Minutes to be Confirmed**

### 5.1 Ōhiwa Harbour Implementation Forum Minutes - 11 March 2021

#### Matters Arising:

- Outlined the minute action process whereby any action items from each meeting were captured, monitored and progressed by staff.



## Resolved

**That the Ōhiwa Harbour Implementation Forum:**

**1 Confirms the Ōhiwa Harbour Implementation Forum Minutes - 11 March 2021 as a true and correct record, subject to the following amendments:**

- Remove 'Alternate' from Deputy Mayor Andrew Iles' title as he is the Primary Member.

**Bluett/Riesterer  
CARRIED**

## 10. Whakahoutanga Kōrero Verbal Updates

### 10.1 Update from Whakatāne District Council

*Presentation: Whakatāne District Council Update: Objective ID A3972243*

Deputy Mayor Andrew Iles provided an update on matters relevant to the Forum, as the meeting's host.

#### **Key Points:**

- Thanked Upokorehe for consultation with the roading team on safety improvements to State Highway 2 between Whakatāne and Ōpōtiki as the route was now safer and more pleasant to travel
- Ongoing concern over state highway network flooding highlighted the need for another bridge into Whakatāne
- Expressions of interest had been sought from tourist operators and food/beverage vendors for the Ōhope Wharf reserve
- Ōhope Wharf was built in the 1950's and was undergoing an upgrade including underneath structural work (already completed) and replacement of the deck
- This was likely the last external meeting to be held in the current Whakatāne District Council Chambers, with the building undergoing significant upgrade. The first meeting in the new ground floor Chambers was scheduled for March 2023

#### **In Response to Questions:**

- Noted there was a temporary speed reduction over the holiday period for part of Wainui Road and the permanent speed limit was under review.,

### 5.2 Chairperson's Report – Verbal Update

*Tabled Document 1 - Te Waimana Kaaku letter appointing alternate member:  
Objective ID A3981538*

Chair Cr Toi Kai Rākau Iti presented this item.

### **Resolved**

- Noted the elevation of whakaaro Māori for treaty partnerships within the Resource Management Act (RMA) reforms
- A new Full Time Equivalent (FTE) staff member, Melissa Saunders, had been appointed as a Land Management Officer to support Ōhiwa Harbour mahi
- The Tino Rangatiratanga flag was now flying every day from each Bay of Plenty Regional Council office in Whakatāne, Tauranga and Rotorua
- Welcomed Marewa Titoko to the Forum as the new alternate member for Te Waimana Kaaku
- Outlined Regional Council's Toi Tangata Plan.

### **Key Points - Members:**

- It was a positive change to see Mātauranga Māori and Māori input being sought - this needed to be championed and employed in both operational work and policy so that it became second nature
- The utilisation of Mātauranga Māori, values and manaakitanga in everyday life was the seeking and finding of knowledge that Māori have which could assist in all aspects of mahi
- Whakatāne District Council also had Mātauranga Māori workstreams in progress.

### **Resolved**

**That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, Chairperson's Report - Verbal Update;**
- 2 Confirms the appointment of Marewa Titoki as the alternate member for Te Waimana Kaaku to the Ōhiwa Harbour Implementation Forum.**

**Bluett/Ransfield  
CARRIED**

### **Items for Staff Follow Up:**

- An update to be provided at a future meeting on the connection between Mātauranga Māori and State of the Environment reporting..

## **6. Ngā Pūrongo Reports**

**Hei Pānui Anake  
Information Only**

## 6.1 Engagement Opportunity - Values and Environmental Outcomes

*Presentation: Engagement Opportunity - Values and Environmental Outcomes:  
Objective ID A3982074*

Senior Planner (Water Policy) Gemma Moleta and Planner Riki-Lee Ainsworth presented this item.

### **Key Points:**

- The National Policy Statement for Freshwater Management (NPS-FM) had provisions that required greater tangata whenua participation and engagement with treaty partners. This included Te Mana o Te Wai being written into the NPS-FM; compulsory mahinga kai values and the opportunity for Mātauranga Māori to be used for measuring cultural values
- A key feature of the Freshwater Management Unit (FMU) was that there would be a vision in the Regional Policy Statement (RPS) which would be specific to the Ōhiwa Harbour FMU, noting that the harbour was the receiving environment for fresh water
- The group of attributes which needed to be measured included nitrogen, e-coli and sediment
- Ambitious, but reasonable goals with timeframes would be set, informed by history and environmental pressures
- Mahinga kai and wāhi tapu sites were only displayed on the public site if there were no sensitivity or confidentiality issues
- There was much known about Ōhiwa Harbour, but less about the freshwater catchment and the values associated with this
- There was opportunity to provide feedback on what was valued about specific freshwater sites and what needed changing, e.g. riparian planting or required weed control\
- Noted that all information provided on the Participate website page was public, whereas none of the information from the tangata whenua page was shared publicly
- There were two ways for Māori to engage under Te Honongo (the Regional Māori Engagement Plan for Implementing the NPS-FM), and multiple ways under the NPS-FM engagement process. Kanohi ki kanohi, had been the preferred method so far, potentially due to the desire to keep particular Mātauranga information secure.

### **Key Points - Members:**

- Suggested community groups or a science project through schools would create opportunities to reach people and obtain the input required
- Whakatōhea was heavily involved with freshwater as it influenced the health of the mussel farms and processing factory, including the study of water out of the rivers. Mātauranga involved Rongoa and taiao and

affected all operations, not just those pertaining to the harbour – this was about recapturing the health of the water

- Kutarere school had science programmes underway carrying out water testing and monitoring, which included estuaries, the awa at Waioatahe and the Ōhiwa Harbour
- Farmers' practices around the tributaries feeding into Ōhiwa had downstream effects and the rules dictated how people utilised the land around Ōhiwa
- Recognition of historical tuna supply and where they had gone
- Acknowledged the continuous work of Care Groups around the waterways with fencing, riparian planting and working together for freshwater health.

#### **In Response to Questions:**

- There were other meetings underway with community and co-governance groups, notification in the Freshwater Flash, local newspapers, Facebook and Instagram, along with a number of other types of engagement
- Intensive community engagement was scheduled for 2023, when a clearer idea of implications was expected
- There was a separate process for tangata whenua engagement
- This stage of engagement was open until at least Christmas 2021, with opportunity for tangata whenua engagement to be further extended. It was anticipated that an NPS-FM draft document would be available in 2023, with an issues and options paper for community discussion
- Drinking water supply was one of the compulsory values under the NPS-FM which may be captured under the Three Water Reform. Improving ecosystem health would have implications on where the limits were set for stormwater and wastewater.

#### **Items for Staff Follow Up:**

- The Forum to be informed if gaps were identified in the cultural values information required as Regional Council had further resources to facilitate cross cultural conversations
- Requested a more detailed report on declining trends within the harbour and what actions were being taken to combat this
- Arrange an opportunity for further discussion and highlighting the use of the engagement tool.

### **Resolved**

#### **That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, Engagement Opportunity - Values and Environmental Outcomes.**

Iti/Riesterer  
CARRIED

Item 8.1

10.57 am – The meeting adjourned.

11.18 am – The meeting reconvened.

## 6.2 Upokorehe pipi kaitiaki update

*Presentation: Upokorehe iwi Kaitiaki update: Objective ID A3983625*

Gaylene Kohunui and Ngaire Ngamoki presented this item.

### Key Points:

- Pipi monitoring had occurred continuously from July-October 2021 during the holiday periods, with random monitoring undertaken in recent weeks
- Over a 25 day period, there had been more than 2000 people observed collecting pipi, which could equate to 300,000 pipi taken within that timeframe
- Was considering how to more accurately capture qualitative data
- Critical that information on customary permit application forms was filled in correctly
- During follow up, it was discovered that pipi was not always making it to places stated on permit applications
- Several people being able to fill out a permit for customary takes was concerning – Fisheries New Zealand had been approached about this and a hui would be called with permit holders to learn how to fill out permit applications correctly
- Positive feedback had been received for the explanatory brochure on pipi harvesting in Ōhiwa Harbour
- Decline had been noted in the pipi bed – with likely reasons being the way in which they were harvested (over-harvesting and the number of pipi wasted
- There had been increasing disruption at the bird sanctuary from visitors and suggested improved signage
- Provided an update on Upokorehe kaitiaki resourcing – 12 applications had been made for honorary fishery officers – 6 of which went through to final assessment with full training occurring in 2022. This was important for kaitiaki succession planning
- Another ongoing issue was Upokorehe whānau having to pay for their own printing, kai, travel, equipment, time and reporting, in order to be able to carry out this mahi. They welcomed support from Bay of Plenty Regional Council and from Ōpōtiki District Council

- With the pipi monitoring volunteers providing education and increased understanding a decline in breaches had been observed
- Vehicles on Tokitoki Reserve continued to be an issue, however fixing bollards and erecting a chain to limit access could be considered
- The Management Plan identified returning the pohutukawa taonga that used to be situated on Tokitoki Reserve, which had a lot of history and was currently sitting below the reserve.

#### **Key Points - Members:**

- Abuse of customary permits was of serious concern - purpose was primarily for tangi and permit issuers would welcome feedback around breaches in this context
- Commended the ongoing work and acknowledged the need for assistance
- Ōpōtiki District Council would consider how to assist in the return of the pohutukawa taonga to Tokitoki Reserve, in co-operation with the Department of Conservation (DOC)
- Noted that permit authorities anywhere had the right to write a permit and this needed to change.

#### **Key Points - External:**

- DOC advised that they were currently working on the resource consent renewal required for Tokitoki Reserve and would follow up with Gaylene to ensure relevant concerns were being addressed.

#### **In Response to Questions**

- To date, 500 brochures had been printed, with more than 200 distributed to people at the pipi beds, and the remainder given to organisations to hand out. Once more were printed, costs permitting, they would be given to campgrounds etc in the area.

### **Resolved**

**That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, Upokorehe pipi kaitiaki update.**

**Iles/Riesterer  
CARRIED**

### **6.3 Awhi Mai Awhi Atu Update**

*Presentation: Awhi Mai Awhi Atu Update: Objective ID A3983579*

Land Management Officer Tim Senior presented this item on behalf of Dr Kura Paul-Burke – University of Waikato.

#### **Key Points of Presentation:**

- \$3k of funding had been awarded from the Association of Sciences, Limnology and Oceanology (ASLO) to run sedimentation and water quality workshops in Ōhiwa Harbour
- Seastar bait trapping trials had begun in the harbour, with the purpose of identifying practical seastar management methods
- The third generation natural spat lines had been deployed during the Tangaroa phase of the maramataka
- Patangaroa project was progressing, preliminary results for collagen testing hoped to be available by early 2022. An article on this project would feature in NZ Seafood magazine in December 2021
- Mapping of the pipi and tuangi beds on the Western side of the harbour had commenced with purpose of compiling the first ever combined underwater and inter-tidal mapping of pipi and tuangi beds.

**In Response to Questions:**

- Suggested collaborating with the AgriSea Company in relation to extracting collagen from starfish for the purposes of cosmetics etc.

**Resolved**

**That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, Awhi Mai Awhi Atu Update.**

**Iles/Riesterer  
CARRIED**

**6.4 Baseline investigation of microplastic pollution in sediment and bivalves in the Bay of Plenty**

*Presentation: Microplastics investigation in the Bay of Plenty: Objective ID A3979557*

Anita Lewis, University of Waikato presented this item.

**Key Points of Presentation:**

- Microplastics were plastic particles smaller than 5mm in diameter
- Entered marine environments through urban wastewater and drainage systems – wastewater treatment plants only caught macro plastics
- Microplastics bioaccumulated in the food web, with impacts on wildlife, marine life and humans
- Research showed this could affect reproductive qualities and growth of fish and shellfish
- There was potential for economic impact on the aquaculture export industry

- Sediment sampling had been carried out in locations from Waihi Beach to Ōpōtiki, including Ōhiwa Harbour
- 75% of Microplastics detected were microfibres from clothing, with 23% fragments and 2% film
- There were microparticles found in tuatua at each sampling location
- There was scope for future research and it was currently uncertain if the shellfish were mistaking microplastics for a food source.

**Key Points - Members:**

- Acknowledged the serious nature of the information and the importance of this research to start understanding the scale of the problem.

**In Response to Questions:**

- Microplastics were endocrine blockers and carcinogenic, with no safe level - the more ingested, the more potential for health issues
- Thresholds had not yet been established due to the early nature of this research
- Further research was being undertaken to look at Microplastic content in both the gut and the tissue of fish.

**Resolved**

**That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, Baseline investigation of microplastic pollution in sediment and bivalves in the Bay of Plenty.**

**Ransfield/Titoki  
CARRIED**

**6.5 Ōhiwa Harbour Marshbird Survey 2020**

*Presentation: 2020 Marshbirds Survey: Objective ID A3983408*

Environmental Data Officer Lisa Bevan presented this item.

**Key Points of Presentation:**

- Regular surveys had been conducted since 2010 after the Ōhiwa Harbour Strategy was established
- The survey focused on five birds: banded rail, marsh crake, spotless crake, bittern and fernbird
- Bittern was classified as nationally critical (the same as kakapo), with the other four species classified as at risk/declining
- Outlined where each bird was found within the harbour



- Due to nesting habits, they were vulnerable to predation or any changes/degradation to their habitat
- First marsh crake ever recorded in the survey and although little was known about them, it was a positive addition to the list of rare birds in Ōhiwa Harbour
- The most common threats to habitat included human activity, grazing and pests. Staff would follow up with landowners at the four sites where grazing had been identified as a threat
- Data from Nukuhou Saltmarsh Care Group highlighted how successful pest control could be for these species. The group recorded 10 fernbirds in their 2003 survey, compared to 93 in 2020.

**In Response to Questions:**

- Mangrove control was not contrary to bird habitat as it had a focus on seedlings and it was the larger mangroves that the banded rail used for cover.

**Resolved**

**That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, Ōhiwa Harbour Marshbird Survey 2020.**

**Mortensen/Ransfield  
CARRIED**

**6.6 State of Environment for Ōhiwa Harbour and Catchment - 2021 Interim report**

*Presentation: State of the Environment Interim Report for Ōhiwa Harbour and catchment 2021: Objective ID A3983407*

Environmental Data Officer Lisa Bevan presented this item, supported by Coastal Catchments Manager Pim de Monchy and Land Management Officer Tim Senior.

**Key Points of Presentation:**

- Advised that this was an annual interim report, with a comprehensive analysis provided in a State of the Environment report (SOE) every five years
- The biggest issue identified for Ōhiwa Harbour in the 2018 SOE was the estuary bed habitat health being moderate to poor due to the amount of fine mud. Monitoring over the summer period showed no change in the health of the estuary bed
- Five water quality parameters showed a worsening short term trend in the Nukuhou River
- The water quality monitoring for swimming and shellfish showed no exceedances, therefore swimming and shellfish consumption remained safe

- Short term trends in graphs were also impacted by short term climate changes that may affect water quality
- Nukuhou suitable whitebait habitat had been given a moderate score
- A collaborative new programme monitoring bittern across the Bay of Plenty used acoustic recorders, including five in Ōhiwa, for which there would be an update provided next year

**Key Points - Members:**

- Highlighted the importance of Pataua Island to Upokorehe
- Black swans in the harbour were an ongoing issue, they impacted the harbour by eating seagrass that was kai for fish species, including snapper.

**In Response to Questions:**

- Finding the right people at the right time for culling black swans had been a major challenge, combined with pressure from Fish and Game New Zealand who held a different opinion to the Forum around tolerable density when it came to black swans
- The current impact of black swans on the sea grass, and the wider impacts on other species in the harbour, were visible though not yet deemed significant
- Black swans were classified by Fish and Game New Zealand as a game bird and there was a special swan season weekend in February each year allowed through the Eastern Bay of Plenty Fish and Game Council that should be taken advantage of, noting permission from relevant landowners was required if private land was involved.

**Items for Staff Follow Up:**

- Report back to the Forum on the monitoring outcomes of the Nukuhou farm new effluent system and related downstream effects at Kutarere.

**Resolved**

**That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, State of Environment for Ōhiwa Harbour and Catchment - 2021 Interim report;**
- 2 Requests a report on the impact of the black swans on the Ōhiwa Harbour sea grass and food chain;**
- 3 Writes a letter to the Fish and Game Council requesting an extension to the hunting season for black swans under the Wildlife Act 1953 for Ōhiwa Harbour;**
- 4 Requests that the Regional Council carries out black swan control during any black swan hunting seasons to reduce the impact on seagrass.**

**Ransfield/Mortensen  
CARRIED**

## 6.7 Responses to Ōhiwa Harbour Implementation Forum submissions on Council Long Term Plans

Department of Conservation (DOC) Community Ranger Whitney Nelson responded to questions.

### Key Points:

- Waste Minimisation Plan had to be submitted once publicly notified so that it could be correctly captured.

### Items for Staff Follow Up:

- Staff to monitor progress on the actions and report back to the Forum at a future meeting.

## Resolved

That the Ōhiwa Harbour Implementation Forum:

- 1 **Receives the report, Responses to Ōhiwa Harbour Implementation Forum submissions on Council Long Term Plans.**

Iles/Bluett  
CARRIED

## 6.8 Ōhiwa Harbour Strategy annual work programme report for the year ending 30 June 2021

*Presentation: Ōhiwa Work Programme Report 2021: Objective ID A3979607*

Land Management Officer Tim Senior presented this item.

### Key Points:

- Over the past year, staff had worked with farmers to fence off almost 35km of streams
- A demonstration was given of a new dashboard system that captured work undertaken, and could be filtered in a variety of ways, including by catchment.

### Key Points - Members:

- It was important to understand why any actions were highlighted red in the work programme progress column (i.e. not completed), and requested accompanying reason/s in future reports to identifying what was not working and why
- Raised the issue of silt and mangroves causing flooding at Kutarere – the awa was narrower due to being blocked.

### In Response to Questions:

- Noted that some improvements had been made at Kutarere, however the expertise required to unblock the stream was complex and involved an engineering assessment, which would be undertaken, although outside the scope of the Forum.

**Items for Staff Follow Up:**

- Follow up with the Rivers and Drainage team and liaise with Upokorehe regarding the flooding situation at Kutarere and options to identify a way forward for this significant problem.

**Resolved**

**That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, Ōhiwa Harbour Strategy annual work programme report for the year ending 30 June 2021.**

**Iles/Riesterer  
CARRIED**

**7. Karakia Kati  
Closing Karakia**

A karakia was provided by Charlie Bluett.

**1.43 pm – the meeting closed.**

**CONFIRMED**

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Cr Toi Kai Rākau Iti  
Chairperson, Ōhiwa Harbour Implementation  
Forum

**Report To:** Ōhiwa Harbour Implementation Forum

**Meeting Date:** 26 April 2022

**Report From:** Tanja Rother,  
Shared Landscapes. Intercultural Research & Engagement Services

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## Ōhiwa website development

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### Executive Summary

A website that informs a broad audience on all aspects of the Ōhiwa Harbour and its management was proposed a number of years ago. The website has now been developed and will be presented to the Forum at the meeting.

### Recommendations

That the Ōhiwa Harbour Implementation Forum:

- 1 Receives the report, Ōhiwa website development;
- 2 Endorses the public release of the Ōhiwa website;
- 3 Endorses the ongoing content development of the Ōhiwa website.

## 1 Background

Currently, the Ōhiwa Harbour and the Ōhiwa Harbour Strategy partners have limited tools to communicate their work to the local community and interested parties elsewhere. Therefore, a stand-alone website that informs a broad audience on all aspects of the Ōhiwa Harbour was proposed some years ago in preference to a few pages on the Regional Council website. Its main objective is to inform and educate and hence enable people, locals and visitors, to respect and protect the harbour. This website has now been developed and will be presented to the Forum.

## 2 Website development

The website seeks to provide a platform for information on all aspects of the harbour. Because of the opportunities of the digital space the Ōhiwa website is able to cover a wide range of issues concerning the harbour. It is complemented by other already existing tools of information and education such as the Ōhiwa Harbour Community Newsletter and Ngā Tapuwāe o Tairongo, the Ōhiwa Harbour Heritage Trail.

The website currently consists of a homepage, three main menus and additional pages for general information.

The *Homepage* presents the three main themes of the website: Explore, Care and Enjoy.

The *Explore* menu or pages introduce the harbour's environment and history, provide basic information on the geology and ecology of the harbour, the wetlands, the birds as well as the harbour's cultural history including Tairongo and its shipping history.

The *Care* pages talk about the kaitiaki of the harbour, the Ōhiwa Strategy and the Care Groups, mangrove management and what Nukuhou farmers do in the catchment.

In the *Enjoy* menu several pages inform about all the activities that the harbour offers, walking, fishing, and the Heritage Trail.

Then there are the *Location* and *Contact* pages that provide the user with basic information on where to find the harbour and whom to contact for more information.

Finally, a *News* page shares the latest stories, project updates, and events in and around the harbour. Essentially this news blog feeds the future Ōhiwa Harbour Community newsletter which will be managed through the website once it is live. Subscribers to the newsletter will still receive the newsletter in their e-mailbox as usual. Except now, to read a *full* story of an item in the newsletter, readers will be directed straight to the website.

### 3 Work in progress

The project was first started a few years ago. The website content has been developed further since then, mainly between Tim Senior and myself in the last year. Professional website developers, Devcich & Co., based in Mount Maunganui, have set up the basic site structure and design. The website works as a content management system that allows for content, images and design elements to be changed easily.

There are multiple opportunities to develop this website further in the future including, importantly, improving on content in Te Reo Māori. In the long-term, there is also ample space to make the website more interactive and inclusive of the wider Ōhiwa community, enable tangata whenua and care groups to perhaps have their own pages, add an archive with Ōhiwa/Strategy related documents.

The website is very much work in progress and will require ongoing development. At this point approval is sought for the website in terms of its design and its content so far.

In order for the website to continue to attract viewers in the future new content will need to be added, updated and the look of it will have to change over time. New content will be distributed to the Ōhiwa Harbour Strategy Coordination Group representatives for their approval prior to it's publication on the website in line with the communication protocol already in place.

**Tanja Rother**

**5 April 2022**



<b>Pūrongo Ki: Report To:</b>	Ōhiwa Harbour Implementation Forum
<b>Rā Hui: Meeting Date:</b>	26 April 2022
<b>Kaituhi Pūrongo: Report Writer:</b>	Malea Zygadlo, Environmental Scientist and James Dare, Environmental Scientist - Water Quality
<b>Kaiwhakamana Pūrongo: Report Authoriser:</b>	Julie Bevan, Policy & Planning Manager
<b>Kaupapa: Purpose:</b>	To provide context around the trend results for the Nukuhou river and how we use these results in understanding degradation.

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## Nukuhou Water Quality Summary

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### Whakarāpopototanga Executive Summary

The Nukuhou River shows a number of worsening trends. This report outlines the context around these results.

- Trend analysis results need to be interpreted in the context of their analysis period. For example, worsening trends over the most recent ten-year period do not necessarily mean the site is degrading over longer periods.
- Context around the trends, including the time period, climatic influences and methodology changes, all need to be considered.
- Relative state (e.g., NPS-FM attribute bands) should also be considered when determining the 'health' of a site.

### Ngā tūtohutanga Recommendations

**That the Ōhiwa Harbour Implementation Forum:**

- 1 Receives the report, Nukuhou Water Quality Summary.**

## 1. **He Whakamārama Background**

The Ōhiwa Harbour and Catchment – SOE Interim Report identified ‘worsening’ trends in the Nukuhou river for a number of water quality measurements. As this was an interim report, the trend results were not discussed or investigated. It was requested that some explanation around the trends were provided both in terms of the technical interpretation and what is being done about it. This report describes how we interpret trend results and provides context around the results.

## 2. **Water Quality Results**

### 2.1 **Trend interpretation**

Scientists use trend analysis as a key tool to understand changes in water quality. Results are used to evaluate changes in environmental state, assessing the effectiveness of management actions and policies, evaluating relationships between environmental conditions and the factors that influence them, and providing early warning of environmental problems.

While trends are widely used, it is important to understand the caveats that come along with interpreting trends; context is very important. For example, trends may indicate improving or worsening water quality, however the reason may be more closely linked to natural causes than human derived change, e.g., medium term climatic variability. Recent research has shown that even 10-year trends may be affected by climate variability, masking the effect of land use change.

A key aspect we must consider when interpreting trend results is the timescale we have used. To exemplify the effect a change in time period can have on trend results, Figures 1 and 2 and Table 1 shows the change from ‘improving’ trends to ‘worsening’ trends depending on if the full dataset or the 10-year dataset is used.

Both timeframes come with their issues. The Nukuhou monitoring site has data from 1991, however there was a lab methodology change between 2008 and 2009 which can be seen as a slight step change in the long-term record. Another complication is that river flow measurements are only available from 2011, which has also affected how we interpret data.

Trends calculated for the Nukuhou Catchment have mostly been displayed as 10-year trends, in recent years, to avoid the difficulties of dealing with the lack of flow measurements and lab methodology changes, as well as providing information that is reflective of recent land use activity. However, as mentioned above, 10-year trends may be more subject to climatic variability than longer time periods. This impacts trend results as the climatic variability can mask the effects of land use change.



Table 1: Trend results for each monitored water quality parameter. This table shows both 10-years of data and all data (since 1990s), and the comparison between flow adjusted and not for the 10-year data.

Time Period	Flow Adjusted	Parameter	Percent Annual Change	Trend Result
All	No	Dissolved Reactive Phosphorus	-3.0	Very Likely Improving
All	No	<i>E. Coli</i>	-0.5	Very Likely Improving
All	No	Ammoniacal-Nitrogen	-3.8	Very Likely Improving
All	No	Nitrate-Nitrogen	-1.0	Very Likely Improving
All	No	Total Nitrogen	-1.7	Very Likely Improving
All	No	Total Phosphorus	-0.6	Very Likely Improving
10 Years	No	Dissolved Reactive Phosphorus	-2.2	Very Likely Improving
10 Years	Yes	Dissolved Reactive Phosphorus	-0.6	Likely Improving
10 Years	No	<i>E. Coli</i>	2.0	Very Likely Worsening
10 Years	Yes	<i>E. Coli</i>	1.4	Very Likely Worsening
10 Years	No	Ammoniacal-Nitrogen	2.7	Likely Worsening
10 Years	Yes	Ammoniacal-Nitrogen	0.1	Likely Worsening
10 Years	No	Nitrate-Nitrogen	3.6	Very Likely Worsening
10 Years	Yes	Nitrate-Nitrogen	1.9	Likely Worsening
10 Years	No	Total Nitrogen	3.1	Very Likely Worsening
10 Years	Yes	Total Nitrogen	0.7	Likely Worsening
10 Years	No	Total Phosphorus	0.5	Likely Worsening
10 Years	Yes	Total Phosphorus	-0.7	Likely Improving

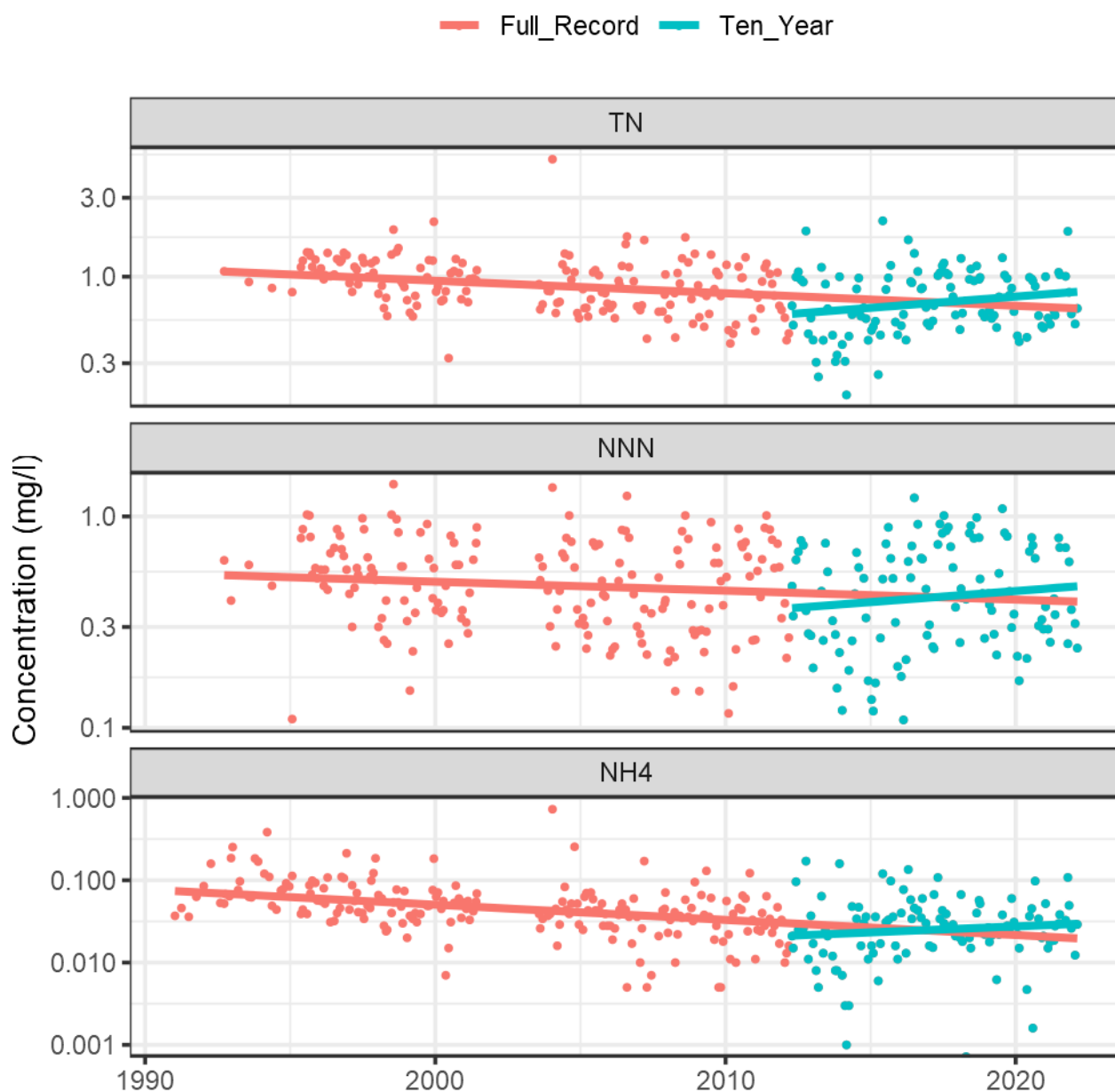


Figure 1: Timeseries of data at the Nukuhou NERMN water quality site for Total Nitrogen (TN), Nitrate-N (NNN), Ammoniacal-N (NH4),. The blue dots and trend line are for the last 10-years of data.

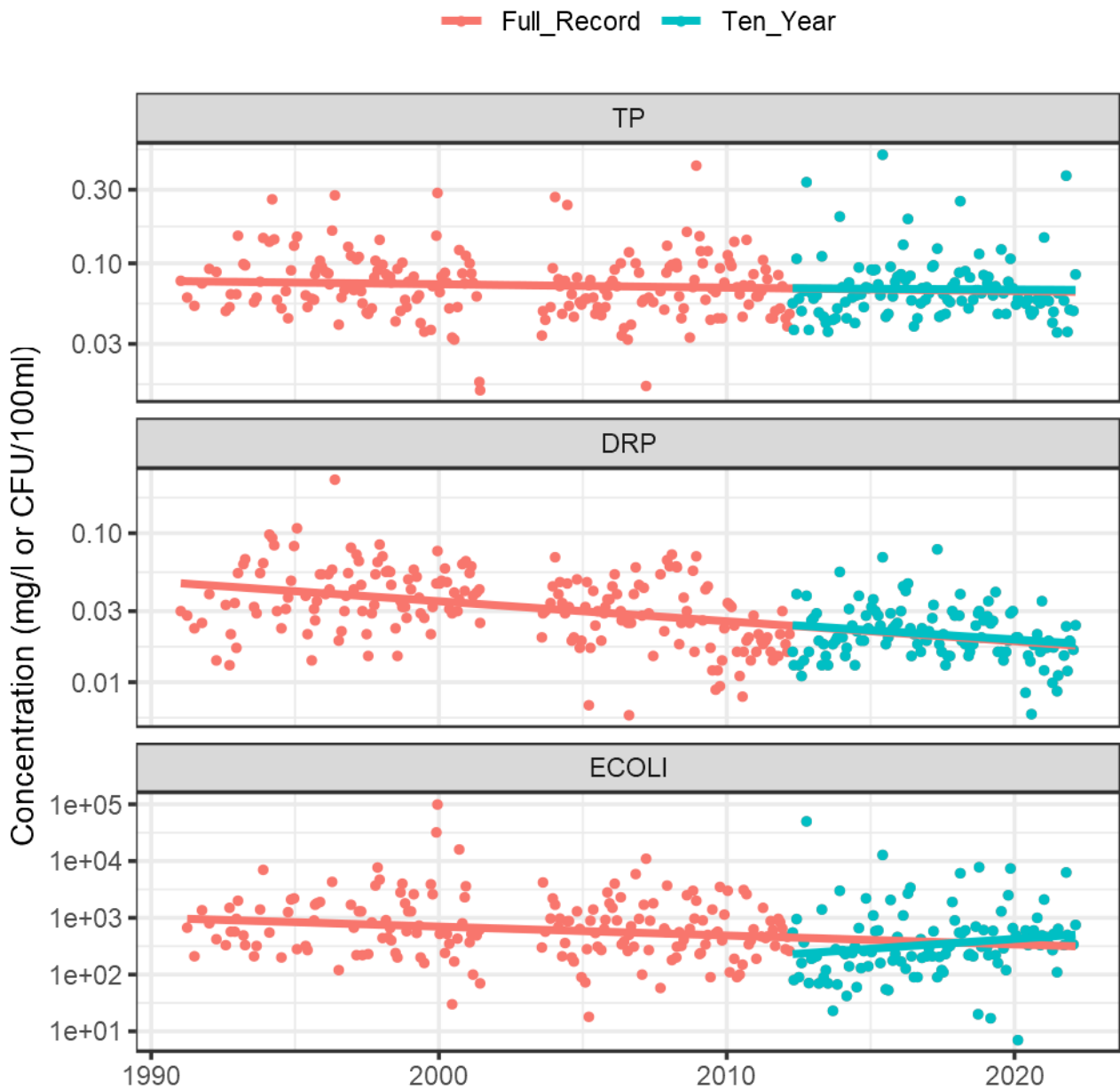


Figure 2: Time series of data at the Nukuhou River water quality monitoring site for Total Phosphorus (TP), Dissolved Reactive Phosphorus (DRP), and *E. coli*. The blue dots and trend line are for the last 10-years of data.

## 2.2 Other information that informs degradation

Determining if a river, or part of a river, is actually degrading is very difficult. While trend analysis can appear to be a conclusive result, the context around that result is very important as explained above. There are other analyses that can add to our interpretation. These can include analysis of the state (e.g., average or median concentration), modelling results (e.g., SedNet), land use and management information, and comparison to similar rivers.

Figure 3 shows the median value from the Nukuhou monitoring site in comparison to the other monitoring sites across the region. Here we can see that all the measurements are below average when compared to other rivers. *E. Coli*, sediment (TSS and clarity), and ammoniacal-N (NH<sub>4</sub>-N) are identified as the measurements BOPRC would be most concerned about based on the state (concentration)

information. The results from computer modelling exercises also need to be worked through alongside this information.

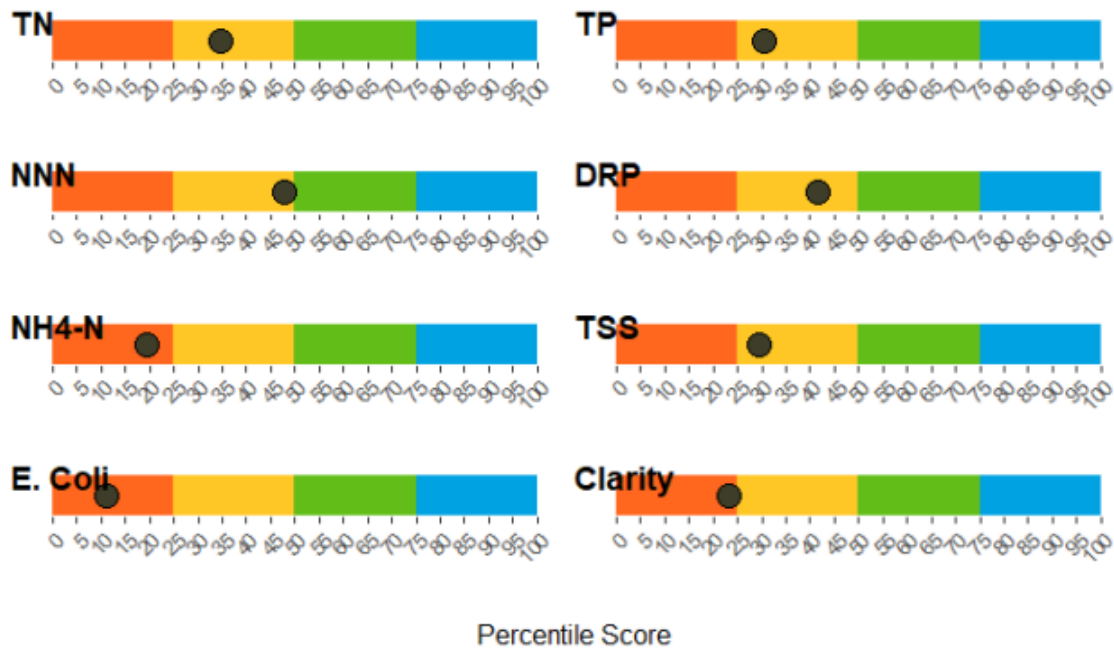


Figure 3: Comparison of the Nukuhou River water quality monitoring site against other River monitoring sites in the Bay of Plenty. The grey dot represents the sites 50<sup>th</sup> percentile score (i.e., median value). (Sourced from the Rivers Water Quality 2020 Update)

## 2.3 Summary

Many water quality parameters in the Nukuhou are highlighted as attributes that need attention. When it comes to trend interpretation, it is important to keep I mind:

- The timeframe of the trend analysis.
- The potential influence of climate and other natural variables over that timeframe.
- The context of the state (concentration) of that parameter relative to other sites.

## 3. Ngā Whakaarohanga Considerations

### 3.1 Ngā Mōrea me Ngā Whakangāwaritanga Risks and Mitigations

There are no significant risks associated with this matter/subject/project/initiative.

### 3.2 Huringa Āhuarangi Climate Change

The matters addressed in this report are of a procedural nature and there is no need to consider climate change impacts.

### 3.3 Ngā Pānga ki te Māori Implications for Māori

Ōhiwa Harbour is recognised as a very significant place for Māori. Their relationship to it, particularly as a traditional māhinga mātaimai (food gathering place) is important. As Ōhiwa Harbour Strategy partners, tangata whenua are keen observers of the health of the harbour. Results, implications and mitigation are all regularly communicated and consulted with the tangata whenua partners.

### 3.4 Whakawhitiwhiti ā-Hapori Community Engagement



**CONSULT**  
**Whakauia**

To obtain input or feedback from affected communities about our analysis, alternatives, and /or proposed decisions.

### 3.5 Te Hāngai ki te Pou Tarāwaho Rautaki Alignment with Strategic Framework

This report details monitoring in accordance with the actions of the Ōhiwa Harbour Strategy.

### 3.6 Ngā Pānga ā-Pūtea Financial Implications

There are no material unbudgeted financial implications and this fits within the allocated budget.

## 4. Ngā Mahi Whai Ake Next Steps

A lot of work is already being undertaken and planned in the Ōhiwa catchment to improve water quality. In order to provide more context to the trend analysis, we propose that the trend results are presented both as 10-year trends and full data trends. The full State of the Environment report for the Ōhiwa Harbour is also due to be prepared next year. It is proposed that in this report, the trends and state are investigated and presented in a more complete format that considers the context outlined in this report.



<b>Pūrongo Ki: Report To:</b>	Ōhiwa Harbour Implementation Forum
<b>Rā Hui: Meeting Date:</b>	26 April 2022
<b>Kaituhi Pūrongo: Report Writer:</b>	Tim Senior, Land Management Officer
<b>Kaiwhakamana Pūrongo: Report Authoriser:</b>	Chris Ingle, General Manager, Integrated Catchments
<b>Kaupapa: Purpose:</b>	Improving freshwater quality

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## Improving the quality of freshwater in the Ōhiwa catchment

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### Whakarāpopototanga Executive Summary

The causes of poor water quality in the Ōhiwa catchment are complex and an improvement is going to take some years to become evident. The focus of the effort by Bay of Plenty Regional Council in supporting landowners with grant funding and expert advice, is on reducing sediment runoff which has a number of origins. Fencing and planting of streams is well underway along with a number of other initiatives.

### Ngā tūtohutanga Recommendations

That the Ōhiwa Harbour Implementation Forum:

- 1 Receives the report, Improving the quality of freshwater in the Ōhiwa catchment.

## 1. **He Whakamārama Background**

The fact that the quality of the Nukuhou River water is poor has been known since monitoring began in the 1990's. The Nukuhou is the only Ōhiwa tributary to have long term water quality monitoring. Its sub-catchment covers 60% of the Ōhiwa catchment. Monitoring has recently begun on four other Ōhiwa tributaries to start to gain a more complete picture of freshwater quality throughout the catchment.

Bay of Plenty Regional Council (BOPRC) has a role in working with landowners and others to try to improve water quality. Efforts to make meaningful improvements began in about the year 2000 when the catchment was designated a focus area by the BOPRC land management team. In 2019 Council made the catchment a 'focus catchment', enabling further resources to be applied.

Poor water quality is the result of the use and management of the land over the last 150 years or so. It is an unintended consequence that wasn't well understood by landowners, and certainly not quantified, until relatively recently. Thanks largely to BOPRC's work in the catchment over the last 20 or so years, the majority of farmers and landowners now have a much better understanding of the issues and possible solutions.

While all of the water quality parameters monitored in the Nukuhou River are poor, the most significant of them, in terms of the impact on the harbour, is sediment. The increase in sediment flowing off the land would have begun with the clearance of the original forest cover for farming, with the other contaminants (nitrogen, phosphorus and bacteria) would likely have increased more in recent decades as pastoral farming became more intensive.

Pastoral farming is the largest land use in the Ōhiwa catchment (35%) with plantation forestry at 17% (though this has probably recently decreased). While production forestry does release significant amounts of sediment during the harvest and re-establishment period, most of the time forestry land use is very stable and virtually no other contaminants are released. Agriculture releases more sediment, and other contaminants, over the long term.

Reversing the cumulative impacts of 150 years of farming is inevitably going to be a slow process. Almost any use of land results in water contaminants being produced and it's not possible to completely prevent this. However, changes and modifications to the way land use is managed can reduce them over time.

It's important to note that the harbour is naturally filling in with sediment and always has been, thanks in part to the light easily erodible recent ash and silt soils in the catchment. Human activities have however sped this process up considerably. Ōhiwa Harbour is not alone in this: studies of similar estuaries in the Waikato suggest that historical sediment accumulation rates were less than 0.5mm per year. Since European settlement, this has risen to almost 200 times the historical rate.

## 2. **What needs to be done**

Efforts to reduce sediment have been the focus of the work that BOPRC has been doing, alongside landowners. It's safe to say that generally many of the interventions made to reduce sediment are also likely to have some beneficial effect on the other parameters by reducing or slowing the flow of water.

Phosphorus is bound to soil particles so reducing erosion will have a direct effect. The slower the water moves across the land, the more opportunity there is for plants to absorb excess nitrogen and for harmful bacteria to die off.

High sediment levels are caused by erosion which is basically soil being moved downslope, generally by water. Most of the soils in the catchment are recently formed ash soils on the slopes (from volcanic activity) or silty soils on the river and steam flats (from flooding). Both of these are easily moved by water. This movement happens in a number of ways, some more visible than others:

- Landslides and slips largely caused by heavy rain on steep slopes;
- Stream bank erosion, which is a particular problem in the Nukuhou River due to the loose soils and deeply incised river;
- Sheet erosion of recently cultivated land during heavy rain;
- Soil creep, a very slow but inexorable process caused by rain drops splashing soil particles downslope.

Heavy stock trampling and tracking can open up the soil and expose it to rainfall, exacerbating erosion of various kinds. Earthworks can also leave unstable soil subject to erosion.

There are a number of techniques that can be employed to reduce erosion (this is not an exhaustive list):

- Fencing off bush areas;
- Retiring steep land from farming altogether and planting it in exotic or native trees;
- Planting poplar poles to help hold unstable land;
- Fencing and planting stream banks to keep stock out a) to protect the bank from damage from treading and b) to prevent stock from directly contaminating the water;
- Constructing ponds or wetlands to trap sediment;
- Various methods of protecting stream banks by using shrub willow plantings, rock protection or groynes;
- Reducing stock numbers or grazing smaller animals on steeper slopes;
- Improved grazing management and stock rotation particularly during wet periods;
- Carefully planning earthworks;
- Careful location of fencelines and stock tracks;
- Minimising cultivation of steeper slopes.

The first six of the above techniques BOPRC is able to assist landowners with by way of grant funding. The rest are management techniques that need to be implemented by landowners, though BOPRC are able to provide advice.



In addition, there are a number of further management techniques that help to reduce some of the other contaminants, for example:

- Careful use of artificial fertilisers;
- Careful management of dairy effluent systems.

### 3. **How BOPRC works with landowners**

Apart from ensuring that farmers meet the conditions of any consents they may hold (eg. for dairy effluent systems or major earthworks), until recently there were very few regulations compelling farmers to carry out any of the above improvements. So BOPRC land management staff can only work with landowners on a voluntary basis. However farmers are increasingly aware that they need to manage their farms better, so the demand for land management advice and assistance is increasing.

Staff will either approach a landowner or vice versa to suggest some work that they would like to see done. After (often considerable) discussion this will result in the production of an Environmental Plan agreement (EP). This describes the proposed works (for eg. fencing off a stream), how and where they are to be done and allocates costs between the two parties. BOPRC is generally able to contribute 50% grant funding towards eligible work.

The work is very much a partnership between BOPRC and landowners.

### 4. **What is being done**

In the early 2000's a significant effort was put in to "tidy up" the main river. This involved removing tree debris which was interfering with the flow of water and causing erosion of the banks. Old willow and walnut trees, which almost inevitably eventually fall into the river, were also removed. These were often replaced with smaller shrub willows. Some of the more serious erosion on some bends was managed by rock armouring. Any fencing required along the main river was completed to ensure stock were not able to access the river. This was all done using the EP mechanism.

A study by a river engineer to assess what more can be done to help prevent further erosion of the banks of the main river is about to get underway.

Stream, and more recently farm drain, fencing still continues, through EP's, with planting of natives or shrub willows as and where appropriate. Fencing streams, particularly on steeper drystock farms, often then requires the installation of a stock drinking water system of pipes and troughs.

Also through EP's, large numbers of poplar poles are being planted on some steeper slopes. Significant stands of bush are being fenced and landowners are being encouraged to retire some of the steepest areas.

In some gullies small bunds are constructed to help trap sediment before it reaches the main river. These generally have to be dug out periodically.

BOPRC also now has the capacity to assist farmers with the development of nutrient budgets. These budgets help farmers to optimise their use of fertilisers which is

currently often not very precise and may be leading to more leaching and contamination than is necessary. Two farms have already had theirs completed.

Behind this work on the ground, continuous efforts are made to provide farmers with up to date information and recommendations about many aspects of their farm management. Other on farm changes are taking place, for example several dairy farms have reduced their cow numbers without any reduction in productivity.

## 5. What has been achieved

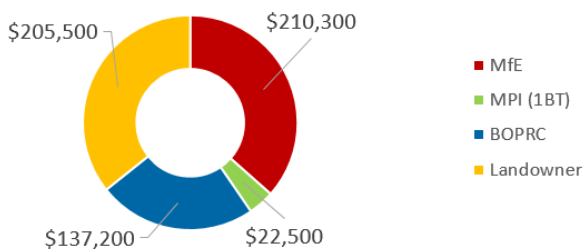
By 2012, the harbour margins were completely protected from stock.

By November 2021, approximately 504km of stream fencing had been completed, leaving approximately another 226km to complete. Most of the streams still unfenced are very small in the upper areas of the catchment and may be in areas where there are no stock, such as lifestyle blocks, so the amount left to do may actually be much less.

Since 2019, 25 EP agreements have been made with landowners. The graphic below illustrates the resulting work and the costs involved. It's important to note that BOPRC have been actively seeking extra sources of funding and the Ministry for the Environment's Freshwater Improvement Fund and the Ministry for Primary Industry's One Billion Trees Fund have considerably increased the amount of work done.

### Ōhiwa/Nukuhou Focus Catchment Progress Report Card, November 2021

#### Works Completed Since 2019



**52**

kilometres of new stock exclusion fencing completed



**15.2**

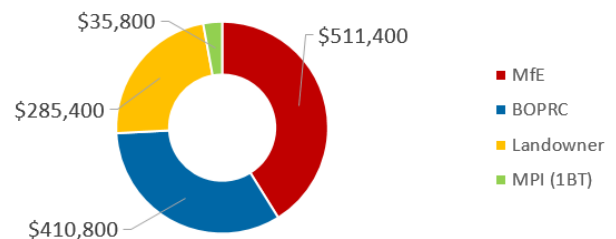
Hectares of land retired



**26,000**

Native trees planted

#### Works Planned for 2021-23



**79.1**

kilometres of new stock exclusion fencing to be completed



**20.5**

Hectares of land to be retired



**38,000**

Native trees to be planted

It should also be noted that some farmers will be doing their own fencing and planting with no support from BOPRC, but the extent of this is not known. There is also a significant number of sediment traps and bunds that have been constructed by farmers themselves.

Hundreds of shrub willow poles are planted along stream banks each year and these are not included in the native plant numbers in the report card above.

As mentioned above, a stock drinking water supply sometimes needs to be installed when the streams are fenced. On one large property alone this required the provision of 36 troughs, 2 large tanks, a pump and 11km of pipe at a cost of \$170,000.

A number of pockets of bush have been incorporated into the stream fencing and three larger bush blocks have been fenced with pest control being carried out in some.

While the focus to date has been on the larger farms, lifestyle block owners (of which there are a large number in the catchment) are showing increasing interest in protecting their streams and often in large scale planting of most of their properties and several EP agreements are already in place.

## 6. What still needs to be done

The first priority has been, and remains, completing the stream fencing and planting with either natives or shrub willows where appropriate.

There is more poplar pole planting to be done on some of the steeper slopes and ideally some small areas retired from grazing altogether.

There are opportunities to construct more ponds and wetlands to trap sediment.

Once the engineering report on the river bank erosion has been completed, there is likely to be work to do protecting those banks.

Each farm ideally needs a nutrient budget to ensure effective fertiliser use.

Farmers need to continue to make incremental improvements to the way they manage their farms and BOPRC will back this up with training and learning opportunities for them where possible.

It's hoped that very soon, landowners will form a catchment group which will facilitate a catchment wide coordinated approach to all this work.

It is important to remember that most of this work is voluntary on the part of landowners and relies on their goodwill, BOPRC is not able to require it to be done.

And finally, the issue we have has been 150 years or so in the making and it's going to take some time to reverse. Even the fencing and planting done so far will not have an immediate effect – plants take time to establish and stream banks take time to heal.

## 7. Ngā Whakaarohanga Considerations

### 7.1 Ngā Mōrea me Ngā Whakangāwaritanga Risks and Mitigations

There are no significant risks associated with this matter/subject/project/initiative.

## 7.2 **Huringa Āhuarangi Climate Change**

The matters addressed in this report are of a procedural nature and there is no need to consider climate change impacts, though it is noted that all native plantings will have a positive impact on climate change.

## 7.3 **Ngā Pānga ki te Māori Implications for Māori**

Water is of crucial importance to Māori for a host of reasons. The work described in this report will help to restore the Mauri of the rivers and streams in the Ōhiwa catchment.

## 7.4 **Whakawhitiwhiti ā-Hapori Community Engagement**

The intention of this report is to engage with and obtain feedback from community representatives.

## 7.5 **Te Hāngai ki te Pou Tarāwaho Rautaki Alignment with Strategic Framework**

This report details work towards implementing the actions of the Ōhiwa Harbour Strategy.

## 7.6 **Ngā Pānga ā-Pūtea Financial Implications**

There are no material unbudgeted financial implications and this fits within the allocated budget.

## 8. **Ngā Mahi Whai Ake Next Steps**

The work of BOPRC in supporting landowners to take action to improve water quality in the Ōhiwa catchment will continue.



<b>Pūrongo Ki: Report To:</b>	Ōhiwa Harbour Implementation Forum
<b>Rā Hui: Meeting Date:</b>	26 April 2022
<b>Kaituhi Pūrongo: Report Writer:</b>	Gemma Moleta, Senior Planner (Water Policy)
<b>Kaiwhakamana Pūrongo: Report Authoriser:</b>	Julie Bevan, Policy & Planning Manager
<b>Kaupapa: Purpose:</b>	To outline the Essential Freshwater Policy Programme for 2022, provide an update on a Ōhiwa Harbour long-term vision for freshwater and a brief national update.

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## Essential Freshwater Policy Programme Update and Visions

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### Whakarāpopototanga Executive Summary

This report provides Ōhiwa Harbour Implementation Forum (OHIF):

- an outline of Toi Moana's Essential Freshwater Policy Programme (EFPP) for 2022 and opportunity to be involved,
- an update on mahi progressing the drafting of an example Ōhiwa Harbour vision since the last hui; and
- an update on national regulatory changes affecting the EFPP.

### Ngā tūtohutanga Recommendations

That the Ōhiwa Harbour Implementation Forum:

- 1 **Receives the report, Essential Freshwater Policy Programme Update and Visions.**

## 1. He Whakamārama Background

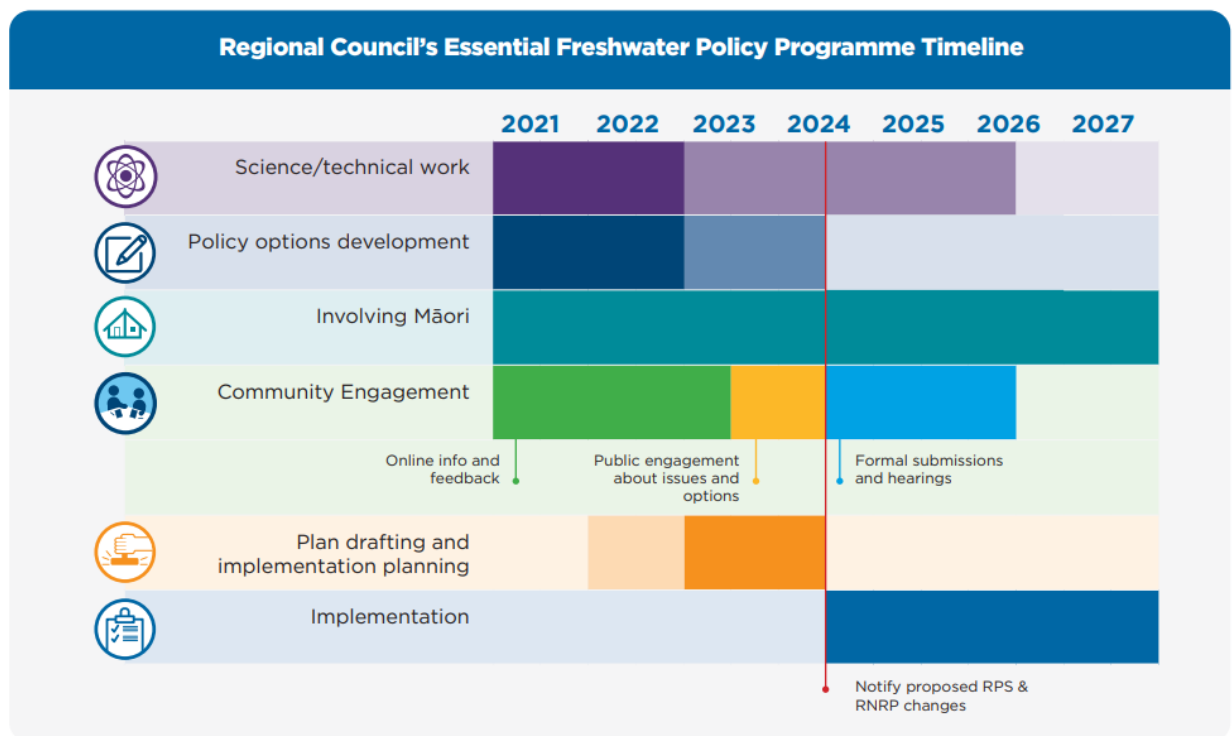
The Essential Freshwater Policy Programme (EFPP) is Toi Moana's (Bay of Plenty Regional Council's) work programme to implement the requirements of the National Policy Statement for Freshwater Management 2020 (NPSFM) as well as review the Regional Natural Resources Plan (RNRP) and freshwater related chapters of the Regional Policy Statement (RPS). The EFPP continues to be implemented according to Toi Moana's agreed programme plan. Tight timeframes are necessary to achieve notification of changes to the RPS & RNRP by 2024 as required by the legislation.

In summary, 2021 involved a large amount of technical / science investigations and reporting, initial regional policy review, and many meetings with iwi and hapū across the region to find out how they would like to be involved in freshwater management and identify capacity and capability needs. The OHIF hui in August 2021 covered values, BOPRCs online engagement tool Participate, the water quality reporting tool and an initial discussion on long-term visions for freshwater under the National Policy Statement for Freshwater Management (NPSFM).

## 2. Essential Freshwater Policy Programme 2022

The major focuses for 2022 are outlined in the timeline below and will be:

- Developing draft measurable targets, limits and policy options to achieve them;
- Working with iwi and hapū where they would like to be involved in the NPSFM process and supporting their mātauranga Māori input; and
- Early “without prejudice” discussions with key stakeholders, and technical experts as Toi Moana staff develop policy options as well as some initial communication and engagement with the public.



## 2.1 Issues and Options

Toi Moana's Strategy and Policy Committee will be meeting in June, August and September 2022, their last meetings prior to local government elections. They will be considering issues and options which will become the focus of engagement in 2023, although these may not be fully formed by the time of the meetings. The topics are likely to be grouped as follows:

Strategy and Policy Committee Meeting	Topic
June 2022	RPS freshwater amendments, RNRP Integrated Management, Beds of Water Bodies, and Wetlands chapters
August 2022	Discharges to Water/Water Quality chapters (region wide chapters and FMUs)
September 2022	Groundwater and Surface Water Quantity chapters (region-wide chapters and FMUs). Communications and Engagement Plan for 2023

Local government elections are being held in October this year, which may result in change of Councillors and also OHIF council member appointments.

OHIF will receive another freshwater policy update at the meeting scheduled in September. This will provide an opportunity to be kept informed of key issues and options relevant to the Ōhiwa Harbour Freshwater Management Unit (FMU) as they are considered by Toi Moana. OHIF may wish to provide advice and recommendations to Toi Moana as it sees fit. OHIF iwi members can facilitate their iwi and/or hapū involvement in the freshwater mahi at any time throughout the programme. Informal discussions can be arranged as a committee, as iwi members of OHIF, independently with your iwi and/or hapū or any combination of the above.

## 3. Engaging on Long-term Visions for Freshwater

Council is currently undertaking engagements and discussions alongside iwi across the region to help set long term visions for freshwater. This is an opportunity to set ambitious but reasonable goals and timeframes as a part of the long-term vision for freshwater, one that reflects what communities and tangata whenua really want draft freshwater management units (FMU) to be like in the future.

This year iwi organisations were sent letters inviting their involvement in developing draft long term visions for freshwater. Where an iwi's rohe extended over a number of freshwater management units all relevant example visions were attached. A copy of the attachment sent to iwi with an interest in Ōhiwa Harbour FMU is attached for discussion (refer to Attachment 1). There is an opportunity to have a collective meeting with all iwi at once or staff can individually meet with iwi representatives.

## 4. Community Engagement

Throughout this year, Toi Moana staff will start to build and provide information for the public, deliver online engagement on visions and outcomes, and aim to develop community interest and readiness to engage on policy options that affect them in 2023.

In April 2022, an online survey will be launched on Participate Bay of Plenty seeking public input to the development of long-term visions and environmental outcomes for freshwater.

Toi Moana staff will continue to be responsive to enquiries from community and iwi organisations.

## 5. Ngā Kaitohutohu

Ngā Kaitohutohu (Māori Technical Advisory Group) held their first meeting for the year on 22 February to advance discussions on Freshwater Management Units coupled with the implementing Te Mana o te Wai. The group have emphasised the importance of engaging with tangata whenua with interests in the water bodies within their rohe.

## 6. Changes to national freshwater regulations

Nationally, several changes to regulations will be gazetted this year. Proposed amendments to the National Environmental Standard for Drinking Water (NESDW) have been released for public consultation. These will primarily affect regional councils and include changes relating to:

- how at-risk source water areas are delineated.
- how activities that pose risks to source water are regulated or managed.
- protecting all registered water supplies (which will include any party who supplies drinking water to 1 or more other parties).

Changes will need to be included in the Regional Natural Resources Plan as part of the EFPP to implement the NES-DW. Public consultation on the discussion document closed 6 March 2022 and gazettal is likely in mid-late 2022. The government's consultation material is available here

<https://consult.environment.govt.nz/freshwater/nes-drinking-water/>

## 7. Ngā Whakaarohanga Considerations

### 7.1 Ngā Mōrea me Ngā Whakangāwaritanga Risks and Mitigations

There are no significant risks associated with this update.

### 7.2 Huringa Āhuarangi Climate Change

The matters addressed in this report are of a procedural nature and there is no need to consider climate change impacts. Climate change impacts will be considered by Toi Moana as part of implementing the NPSFM and reviewing the RNRP.

### 7.3 Ngā Pānga ki te Māori Implications for Māori

The NPSFM sets out requirements to involve tangata whenua in the management of freshwater and Toi Moana is progressing this in accordance with *Te Hononga*, Regional Council's Māori engagement approach for implementing the NPSFM.



Te Mana o Te Wai in the NPSFM 2020 represents a significant shift by central government to recognise the importance of tangata whenua involvement in the management of freshwater. Importantly, it signals inclusion of mātauranga Māori in shaping up the policies that will be included in the notified changes to the RPS and RNRP.

## 7.4 Whakawhitiwhiti ā-Hapori Community Engagement



### CONSULT Whakauia

To obtain input or feedback from affected communities about our analysis, alternatives, and /or proposed decisions.

Community engagement on freshwater visions and outcomes will be primarily online in 2022. See the sections on engagement within the report. In 2023, Toi Moana will engage across the region on policy options and implications.

## 7.5 Te Hāngai ki te Pou Tarāwaho Rautaki Alignment with Strategic Framework

NPSFM implementation is a core, non-discretionary Toi Moana function.

## 7.6 Ngā Pānga ā-Pūtea Financial Implications

There are no material unbudgeted financial implications and this fits within the allocated budget.

## 8. Ngā Mahi Whai Ake Next Steps

Over the next period of time, Toi Moana will:

1. Continue to invite iwi and hapū to discuss a working draft long-term vision for freshwater and environmental outcomes for Ōhiwa Harbour and other FMUs;
2. Seek public feedback via Participate Bay of Plenty (online engagement) on long-term visions and outcomes for Ōhiwa Harbour and other FMUs;
3. Progress technical work towards identifying water quality and ecosystem health targets for all national attributes that would help us to achieve vision and outcomes for freshwater values; and
4. Iwi and hapū continue to be invited and supported to express their values and mātauranga Māori tohu that could be used to indicate the state/wellbeing of these values.

## Tuhinga Tautoko Attachments

Attachment 1 - Discussion document for Ōhiwa Harbour FMU long-term vision [↓](#)

## Example long-term vision for the draft Ōhiwa Harbour FMU

This is an opportunity to set ambitious but reasonable goals and timeframes as a part of the long-term vision for freshwater, one that reflects what communities and tangata whenua really want the draft Ōhiwa Harbour freshwater management unit (FMU) to be like in the future. An example vision for waters linked to the Ōhiwa Harbour FMU is provided below to encourage kōrerorero.

The example vision is based on existing documents with aspirations for both the harbour and the associated freshwater bodies. These documents include the Ōhiwa Harbour Strategy, the Regional Coastal Environment Plan, iwi management plans and the Mātaatua Declaration on Water.

### Example: Draft Ōhiwa Harbour FMU vision

*Together, to sustain and enhance the landscapes, natural beauty, water quality, customary and recreational activities, heritage places and values, and productive land of the Ōhiwa Harbour and its catchment. In the Ōhiwa Harbour FMU this will include to:*

1. *maintain and enhance the health and natural qualities of Ōhiwa Harbour*
2. *ensure the water quality and quantity is available to sustain the lives of future generations*
3. *provide healthy and abundant mahinga kai resources*
4. *reduce sediment entering the harbour waters and reduce sediment accumulation in Ōhiwa Harbour*
5. *protect and restore biodiversity values and ecosystems in and around the harbour*
6. *protect sites of significance to Māori*
7. *safeguard the mauri of the water*

*The vision is to be achieved within the following timeframes:*

XXXXX

### Commentary on draft vision

The opening statement was chosen given the range of values present in the Ōhiwa Harbour and its catchment. Ōhiwa Harbour is valued for its “*landscapes, natural beauty, water quality, customary and recreational activities, heritage places and values, clear air, and productive land*”<sup>1</sup>. Merging the vision “*Ōhiwa – Together we’re keeping it special*” and the values of the Strategy was one option for the opening statement of this FMU vision. Retaining “together” in the opening statement recognises the collaborative approach sought in the strategy which was jointly prepared by the Ōhiwa Harbour partners – BOPRC, ODC, WDC, Ngāti Awa, Ūpokorehe, Whakatōhea, and Tūhoe. Reference to clear air in the Strategy has been removed as it doesn’t link to the freshwater vision.

An examination of existing documents identified seven goals which are set down below for discussion. Goal 1 – maintaining and enhancing the health and natural qualities of the harbour has been included as it is the objective of the Ōhiwa Harbour Strategy. The receiving environment of this FMU is highly valued and it is considered appropriate that this be the primary focus of the vision.

<sup>1</sup> Ōhiwa Harbour Strategy (refreshed 2014)

Goal 2 – sustaining the lives of future generations stems from the Ngāti Awa Environmental Plan. Similar goals are also included in the Whakatōhea Resource Management Plan and The Mātaatua Declaration on Water.

Goal 3 - healthy and abundant mahinga kai resources comes from the Ngāti Awa Environmental Plan. This goal also covers goals that seek to protect fish habitat, manage fisheries and restore shellfish. An alternative option would be to refer specifically to protecting the *spawning grounds of whitebait, fish and eels and traditional food and cultural resources* as specified in the Whakatōhea Resource Management Plan.

Goal 4 – reducing sediment load, comes from both the Ōhiwa Harbour Strategy and the Regional Coastal Environment Plan (RCEP). We need to consider whether this goal should be included in the vision or not and whether it should be limited to sediment or also include nutrients as mentioned in the Ōhiwa Harbour Strategy. Regardless of its inclusion in a vision or not managing sediment load into the harbour is likely to be an important freshwater management focus.

Goal 5 protecting and restoring biodiversity values and ecosystems comes from the Ōhiwa Harbour Strategy document. The RCEP identifies the Ōhiwa Harbour as being an important indigenous biological diversity area.

Goal 6 - protecting sites of significance to Māori comes from the Ōhiwa Harbour Strategy. Similar goals are identified in Ngāti Awa Environmental Plan, Whakatōhea Resource Management Plan and Upokorehe Iwi Management Plan.

Goal 7 - safeguarding the mauri of the water is from the Ngāti Awa Environmental Plan. This goal is included at an FMU level but is likely to be regionally applicable as there are similar objectives in the RPS.

In the RCEP there many objectives that seek to protect and enhance the values of harbours and estuaries. The Ōhiwa Harbour is identified as containing outstanding natural features and landscapes, areas of significant cultural value and areas of indigenous biological diversity.

Management of fisheries is another key theme of the documents. The habitat of fish/mahinga kai species and for biodiversity is a part of Regional Council's responsibility but the management of fisheries rests with the Ministry of Primary Industries.

The example vision above is an initial effort to capture the essence of the existing material and initiate discussion with iwi and the community regarding their aspirations. The goals and timeframes are yet to be developed through engagement with communities and tangata whenua.

## Item 9.4, Attachment 1



Map of draft Ōhiwa Harbour FMU



<b>Report to</b>	Ōhiwa Harbour Implementation Forum
<b>Date</b>	10 April 2022
<b>Report from</b>	Assoc. Professor Kura Paul-Burke, University of Waikato; Dr Matt Miller, Cawthron Institute; Megan Ranapia (PhD student), University of Waikato.

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**Update on the Ōhiwa Harbour, Awhi Mai Awhi Atu, Sustainable Seas, National Science Challenge project, April 2022**

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## 1.0 Summary

This report provides an update overview of the Sustainable Seas funded Awhi Mai Awhi Atu project and research activities that have been carried out in Ōhiwa harbour on Kūtai, *Perna canaliculus*, Green-lipped mussels and Pātangaroa, *Coscinasterias muricata*, Eleven-armed seastar, between September 2021 and April 2022.

## 2.0 Report

Seasonal sampling of two species of seastars, Pātangaroa (*Coscinasterias muricata*, Eleven-armed seastar) and Reef star (*Sticaster australis*) across four seasonal timeframes consistent with the maramataka (Māori lunar calendar) have been completed.



Figure 1. Images of (R) Pātangaroa (*Coscinasterias muricata*, Eleven-armed seastar) and (L) the Reef Star (*Sticaster australis*).

It was found that seastars, as with most creatures, are mostly water (~70%). Once dried, the seastars produce good levels of collagen at an average of 10%, along with marine protein (33%) and a high amount of ash (50%) made mostly from calcium carbonate. Calcium carbonate helps to make the tough endoskeleton (hard, spiny exterior) components known as ossicles. Analysis of the seastar samples for a series of minor components such as potential bioactives (omega 3, marine toxins, heavy metals etc.,) has commenced. The seastar collagen prototype skin care product and process are now under development with the results and final product anticipated for March 2023.



Figure 2. Collecting reef star samples on reef rocks outside of Ōhiwa harbour.

**Seastar management trials:** in November 2021, seastar management trials were undertaken in the harbour led by Megan Ranapia (PhD student). Trial trapping was carried over 3 different time periods, 1) 24 hours soak, 2) 48 hours soak, and 3) 72 hours soak timeframes (soak = time left in the water). It was found that the 48 hours soak time generated the highest number of seastars caught.

Using two different trap designs (open trap and semi-enclosed trap) and two different baits (mussels versus bonito fish bait). We found that the open traps with bonito fish bait attracted more seastars with an average of 3.5 seastars per day as opposed to the semi-enclosed traps baited with mussels attracting an average of 2.7 seastars per day.

Based on the findings of the November 2021 trial, in May 2022 we will conduct a feasibility trial for removing seastars in the harbour. The strategies will include: 1) diver removal, 2) trapping and 3) combined diver removal and trapping. An experiment area located in the western channel approximately 8 hectares in size with an estimated 12,805 seastars currently present (or 1.6 seastars per 10 metres square) will be trialled. It is estimated that 1 open trap, using bonito bait, soaking for 48 hours will clear an estimated area of 20metres square per day or 40 metres square in the 48hour time frame. It is anticipated that the results from the removal trials will be presented back to the OHIF in October 2022.

### 3.0 Recommendation

**That the Ōhiwa Harbour Implementation Forum under its delegated authority:**

1. Receives the report, update on the Ōhiwa Harbour Awhi Mai Awhi Atu, Sustainable Seas, National Science Challenge project, April 2022

Report prepared by:

**Assoc Professor Kura Paul-Burke**  
University of Waikato



<b>Pūrongo Ki: Report To:</b>	Ōhiwa Harbour Implementation Forum
<b>Rā Hui: Meeting Date:</b>	26 April 2022
<b>Kaituhi Pūrongo: Report Writer:</b>	Tim Senior, Land Management Officer
<b>Kaiwhakamana Pūrongo: Report Authoriser:</b>	Chris Ingle, General Manager, Integrated Catchments
<b>Kaupapa: Purpose:</b>	To update the members on the work undertaken to give effect to the Ōhiwa Harbour Strategy actions since November 2021 and to seek endorsement of the proposed 2022/23 work programme.

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## Work Programme report to 31 March 2022 and proposed work programme for 2022/23

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### Whakarāpopototanga Executive Summary

This report provides an update of the work carried out under the 2021-22 Ōhiwa Harbour Strategy annual work programme from November 2021 to March 2022. Much of the work is on-going in nature and contributes to a long term vision for the harbour. Further progress has been made in the areas of water quality, freshwater fish and tuna, kaimoana research and support for Upokorehe kaitiaki. The report also includes a proposed work programme for the next financial year, 2022-23, and seeks the endorsement of the Forum for this. Members are also asked to provide guidance on topics for a proposed informal workshop.

### Ngā tūtohutanga Recommendations

That the Ōhiwa Harbour Implementation Forum:

- 1 **Receives the report, Work Programme report to 31 March 2022 and proposed work programme for 2022/23;**
- 2 **Endorses the proposed 2022-23 annual work programme.**

## 1. **He Whakamārama Background**

The Ōhiwa Harbour Strategy (the Strategy) covers the Ōhiwa Harbour and its land catchment area. It is a non-statutory document that was prepared by the Strategy partners: Whakatāne District Council (WDC), Ōpōtiki District Council (ODC), Ngati Awa, Te Upokorehe, Whakatōhea, Te Waimana Kaaku, and Bay of Plenty Regional Council (BOPRC). The Strategy was adopted in 2008 and was refreshed in 2016.

Planning and coordination of the operational work of the Strategy is overseen by the Ōhiwa Harbour Strategy Coordination Group (OHSCG) at which all partners are represented.

The work programme for the coming year is presented to the Forum for endorsement prior to the beginning of the new financial year; while results for the previous year are reported every September. A work programme update is also provided. This report is also presented to the Bay of Plenty Regional Council.

Funding for the delivery of this work comes from the existing budgets of the strategy partners. An extra contribution from BOPRC of \$50,000 per year covers the deliverables that are not the direct responsibility of any of the other 6 partners. Landowners and community groups also make a substantial contribution, either in cash or in kind, to many of the actions.

The deliverables of each annual work programme are based on the higher level actions contained in the Strategy. Most of these actions are of an ongoing nature.

## 2. **Progress on key deliverables November 2021 to March 2022**

A table briefly detailing the work done against the deliverables in the annual work programme can be found in Appendix 1. Below is a summary of the more significant aspects of that work.

### 2.1 **Actions 1.1 and 1.2, water quality**

One further Fonterra Farm Environment Plan has been prepared bringing the total completed in the catchment to 11. There are 20 dairy farms, 19 of which are Fonterra suppliers.

23 properties currently have BOPRC Environmental Programmes in progress. 10.9km of riparian fencing has been completed this financial year with up to a further 75km planned over the next two years, with some of this gaining extra funding from Central Government's freshwater improvement fund.

### 2.2 **Action 1.5, mangrove management**

One working bee was held this year prior to a somewhat controversial High Court ruling which declared mangroves to be natural wetlands and therefore subject to the rules of the National Environment Standard for Freshwater. Work is underway nationally to seek a pragmatic solution to this. Discussions are also under way with BOPRC consents staff about whether a consenting pathway exists at present.



As a result of Upokorehe's Marine and Coastal Area (Takutai Moana) Act claim, they have recently been granted a PCR (protected customary right) for the removal of mangroves in Ōhiwa. This would supersede both the High Court ruling and the Resource Management Act, but may take some years to come into effect.

### 2.3 **Action 1.9, habitat and species management**

Tu O'Brien's monitoring shows the numbers of black swans in the harbour to be similar to those of last year. Discussions on some research, to assess the extent of the seagrass beds and any impacts of swan grazing on them, are currently underway with the University of Waikato.

Some trial swan shooting is planned for the coming game bird season (May to August).

### 2.4 **Action 1.10, freshwater fish**

A desktop survey found there were 554 *potential* barriers to native migratory fish and tuna passage in the harbour. A BOPRC summer student carried out an assessment of 370 of these. 107 of these are deemed to be in need of remediation.

Some trial eDNA samples have been taken to try to identify which fish are present in which tributaries. More sampling is planned shortly.

Restoration of some whitebait spawning habitat is being planned for an oxbow on the Nukuhou River by the S bends at Cheddar Valley. Approval has been obtained for Hiwarau C who own part of the land involved.

### 2.5 **Action 1.14 and 3.8, bylaws**

Further efforts are still underway with ODC to try to resolve the issues with vehicles on the mudflats and Ōhiwa Spit where they are prohibited by the Beach Bylaw.

### 2.6 **Action 2.1 and 2.2, shellfish and fish**

The Awhi Mai Awhi Atu project led by Kura Paul-Burke is ongoing. Seastar trapping trials are underway, Tuangi and Pipi bed mapping have been completed (on the western side of the harbour only), work on habitat and decision making are underway and data from sediment cores has been analysed. (See separate agenda report).

For the third year, the BOPRC biosecurity dive team set 240 traps for Asian paddle crabs in February. 8 were caught. Last year 9 were caught.

### 2.7 **Action 3.3, kaitiakitanga and stewardship**

25 volunteer kaitiaki regularly patrolled the Whangakopikopiko pipi bed and surrounding areas over the summer and long weekends. Visitor behaviour was considered worse than last year. A number of vehicles were seen on the mudflats (often without registration). There are concerns about congestion, safety and camping at the boat ramp. An interpretive sign on the birds of the sand island has been made as agreed but not yet installed. BOPRC has agreed to fund some of the other resources needed by the kaitiaki through the Care Group programme. An agreement document is being drafted.

DOC have put chain across the entrance to the Tokitoki reserve to keep vehicles and campers out. This has since been cut. DOC are preparing a resource consent application to repair the sea wall.

## 2.8 **Action 3.6, communications and education**

Progress has been made in developing the Ōhiwa website over the last year and it's now at a stage where it's ready to go live (see separate agenda report).

## 2.9 **Action 3.13, health and safety**

The remediation work identified as required in the Kutarere flooding report has now all been completed by BOPRC along the stream, ODC on Wharf Rd. and Higgins on the state highway. A river engineer has also been asked to investigate the capacity of the Kakaho Stream below the Wharf Rd bridge.

Upokorehe are currently applying to the BOPRC Community Led Adaptation Fund to investigate the implications of climate change on the lowlying parts of Kutarere village. BECA will be engaged to carry out this work.

## 3. **Proposed 2022-23 annual work programme**

Many of the strategy actions are, by their nature, ongoing. This is reflected in many of the work programme deliverables being repeated each year. However the programme also needs to respond to changing circumstances and needs.

The full proposed work programme for next year can be found in Appendix 2. Some of the more significant pieces of work planned for the year are:

- Continuing the work with landowners in the catchment to reduce the sediment and other contaminant loads entering the harbour.
- Completing the assessment of the Nukuhou River bank erosion and possible solutions to it by a river engineer.
- Complete the fish passage barrier survey, carry out further eDNA surveys and begin the retrofitting of identified barriers.
- In conjunction with Waikato University, carry out an assessment of the health of the seagrass beds.
- Apply for a new resource consent for mangrove management if this is deemed necessary.
- Continue to support the Awhi Mai Awhi Atua kaimoana project.

An indicative budget for next year is as follows:

Item	Cost
Mangrove management	\$12,000
Comms support (OHSCG minutes, newsletters, website etc)	\$6,000
Fish barrier remediation 100@\$200each	\$20,000

eDNA sampling kits	\$10,000
<b>Total</b>	<b>\$48,000</b>

The Forum members are asked to endorse this proposed work programme and to provide guidance on any changes that should be made to it.

#### 4. **Workshop/field trip for 2022**

The Forum has in the past generally held a workshop during the year. Gemma Moleta has asked for an informal meeting soon to further discuss aspects of freshwater policy in relation to the Ōhiwa catchment. The members are asked whether this is a topic they would like to follow up and if there are any other topics that they would also like to discuss further.

#### 5. **Ngā Whakaarohanga Considerations**

##### 5.1 **Ngā Mōrea me Ngā Whakangāwaritanga Risks and Mitigations**

There are no significant risks associated with this matter/subject/project/initiative.

##### 5.2 **Huringa Āhuarangi Climate Change**

The matters addressed in this report are of a procedural nature and there is no need to consider climate change impacts.

##### 5.3 **Ngā Pānga ki te Māori Implications for Māori**

As committed kaitiaki of the harbour and partners to the strategy, the four tangata whenua partners were fully engaged in both the development of the Ōhiwa Harbour Strategy, its refresh in 2016 and its continued implementation. Their mana whenua and mana moana is a cornerstone of the strategy and is the basis of many of the strategy actions. Individual tangata whenua representatives are regularly consulted with regarding many aspects of the work and staff from the councils often attend iwi and hapū hui. In particular, during the last year, the tangata whenua partners have provided support for the mussel restoration project and engaged in the management of mangroves and the development of the heritage trail.

##### 5.4 **Whakawhitiwhiti ā-Hapori Community Engagement**

The intention of this report is to engage with and obtain feedback from community representatives.

## 5.5 **Te Hāngai ki te Pou Tarāwaho Rautaki Alignment with Strategic Framework**

This report details work towards implementing the actions of the Ōhiwa Harbour Strategy.

## 5.6 **Ngā Pānga ā-Pūtea Financial Implications**

There are no material unbudgeted financial implications and this fits within the allocated budget.

## 6. **Ngā Mahi Whai Ake Next Steps**

The work programme will continue to implement the actions of the Ōhiwa Harbour Strategy.

## **Tuhinga Tautoko Attachments**

Attachment 1 - Ōhiwa Harbour Strategy Annual Work Programme results to 31 March 2022

[↓](#)

Attachment 2 - Proposed Ōhiwa Harbour Strategy annual work programme 2022-23 [↓](#)

## Ōhiwa Harbour Strategy Annual Work Programme to 31 March 2022

OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
<b>Action Area 1 – Catchment Management</b>			
1.1	Improve water quality into the Ohiwa Harbour	<ul style="list-style-type: none"> <li>Ensure each dairy Farm Environment Plan holder has a plan in place for mitigation work as per FEP recommendations.</li> </ul>	<ul style="list-style-type: none"> <li>1 further FEP is now in place – total now 11 on dairy farms in the catchment.</li> <li>New environmental programmes have been drawn up by BOPRC for 23 properties. These mostly cover stream/drain fencing and planting and fencing off bush.</li> <li>Also see 1.2 below.</li> </ul>
1.2	Reduce sedimentation within the catchment	<ul style="list-style-type: none"> <li>Deliver 2 kms new riparian fencing in Ohiwa catchment.</li> </ul>	<ul style="list-style-type: none"> <li>10.9km of riparian fencing has been completed since 1 July. A further 75.3km of fencing is planned for the rest of the year. Some of the funding for this has come from central government's freshwater improvement fund.</li> </ul>
		<ul style="list-style-type: none"> <li>Finalise and implement the catchment monitoring plan, action plan and communications plan.</li> </ul>	<ul style="list-style-type: none"> <li>The plans are all in place and implementation continues</li> <li>The development of a hydrodynamic and sediment transport computer model of the harbour is currently underway and some of the data should be available by July 2022.</li> <li>Further testing planned to identify the source of the elevated E.coli in the Kakaho stream.</li> </ul>
1.3	Reduce contamination from urban activities		
1.4	Encourage the introduction and use of farm stewardship plans	<ul style="list-style-type: none"> <li>Hold 2 meetings with Nukuhou farmers group.</li> </ul>	<ul style="list-style-type: none"> <li>One meeting held</li> <li>Planned full catchment public meeting was postponed due to Covid restrictions.</li> </ul>
1.5	Manage mangroves in line with Te Upokorehe resource consent	<ul style="list-style-type: none"> <li>Hold at least 6 working bees to remove mangrove seedlings and complete annual report.</li> </ul>	<ul style="list-style-type: none"> <li>Only one working bee was held this year prior to the High Court ruling in which mangroves are deemed to be natural wetlands and therefore subject to the rules of the NESFW. Mangrove removal will now require a resource consent. Discussions are under way with BOPRC consents staff to see if this is possible. Upokorehe have been granted a PCR (protected customary right) for the removal of mangroves in Ōhiwa which would supersede the High Court ruling but may take some years to come into effect.</li> </ul>

Item 9.6, Attachment 1

OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
1.6	Investigate classifications for Ōhiwa Harbour to reflect its special ecological character		
1.7	Protect and enhance wetlands, saltmarsh and estuarine margins and explore opportunities to construct new areas	<ul style="list-style-type: none"> <li>Support Care Group saltmarsh protection as in 1.9 below.</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing.</li> </ul>
1.8	Monitor and assess the health of Ōhiwa Harbour and its catchment	<ul style="list-style-type: none"> <li>Complete monitoring as per monitoring timetable.</li> </ul>	<ul style="list-style-type: none"> <li>All regular monitoring underway.</li> </ul>
		<ul style="list-style-type: none"> <li>Complete 5 yearly threatened plants re-survey</li> </ul>	<ul style="list-style-type: none"> <li>Currently being planned.</li> </ul>
		<ul style="list-style-type: none"> <li>Complete annual monitoring summary.</li> </ul>	<ul style="list-style-type: none"> <li>Annual summary completed and presented to OHIF in November.</li> </ul>
			<ul style="list-style-type: none"> <li>The second application from UVW to MBIE for eDNA research has been unsuccessful. A third application is being prepared.</li> </ul>
			<ul style="list-style-type: none"> <li>Discussions are underway, led by Gina Mohi, to consider how we might incorporate matauranga Māori into our work.</li> </ul>
1.9	Protect and manage habitat and species	<ul style="list-style-type: none"> <li>Implement Nukuhou Saltmarsh/Uretara Care Group EP.</li> </ul>	<ul style="list-style-type: none"> <li>Pest control, planting, maintenance and marshbird monitoring continues. Rats continue to be found on Uretara Island regularly.</li> </ul>

Item 9.6, Attachment 1

OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
		<ul style="list-style-type: none"> <li>Implement Ruatuna/Pukeruru Care Group EP.</li> </ul>	- Pest and weed control continues. 400 plants planted last winter.
		<ul style="list-style-type: none"> <li>Implement Hurike Care Group EP.</li> </ul>	- Pest and weed control continues. 500 plants planted around inlet last winter. 40 new bait stations and 10 new DOC 200 traps.
		<ul style="list-style-type: none"> <li>Implement Ohiwa Reserves Care Group EP.</li> </ul>	- Pest and weed control continues in Ōhiwa domain, Ōhiwa Spit and Whangakopikopiko. The group have received EEf funding to restore wetland in Ōhiwa Domain.
		<ul style="list-style-type: none"> <li>Implement Ōhope Harbourside Trail Care Group EP.</li> </ul>	- 400 plants planted last winter between Wharf and Port Ōhope store. Pest control continues.
		<ul style="list-style-type: none"> <li>Implement Pest Free Ōhope Spit EP.</li> </ul>	- EEf application successful and group has weed control underway and planning for rabbit control during winter.
		<ul style="list-style-type: none"> <li>Implement Kutarere/Roimata Care Group EP.</li> </ul>	- Pest and weed control continues. 24 new bait stations.
		<ul style="list-style-type: none"> <li>Implement Harrison Rd Care group EP.</li> </ul>	- Pest control continues.
		<ul style="list-style-type: none"> <li>Support development of new care groups as appropriate.</li> </ul>	- None this year yet but groups continue to expand their operations.
		<ul style="list-style-type: none"> <li>Support Ōhiwa Headland Sanctuary Trust as and where appropriate.</li> </ul>	- Pest control continues. They have received Jobs for nature funding for pest and weed control and expansion into the area bounded by SH2, Ruatuna Rd and Loop Rd.
		<ul style="list-style-type: none"> <li>Support weed control on DOC reserves</li> </ul>	
		<ul style="list-style-type: none"> <li>Support shore bird management</li> </ul>	- In progress.

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OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
		<ul style="list-style-type: none"> <li>Support efforts to reduce black swan numbers.</li> </ul>	<ul style="list-style-type: none"> <li>Tu O'Brien is doing regular counts. Numbers seem similar to last summer with no apparent increase.</li> <li>Currently in discussion with Waikato Uni about some student investigations into impact on seagrass.</li> </ul>
		<ul style="list-style-type: none"> <li>Implement pest control Onekawa Te Mawhai Regional Park.</li> </ul>	<ul style="list-style-type: none"> <li>Annual pest control completed.</li> </ul>
1.10	Investigate the indigenous freshwater fish species and opportunities to manage	<ul style="list-style-type: none"> <li>Develop plan for fish and tuna monitoring and fish barrier mitigation and begin implementation</li> </ul>	<ul style="list-style-type: none"> <li>Ground truthing and recording of 370 out of 554 potential fish barriers in the catchment is now complete (by summer student). Some trial eDNA work has been carried out to identify what fish are present in which streams.</li> <li>Restoration of some whitebait spawning habitat is planned at S bends on Nukuhou, having obtained approval from Hiwarau C trustees.</li> </ul>
1.11	Investigate the potential impacts of climate change on the Ōhiwa Harbour		<ul style="list-style-type: none"> <li>A report into the potential impacts on Ōhiwa by Tonkin and Taylor for BOPRC should be completed in a year or so.</li> <li>Application underway to BOPRC Community Led Adaptation Fund to try to shed more light on flooding issues at Kutarere, particularly with regard to climate change.</li> </ul>
1.12	Support appropriate regional, district and iwi plan provisions to achieve sustainable management of the Ōhiwa Harbour and catchment		



OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
1.13	Develop data sets to augment resource management protocols		
1.14	Support and implement consenting, bylaw and statutory responsibilities	<ul style="list-style-type: none"><li>Respond appropriately to enforcement and compliance issues.</li></ul>	<ul style="list-style-type: none"><li>There are still ongoing issues with vehicles in the prohibited areas at Ōhiwa Spit and at the Whangakopikopiko pipi bed.</li><li>DOC have installed a chain barrier at Tokitoki to keep vehicles and campers out.</li></ul>
		<ul style="list-style-type: none"><li>Report on bylaws and other rules and policies and identify any gaps</li></ul>	<ul style="list-style-type: none"><li>This has been discussed at some length by OHSG.</li></ul>
Action Area 2 – Harbour management			
2.1	Investigate shellfish populations and advocate for their sustainable management	<ul style="list-style-type: none"><li>Support the Awhi Mai Awhi Atū research (Kura Paul-Burke).</li></ul>	<ul style="list-style-type: none"><li>Seastar trapping trials underway (Megan).</li><li>Tuangi mapping completed on western side only (Kiri).</li><li>Pipi bed mapping almost complete on western side only (Kiri).</li><li>Survey of seastars on pipi beds next.</li><li>Work on habitat and decision making underway (Richard).</li><li>Data from sediment cores has been analysed (Waikato Uni).</li></ul>
		<ul style="list-style-type: none"><li>Support further research into pipi and cockles.</li></ul>	<ul style="list-style-type: none"><li>See above – part of Awhi Mai Awhi Atū research.</li></ul>
		<ul style="list-style-type: none"><li>Support microplastics research</li></ul>	<ul style="list-style-type: none"><li>Report presented by Anita Lewis, Waikato Uni.</li></ul>
		<ul style="list-style-type: none"><li>Respond to reported fisheries issues and advocate to MPI as required.</li></ul>	<ul style="list-style-type: none"><li>The BOPRC biosecurity dive team set 240 traps for Asian paddle crabs in February and caught 8. Last year 9 were trapped.</li><li>Hope to have report from NZ Fisheries shortly.</li></ul>
2.2	Investigate wetfish populations and	<ul style="list-style-type: none"><li>Respond to reported fisheries issues and</li></ul>	

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OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
	advocate for their sustainable management	advocate to MPI as required.	
2.3	Support mahinga mataitai status for Ohiwa Harbour		
<b>Action Area 3 – People and communities</b>			
3.1	Develop and implement a recreation strategy	<ul style="list-style-type: none"> <li>Implement recreation strategy as required.</li> </ul>	
3.2	Promote awareness of the cultural heritage of Ohiwa Harbour	<ul style="list-style-type: none"> <li>Incorporate Māori placenames and stories and Te Reo on signage wherever appropriate.</li> </ul>	
3.3	Recognise and apply the principles of kaitiakitanga and stewardship in management of the harbour and catchment	<ul style="list-style-type: none"> <li>Consider how to give expression to Mana o te Wai in the catchment.</li> </ul>	
		<ul style="list-style-type: none"> <li>Investigate and provide support for Upokorehe kaitiaki.</li> </ul>	<ul style="list-style-type: none"> <li>25 volunteer kaitiaki patrolled the pipi bed and surrounding areas over the summer and long weekends. Behaviour worse than last year. Vehicles on mudflats (often without registration). Concerned about congestion, safety, camping at boat ramp. Interp sign on birds provided as requested but not yet installed. DOC have put chain (since cut) across Tokitoki to keep vehicles and campers out. BOPRC has agreed to fund some of the other resources they need by way of Care Group programme. Agreement document underway.</li> </ul>
3.4	Retain Onekawa Te Mawhai Regional Park and manage	<ul style="list-style-type: none"> <li>Implement the Onekawa Te Mawhai annual plan.</li> </ul>	<ul style="list-style-type: none"> <li>New entrance and track signage installed.</li> <li>Research under way for historical/cultural interp signage.</li> <li>Enlargement of the carpark at Ōhiwa is planned.</li> </ul>

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OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
	according to annual plan		
3.5	Ensure information distribution, including signage is current, appropriate and coordinated	<ul style="list-style-type: none"> <li>Continue upgrading of instructional signage where possible as per Cheeky Rooster recommendations.</li> </ul>	
3.6	Continue to implement comms/ education plan	<ul style="list-style-type: none"> <li>Complete 4 newsletters.</li> </ul>	- Two newsletters completed.
		<ul style="list-style-type: none"> <li>Complete 4 minutes summaries.</li> </ul>	- One minutes summary completed.
		<ul style="list-style-type: none"> <li>Continue to add material to website as appropriate and update regularly.</li> </ul>	- Tanja has done some more work on this recently. OHSCG reps are happy with look and content.
		<ul style="list-style-type: none"> <li>Hold 1 community social event.</li> </ul>	
3.7	Develop a coordinated approach to, and implement management of, public reserves	<ul style="list-style-type: none"> <li>Carry out maintenance of reserves.</li> </ul>	- WDC are planning a concreted cycle track along Otao reserve to join up the existing formed tracks at either end.
		<ul style="list-style-type: none"> <li>WDC to develop a single management plan for all WDC reserves from West End to Ōhope Spit.</li> </ul>	- This is in progress.
3.8	Support the implementation	<ul style="list-style-type: none"> <li>WDC, ODC, BOPRC implement bylaws.</li> </ul>	<ul style="list-style-type: none"> <li>Still issues with vehicles on Ōhiwa spit and mudflats.</li> <li>Jet ski issues raised by Upokorehe kaitiaki.</li> </ul>

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OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
	of regulations for controlling vehicles on tidal flats and beaches	<ul style="list-style-type: none"> <li>Investigate ways of preventing vehicle access to the pipi beds</li> </ul>	<ul style="list-style-type: none"> <li>Gerard (ODC) has suggested possibly using concrete hanbars from harbour project at spit and mudflats – to be investigated further.</li> <li>Mithuna, kaitiaki and Tim to present request for better enforcement of the beaches bylaw here and at the Ōhiwa Spit to ODC in April.</li> </ul>
3.9	Support appropriate harbour and catchment research opportunities	<ul style="list-style-type: none"> <li>Complete the harbour research implementation plan</li> </ul>	
3.10	Develop protocols between the Ōhiwa partners and other statutory agencies	<ul style="list-style-type: none"> <li>Include in the strategy (1.13 above)</li> </ul>	
3.11	Support the work of landowners and community groups	<ul style="list-style-type: none"> <li>Provide support as required to groups as in 1.9.</li> </ul>	<ul style="list-style-type: none"> <li>As above (1.9).</li> </ul>
		<ul style="list-style-type: none"> <li>Provide support to landowners as and when required.</li> </ul>	<ul style="list-style-type: none"> <li>Support regularly provided by BOPRC by way of both Environmental Programmes and advice.</li> </ul>
		<ul style="list-style-type: none"> <li>Provide support for events as required.</li> </ul>	
		<ul style="list-style-type: none"> <li>Provide plants for community planting initiatives as required.</li> </ul>	

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OHS Action	Action Title	Deliverable 2021-2022	Results to 31 March
3.12	Support the involvement of local people in education initiatives and in the management of the harbour and its catchment		
3.13	Advocate for health and safety within the harbour and catchment		- The remediation work identified as required in the Kutarere flooding report has now all been completed by BOPRC, ODC and Higgins. BECA may be engaged to carry out a further investigation as described in 1.11. A river engineer will also be looking at the issue and may also carry out an investigation, funding permitting.
	Administration	• Hold 4 OHSCG hui.	• August, February hui held
		• Hold 2 OHIF hui.	• November hui held.
		• Hold at least 1 OHIF/OHSCG workshops/field trips	

## Proposed Ōhiwa Harbour Strategy Annual Work Programme 2022/23

OHS Action	Action Title	Action Description	Deliverables 2022-2023
Action Area 1 – Catchment Management			
1.1	Improve water quality into the Ohiwa Harbour	By working with Ōhiwa and Nukuhou communities to work towards implementation of NPSFW.	<ul style="list-style-type: none"> <li>Ensure each dairy Farm Environment Plan holder has a BOPRC Environment Plan in place for mitigation work as per FEP recommendations.</li> </ul>
1.2	Reduce sedimentation within the catchment	By ensuring development of appropriate plan rules and encouraging appropriate land management practices.	<ul style="list-style-type: none"> <li>Deliver 5 kms new riparian fencing in Ohiwa catchment.</li> </ul>
1.3	Reduce contamination from urban activities	Raise public awareness of stormwater and septic tank effluent entering harbour. Promote better practice.	
1.4	Encourage the introduction and use of farm stewardship plans	To better manage environmental issues in particular nitrogen and phosphorus leaching.	<ul style="list-style-type: none"> <li>Hold meeting for catchment landowners to promote improvement of farm management to minimise contaminant loss.</li> </ul>
1.5	Manage mangroves in line with the resource consent held by Te Upokorehe	In line with resource consent. Also support initiatives to promote understanding.	<ul style="list-style-type: none"> <li>Investigate possibility of applying for new resource consent. Apply for consent if possible.</li> </ul>
1.6	Investigate classifications for Ōhiwa Harbour to reflect its special ecological character	To recognise the importance of the harbour for migratory birds in particular (Ramsar or similar).	
1.7	Protect and enhance wetlands, saltmarsh and estuarine margins and explore opportunities to construct new areas	To help with sediment and nutrient control, provide habitat for birds and fish, assist with flooding resilience.	<ul style="list-style-type: none"> <li>Support Care Group saltmarsh protection as in 1.9 below.</li> <li>Ensure wetlands on farms are appropriately protected during Environment Plan process.</li> </ul>
1.8			<ul style="list-style-type: none"> <li>Complete monitoring as per monitoring timetable.</li> </ul>

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OHS Action	Action Title	Action Description	Deliverables 2022-2023
	Monitor and assess the health of Ohiwa Harbour and its catchment	Continue to implement monitoring programme already in place.	<ul style="list-style-type: none"> <li>• Complete annual monitoring summary.</li> <li>• Complete 5 yearly threatened plants re-survey.</li> </ul>
1.9	Protect and manage habitat and species	Develop a plan to implement over time pest animal and plant management and ecological restoration. Ensure support for landowners and groups.	<ul style="list-style-type: none"> <li>• Implement Nukuhou Saltmarsh/Uretara Care Group EP.</li> <li>• Implement Ruatuna/Pukeruru Care Group EP.</li> <li>• Implement Hurike Care Group EP.</li> <li>• Implement Ohiwa Reserves Care Group EP.</li> <li>• Implement Ōhope Harbourside Trail Care Group EP.</li> <li>• Implement Kutarere/Roimata Care Group EP.</li> <li>• Implement Harrison Rd Care Group EP.</li> <li>• Support Ohope Spit EEF project</li> <li>• Support Ōhiwa Headland Sanctuary Trust as and where appropriate.</li> <li>• Support development of new care groups as appropriate.</li> <li>• Support shore bird management.</li> <li>• Implement pest control Onekawa Te Mawhai Regional Park.</li> <li>• Support efforts to monitor seagrass and reduce black swan numbers.</li> </ul>
1.10	Investigate the presence of indigenous freshwater fish species and identify opportunities to manage	Increase understanding and establish programme of action to improve fish habitat and waterway connectivity.	<ul style="list-style-type: none"> <li>• Complete fish barrier survey.</li> <li>• Implement fish passage remediation.</li> <li>• Conduct eDNA surveys to assess fish populations.</li> </ul>

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OHS Action	Action Title	Action Description	Deliverables 2022-2023
1.11	Investigate the potential impacts of climate change on the Ohiwa Harbour	Understand the impacts to allow for community to be prepared and for appropriate harbour management.	<ul style="list-style-type: none"> <li>Support climate change assessment for Kutarere.</li> </ul>
1.12	Support appropriate regional, district and iwi plan provisions to achieve sustainable management of the Ōhiwa Harbour and catchment	Also ensure plans are coordinated.	
1.13	Develop data sets to augment resource management protocols	To identify consents and complaints relevant to the catchment and allow better exchange of information.	
1.14	Support and implement consenting, bylaw and statutory responsibilities	Support statutory agencies in enforcement and compliance to ensure protection of natural environment.	<ul style="list-style-type: none"> <li>Respond appropriately to enforcement and compliance issues.</li> </ul>
Action Area 2 – Harbour Management			
2.1	Investigate shellfish populations and advocate for their sustainable management	Work with MPI and local community to ensure that shellfish in the harbour is collected and managed sustainably. Includes investigating the sustainability of mussels.	<ul style="list-style-type: none"> <li>Support the Awhi Mai Awhi Atu research project led by Kura Paul-Burke and other related research projects.</li> <li>Respond to reported fisheries issues and advocate to MPI as required.</li> </ul>
2.2	Investigate wetfish populations and advocate for their sustainable management	As above for wet fish.	<ul style="list-style-type: none"> <li>Respond to reported fisheries issues and advocate to MPI as required.</li> </ul>
2.3	Support mahinga mataitai status for Ohiwa Harbour	Support tangata whenua to establish rohe moana and mahinga mataitai.	
Action Area 3 – People and Communities			
3.1	Develop and implement a recreation strategy	To include management of activities, set tone, assess facilities, carry out surveys, to	<ul style="list-style-type: none"> <li>Implement recreation strategy as required.</li> </ul>



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OHS Action	Action Title	Action Description	Deliverables 2022-2023
		include actions from previous strategies and heritage trail development.	
3.2	Promote awareness of the cultural heritage of Ohiwa Harbour	Identify sites where appropriate.	<ul style="list-style-type: none"> <li>• Incorporate Māori placenames and stories on signage wherever appropriate.</li> </ul>
3.3	Recognise and apply the principles of kaitiakitanga and stewardship in management of the harbour and its catchment	Work with tangata whenua and landowners and celebrate.	<ul style="list-style-type: none"> <li>• Provide support for Upokorehe kaitiaki.</li> </ul>
3.4	Retain Onekawa Te Mawhai Regional Park and manage according to the park management plan	Also look for opportunities to expand.	<ul style="list-style-type: none"> <li>• Implement the Onekawa Te Mawhai annual plan.</li> </ul>
3.5	Ensure information distribution (including signage around the harbour) is current, appropriate and coordinated	Signage and interpretive material, telling stories, providing information to promote understanding. Also pamphlets and other media.	<ul style="list-style-type: none"> <li>• Continue upgrading of instructional signage where possible as per Cheeky Rooster recommendations.</li> </ul>
3.6	Continue to implement comms/education plan	Assess and update. Ensure community understanding.	<ul style="list-style-type: none"> <li>• Complete 3 newsletters.</li> </ul>
			<ul style="list-style-type: none"> <li>• Complete 3 progress summaries for partners.</li> </ul>
			<ul style="list-style-type: none"> <li>• Continue to add material to website as appropriate and update regularly.</li> </ul>
			<ul style="list-style-type: none"> <li>• Review comms protocol to enable ongoing website updating.</li> </ul>
3.7	Develop a coordinated approach to, and implement management of, public reserves	Maximise effective management of all reserves.	<ul style="list-style-type: none"> <li>• Ensure reserves are appropriately maintained.</li> <li>• Support single management plan for all WDC reserves from West End to Ōhope Spit.</li> </ul>
3.8	Support the implementation of regulations for controlling vehicles on tidal flats and beaches	Support local bylaws and regional approach.	<ul style="list-style-type: none"> <li>• Support implementation of WDC, ODC, BOPRC bylaws.</li> <li>• Continue to seek ways of preventing vehicle access to pipi bed and Ōhiwa beach.</li> </ul>

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OHS Action	Action Title	Action Description	Deliverables 2022-2023
3.9	Support appropriate harbour and catchment research opportunities	Identify projects and encourage bi-cultural lens and seek opportunities.	
3.10	Develop protocols between the Ōhiwa partners and other statutory agencies	Protocols between statutory agencies and tangata whenua to integrate kaitiakitanga into resource management.	
3.11	Support the work of landowners and community groups	Information, expertise, capacity building, project facilitation, coordination, funding. Includes harbour wardens, schools.	• Provide support as required to groups as in 1.9.
			• Provide support to landowners as and when required.
			• Provide support for events as appropriate.
			• Provide plants for community planting initiatives as required.
3.12	Support the involvement of local people in education initiatives and in the management of the Ōhiwa Harbour and its catchment	Encourage work and education opportunities that are relevant to the Ōhiwa harbour.	
3.13	Advocate for health and safety within the harbour and catchment	Advocate to eastern bay road safety committee and harbourmaster to improve safety.	• Facilitate engineering report on Kakaho Stream.
	Administration	Meetings, workshops etc.	• Hold 4 OHSCG hui.
			• Hold 2 OHIF hui.
			• Hold 1 workshop/field trip for OHSCG/OHIF.