Regulatory Committee - 30 January 2019 Attachments

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Minutes of a meeting of the Regulatory Committee held in the Council Chamber at Philip Laing House, Dunedin on Wednesday 28 November 2018, commencing at 1:02pm

Membership

Cr Bryan Scott	*(Chairperson)*
Cr Sam Neill	*(Deputy Chairperson)*
Cr Graeme Bell	
Cr Doug Brown	
Cr Michael Deaker	
Cr Carmen Hope	
Cr Trevor Kempton	
Cr Michael Laws	
Cr Ella Lawton	
Cr Andrew Noone	
Cr Gretchen Robertson	
Cr Stephen Woodhead	

Welcome

Cr Scott welcomed Councillors, media, members of the public and staff to the meeting.

1. APOLOGIES

The apology from Cr Kempton was noted.

2. LEAVE OF ABSENCE

Leave of Absence was noted for Cr Woodhead.

3. ATTENDANCE

Sarah Gardner	*(Chief Executive)*
Nick Donnelly	*(Director Corporate Services)*
Tanya Winter	*(Director Policy, Planning and Resource Management)*
Gavin Palmer	*(Director Engineering, Hazards and Science)*
Sally Giddens	*(Director People and Safety)*
Ian McCabe	*(Executive Officer)*
Lauren McDonald	*(Committee Secretary)*
Kylie Galbraith	*(Acting Manager Consents) - Item 11.2*

4. CONFIRMATION OF AGENDA

The agenda was confirmed as tabled.

5. CONFLICT OF INTEREST

No conflicts of interest were advised.

6. PUBLIC FORUM

No public forum was held.

7. PRESENTATIONS

No public forum was held.

8. CONFIRMATION OF MINUTES

Resolution

That the minutes of the meeting held on 17 October 2018 be received and confirmed as a true and accurate record.

Moved: Cr Scott
Seconded: Cr Neill
CARRIED

9. ACTIONS Status report on the resolutions of the Regulatory Committee

11.3 Managing the use of coal for domestic heating in Otago and New Zealand **(Technical Committee)**	31/1/2018	*That the matter of the ability to enforce the current Regional Air Plan AirZone 1 provisions be considered by the Regulatory Committee*	IN PROCESS
10.1 Review of Council's Consents Function	17/10/18	*Staff appoint a consultant/s to undertake the review.* *That the Committee approves the brief attached as Appendix 1 for the Review of Council's Resource Consents Function, subject to the suggested edits outlined (Best Practise, shared services)*	IN PROCESS
11.1 Compliance Activity for 2017/18	17/10/18	*That a case study be undertaken on the Kaikorai Stream with a view to informing future work on urban waterways and other waterways of concern.* *That this paper be reframed and represented with analysis of trends and of highlights and issues governance should be address*	Mrs Gardner to follow up on progress
11.2 Director's Report on Progress Lagarosiphon control – Lake Dunstan		*That an effectiveness review of lagarosiphon control on Lake Dunstan be brought to next committee round*	
Wallaby Control	Cr Scott requested that the action item for a Memorandum of Understanding (MOU) with Environment Canterbury for wallaby control be reinstated to the action list.		

10. MATTERS FOR COUNCIL DECISION

Nil

11. MATTERS FOR NOTING

11.1. Director's Report on Progress

The report detailed the regulatory activity during the period 4 October – 9 November 2018, including: compliance; State of the Environment data capture; harbourmaster and biosecurity activities.

A request was made for context to be provided on the rabbit count data in the report. The information requested was for the locations where the rabbit counts were completed and comparisons to previous years data, to assist in understanding the distribution and the effectiveness of the RHV virus tool. Report to be provided to the next meeting round.

Resolution

That the rabbit night count routes be updated to include previous years for rabbit night counts in Otago and the dates, for the purpose of effective evaluation.

Moved: Cr Laws
Seconded: Cr Bell
CARRIED

SOE monitoring sites - Dr Palmer was requested to provide an update on the implementation of additional SOE sites, as agreed in the LTP, to the Technical Committee round in January 2019.

Wallaby Control - A request was made for staff to provide a workshop update on the success of the Wallaby poisoning programme.

Resolution

That this report is received and noted.

Moved: Cr Bell
Seconded: Cr Deaker
CARRIED

Discussion was held on the encouraging landowners to install of telemetry sites to improve data received, e.g. in real-time. Mrs Gardner advised she would follow up with staff on external communication information/strategy that has been developed.

Resolution

Report on policy in progression of wrapping of water metering telemetry

Moved: Cr Hope
Seconded: Cr Laws
CARRIED

11.2. Consents and Building Control
The report detailed the consents and building control and deemed permit replacement progress for the period 15 September 2018 to 2 November 2018. Discussion was held on the progress of deemed permit replacement.

Resolution

a) That this report is noted.

Moved: Cr Deaker
Seconded: Cr Hope
CARRIED

11.3. Resource Management Act 1991 Biosecurity Act 1993 and Building Act 2004 Enforcement activities from 23 September 18

The report detailed the Resource Management Act 1991, Biosecurity Act 1993 and Building Act 2004 enforcement activities undertaken by the Otago Regional Council during the period 29 September 2018 to 9 November 2018.

Resolution

That this report be noted.

Moved: Cr Lawton
Seconded: Cr Deaker
CARRIED

12. RESOLUTION TO EXCLUDE THE PUBLIC

Resolution

That the public be excluded from the following parts of the proceedings of this meeting, namely: Enforcement – Current Matters

Moved: Cr Scott
Seconded: Cr Lawton
CARRIED

13. NOTICES OF MOTION

No Notices of Motion were advised.

14. CLOSURE

The meeting was declared closed at 02:18 pm.

Chairperson

Safety Management Systems Review

	A review of the SMS in accordance with the NZ Port & Harbour Marine Safety Code	
Location **Port operator and regional council** **(please make clear if SMS review is for port company and/or regional council)**	Dunedin Port Otago Limited and Otago Regional Council Both	
Date of desktop SMS review	December 2018	
Purpose	Follow up desktop SMS review from initial SMS (on site) review on 23 November 2017. To confirm that the SMS is consistent with the Code.	
Objective	Follow up desktop SMS review by panel members. To confirm that the SMS of Port Otago Limited (POL) and Otago Regional Council (ORC) meets the requirements of the Code, namely, that: ➢ The arrangements, measures, procedures and processes in the SMS are effective to manage the risks, and reflect best practice ➢ The SMS is underscored by effective working relationships ➢ There is evidence of ownership and commitment to the SMS at all levels of the regional council and port company	
Panel members **(who conducted desk top review)**	Christiaan Moss, Mark Rothwell, Ian Howden	
Documents reviewed	Re-review	Otago Port and Harbour Safety Management System

Previous reviews **(Brief statement on date of previous review, findings/ areas for improvement noted at that time)**	23 November 2017 On the SMS documents presented it was identified that the framework of the Code (policy documents) had been established. However, it was not apparent to the review panel that there was sufficient objective evidence to demonstrate that policy was being followed. An example of this included: • MNZ reported incidents have not been re-assessed since the last risk assessment in 2015.	
Findings	***Overall comments*** • SMS documents presented showed a clear framework of the required Code policy documents. • A detailed and up to date risk assessment was available. o Note: The panel recognises the effort (and level of detail required) of Port Otago Limited and Otago Regional Council in conducting this undertaking. • All findings from the previous review dated 23 November 2017 have been addressed.	
Conclusion **(Consistent with Code)** **(**Note any specific areas for attention at next review or assessment)	There is sufficient documentary evidence to conclude that the SMS for Port Otago Limited and Otago Regional Council is Code consistent. The panel recognises the amount of work required to identify and establish Code compliance through documentation. However, the next challenge for both Port Otago Limited and Otago Regional Council will be translating this into practice (this will be achievable with implementation over time).	
Signed and dated by panel	Christiaan Moss Mark Rothwell Ian Howden	Signed by Christiaan Moss  10/12/2018

Checklist for panel members	
Evidence sighted: ➢ Code application ➢ Harbour risk assessment ➢ Harbour safety policy ➢ Harbour safety plan ➢ Statement of duties and powers ➢ MoU's and SOP's ➢ Delegations ➢ How bylaws and directions will be enforced and resources sufficient to undertake this work ➢ Emergency response plans ➢ Annual audit report of SMS ➢ SMS group minutes ➢ Incident reporting	
Have you seen evidence of:	**Yes/No or other comments**
Ownership of and commitment to SMS at top level in both council and port operator organisations (e.g. in long term community plan or annual plan, port operator's annual reports or company websites)	Yes.
Delineation of navigation safety responsibilities	Yes.
Roles and responsibilities are understood in practice	Yes.
Staff are qualified and competent	Yes.
A well-functioning harbour safety plan or manual that is regularly reviewed and updated (the annual SMS self-assessment has been completed within the timeframe stated in the plan or manual)	Yes.
Working relationships are well documented and function well	Yes.
Incidents involving ships within jurisdiction are reviewed and risks assessed (Note any significant changes or incidents that triggered or should have triggered a review of the risk assessment)	Yes.

PORT & HARBOUR
Marine Safety Code
NEW ZEALAND

13 December 2018 Ref: D18/48634

Sarah Gardner
Chief Executive
Otago Regional Council
Private Bag 1954
DUNEDIN 9054

Kevin Winders
Chief Executive
Port Otago Ltd
PO Box 8
PORT CHALMERS 9050

Dear Ms Gardner and Mr Winders

NZ Port and Harbour Marine Safety Code Safety Management System Peer Review and Final report

I am pleased to advise that the Safety Management Systems (SMS) for Otago port and harbour has been assessed and found to be consistent with the requirements of the New Zealand Port and Harbour Marine Safety Code (the Code) 2016.

The Safety Management System for Otago was initially assessed in November 2017 and the review panel concluded that there was insufficient documentary evidence to demonstrate that the SMS for Port Otago Ltd and Otago Regional Council was Code consistent. An action plan was developed and agreed for further work to be undertaken to address the outstanding issues identified in the report.

The updated SMS from Port Otago and the Otago Regional Council was submitted to the review panel in November 2018 and a desk top review of the new SMS was conducted.

The panel concluded that these SMS documents showed a clear framework of the required Code policy documents, a detailed and up to date risk assessment and all findings from the previous review dated 23 November 2017 had been addressed.

The panel was satisfied that the arrangements, measures, operating procedures and processes in the Port Otago/ Otago Regional Council Safety Management System are now sufficiently robust, credible and effective to manage the regional maritime risks and reflect best practice.

We should like to thank Steve Rushbrook, Sean Bolt and Navigatus for the diligence shown to demonstrate that Port Otago and Otago Regional Council are operating in a manner consistent with the requirements of the Code. We commend all parties for their genuine concern to ensure there is a robust system in place for the management of safe navigation of vessels through the harbour and port managed by the Regional Council and Port Otago.

A copy of the final report is **attached**.

This is a positive outcome and reflects a strong commitment to the Code by the Otago Regional Council and Port Otago.

The review panel noted the challenge for the port and harbour will be to successfully operationalize the new SMS. This aspect will be followed up at the next review of the SMS and should be addressed during the annual self-assessment of the SMS by the Otago Regional Council and Port Otago.

This review was conducted for the purposes of the New Zealand Port & Harbour Marine Safety Code 2016. The review panel and the Code Working Group assume no responsibility to any person who relies on this letter of confirmation for any other purpose.

It is expected that both the Otago Regional Council and Port Otago Ltd remain Code consistent through annual self-assessments of the SMS and external reviews, as appropriate. A copy of the annual self-assessment and any external reviews should be forwarded to the Code Secretariat:

NZ Port & Harbour Marine Safety Code Secretariat
C/- Maritime New Zealand
1 Grey Street
PO Box 25620
Wellington 6146
marinesafetycode@mnz.govt.nz

Information gathered from all ports, harbours and regional councils from their annual self-assessments and from the SMS review programme is consolidated and used to measure the level of consistency against the Code standard on a national basis and to inform the scheduling of future SMS reviews.

You may expect the next review to take place within 3-5 years. In the interim period please do not hesitate to contact the Code Secretariat or any member of the Working Group for assistance with any aspect of the implementation of the Code.

Yours sincerely

Demetra Kennedy
Secretariat
On behalf of the Working Group
NZ Port & Harbour Marine Safety Code

Freshwater Biosecurity Partnership Programme

2016–2021 Strategy

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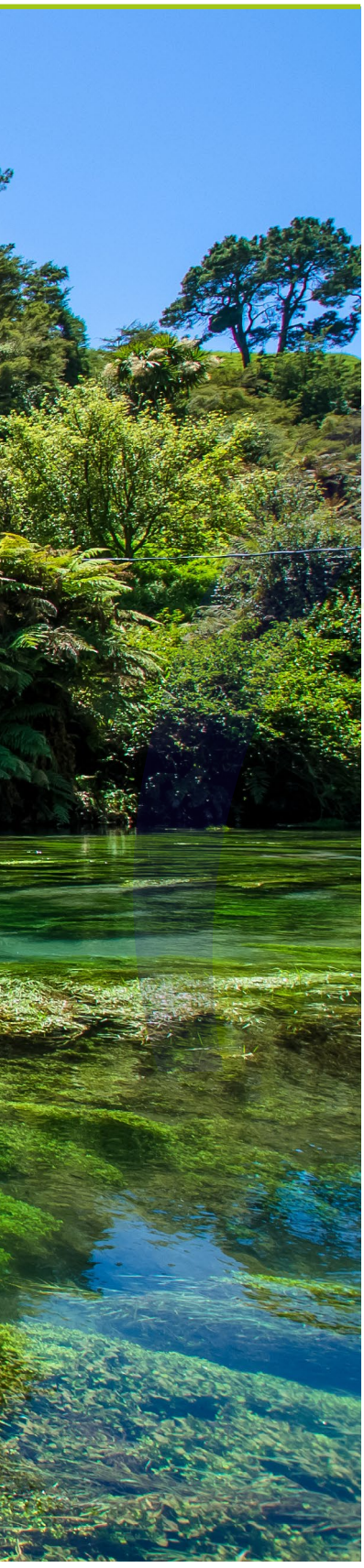

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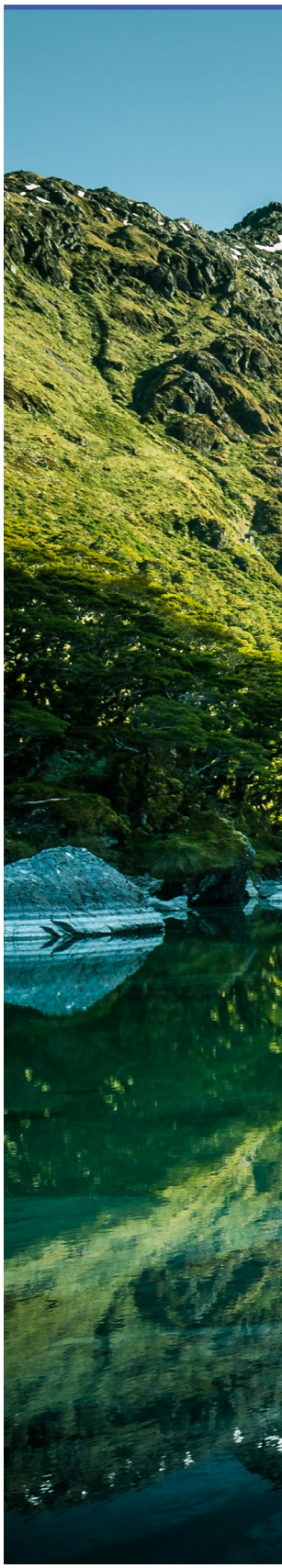
Foreword

It has been over a decade since the first detection of didymo in the South Island, with the immediate response and following long-term management programme being a successful example of collaboration and partnership across agencies.

The Check, Clean, Dry campaign tested and implemented new ways of changing public behaviour to prevent pest spread, a model which has been adopted internationally. This strategy builds on the successes so far in the management of freshwater pests, while working to future-proof the programme to ensure continued success in protecting New Zealand's freshwater ecosystems.

Geoff Gwyn
Director Response and Readiness
Ministry for Primary Industries



Strategy purpose

This strategy:

- sets the direction and defines the scope of the Freshwater Biosecurity Partnership Programme ('the Programme') until July 2021;
- reflects a shared vision for all Programme partners ("the partners") and stakeholders; and
- outlines the Programme's key focus areas and activities.

This strategy is a non-statutory document which partner agencies agree to in good faith and is supported by a partnership agreement outlining roles and expectations.

It is anticipated this strategy will be fully operational by mid-2017 following the development and agreement of work plans and the implementation of the new Programme structure.

This strategy will be reviewed as required and amended as necessary in consultation with the partners.

Background

The importance of New Zealand's freshwater

Our fresh waterways are essential to New Zealand's economic, environmental, cultural and social well-being. Our freshwater resources give our primary production, tourism, and energy generation sectors a competitive advantage in the global economy and are highly valued for recreational uses. Freshwater supports important parts of New Zealand's biodiversity and natural heritage, and has deep cultural meaning to New Zealanders. Many of New Zealand's lakes, rivers and wetlands are iconic and globally renowned for their natural beauty and intrinsic values.[1]

Māori continue to have a strong interest in water quality and quantity, the life-supporting capacity of water, and protecting and enhancing freshwater and freshwater species.[2] Iwi and hapū have a kinship relationship with the natural environment, including freshwater, through shared whakapapa.[3] It is an integral political, spiritual and economic part of Māori culture. Each waterway has its own mauri, or life essence; a body of water with a healthy mauri will sustain healthy ecosystems, support cultural uses and mahinga kai (food sources), and be a source of pride and identity to people.[4]

Freshwater is recognised by iwi as a taonga of paramount importance, and that kaitiakitanga – the obligation of iwi to be responsible for the well-being of the landscape, including water and waterways – is intergenerational in nature and has been and may be expressed and given effect to in many different ways.[5] The Programme relies on partners such as the Department of Conservation, Land Information New Zealand and regional councils having strong relationships with local iwi to ensure these values are recognised and protected.

Freshwater pests

Freshwater pests can be any freshwater organism that has the potential to cause harm, for part or all of their life, to valued freshwater species, ecosystems or environments. They include organisms that inhabit both fresh and brackish water. Freshwater pests can have significant impacts on:

- commercial fisheries;
- water intakes for irrigation and hydro power generation;
- drinking water;
- recreational values;
- tourism expenditure;
- existence values;
- loss of native species; and
- management costs.[6]

1 National Policy Statement for Freshwater Management 2014: **http://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/nps-freshwater-management-jul-14.pdf**

2 **http://waimaori.maori.nz/home.htm**

3 National Policy Statement for Freshwater Management 2014: **http://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/nps-freshwater-management-jul-14.pdf**

4 **http://waimaori.maori.nz/home.htm**

5 Land and Water Forum (2010). Report of the Land and Water Forum: A Fresh Start for Freshwater. **http://www.landandwater.org.nz/includes/download.aspx?ID=118914**

6 Explanation of all values can be found in NZ Institute of Economic Research (2011). MAF – Didymo and other freshwater pests: Economic Impact Assessment.

Didymo Long-Term Management Plan 2007

The 2004 incursion of *didymo* in the South Island led to a biosecurity response. This was subsequently transitioned into long-term management with the Didymo Long-Term Management Plan in 2007. The focus of this plan was:

- collecting information on the spread and impacts of *didymo*;
- identifying tools to support management decisions and responses to *didymo* should it become established in the North Island; and
- fresh-waterway users taking personal responsibility for reducing the risk of *didymo* spread (see "Check, Clean, Dry" below).

It was later recognised that many of the initiatives in this plan would also be effective for other invasive freshwater pests. This led partners to extend the focus of the Didymo Long-Term Management Plan to the broader Freshwater Pest Partnership Programme in 2011.

Check, Clean, Dry

In 2005, the Check, Clean, Dry social marketing campaign was established. The campaign focus was on changing behaviour and encouraging fresh-waterway users, through marketing initiatives and waterside advocacy, to take personal responsibility for stopping the spread of *didymo*. This was extended to other freshwater pests in 2011.

The Programme has proven to be successful in raising awareness. The Check, Clean, Dry campaign has been used to highlight the spread and impacts of a range of freshwater pests. Audience research conducted by Colmar Brunton in 2013 found that 81 percent of high-risk users surveyed could name *didymo* without prompting, and increased awareness of other freshwater pests.[7] This survey also found that 86 percent of high-risk users stated that they sometimes or always check, clean, and dry.

Partnerships

A key success of the Programme to date has been the strong partnerships formed between the Ministry for Primary Industries, the Department of Conservation, Fish and Game New Zealand, local government agencies, affected industry organisations and specific Māori entities. Working in partnership has enabled resources to be pooled, and better information sharing resulting in improved decision-making.

7 Colmar Brunton (2013) Check, Clean, Dry monitor. Report presented to the Ministry for Primary Industries.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Vision

The Programme supports collaborative action to protect New Zealand's freshwater ecosystems from the impacts of pests.

Freshwater Biosecurity Partnership Programme

This 2016–2021 strategy formally renames the Programme to the **Freshwater Biosecurity Partnership Programme**. While the Programme has been recognised as incorporating all freshwater pests for advocacy since 2011, the name change recognises that all activities under the Programme now align with this broader focus.

The Check, Clean, Dry campaign has been successful; however, it is now mature and some engagement with the message is starting to soften. Refreshing the campaign is a key deliverable under this strategy, which:

- aligns with best practice in behaviour change theory;
- is fit for purpose for all freshwater pests;
- targets the right audiences in the right ways; and
- remains relevant and successful for another decade.

Programme partners

For the Programme to be successful, multiple stakeholders need to fulfil specific roles, including those who are not direct partners. A partnership agreement sits alongside this strategy informing how all partners will work together, continuing to build the Programme around a partnership approach that:

- increases the likelihood of the Programme achieving its objectives by developing agreed goals with national and local stakeholders;
- accounts for partners' capacity to participate;
- utilises the partners' and stakeholders' knowledge, skills and resources that are required for different components of the Programme; and
- ensures the Programme is sustainable over time, as it is less vulnerable to changes in individual agency priorities.

The Programme brings together a range of organisations and individuals with an interest and/or mandate to protect freshwater ecosystems. The partners of the Programme include the Ministry for Primary Industries, Department of Conservation, Land Information New Zealand, regional councils, Fish and Game New Zealand, and iwi representatives, along with Genesis Energy and Meridian Energy.

Partner groups will need to provide ongoing commitment to the Programme to ensure its success. Other parties may be identified, or identify themselves, and become involved as the partnership develops. Stakeholders with a vested interest or a role in the freshwater biosecurity system include research providers, freshwater user groups and the tourism industry.

Vision

The Programme supports collaborative action to protect New Zealand's freshwater ecosystems from the impacts of pests.

Outcomes

The outcomes for the Programme support those of the Pest Management National Plan of Action[8] , which outlines a collaborative set of high-level and intermediate outcomes for pest management within New Zealand. This is further elaborated on in Appendix A.

8 **https://mpi.govt.nz/document-vault/7087**

Programme outcomes:

- The spread and impacts of freshwater pests is reduced throughout New Zealand.
- High-value sites and high-value domestic pathways are identified and efforts targeted accordingly.
- Understanding of freshwater pests increases amongst all freshwater users.
- Freshwater users adopt behaviour that prevents the spread of pests and become champions for the Programme.
- Key partners of the Programme are engaged and collaborate.

Programme scope

The Programme works to understand and manage regional and national pathways through which significant freshwater pests are spread. This is a partnership programme focused on:

- building effective relationships;
- increasing knowledge about the issues and best practice for management;
- sharing expertise; and
- leading a public behaviour change programme (currently Check, Clean, Dry).

The Programme informs but does not directly address site-specific management and water quality or quantity issues. The table below outlines what is in-scope and out-of-scope for the Programme.

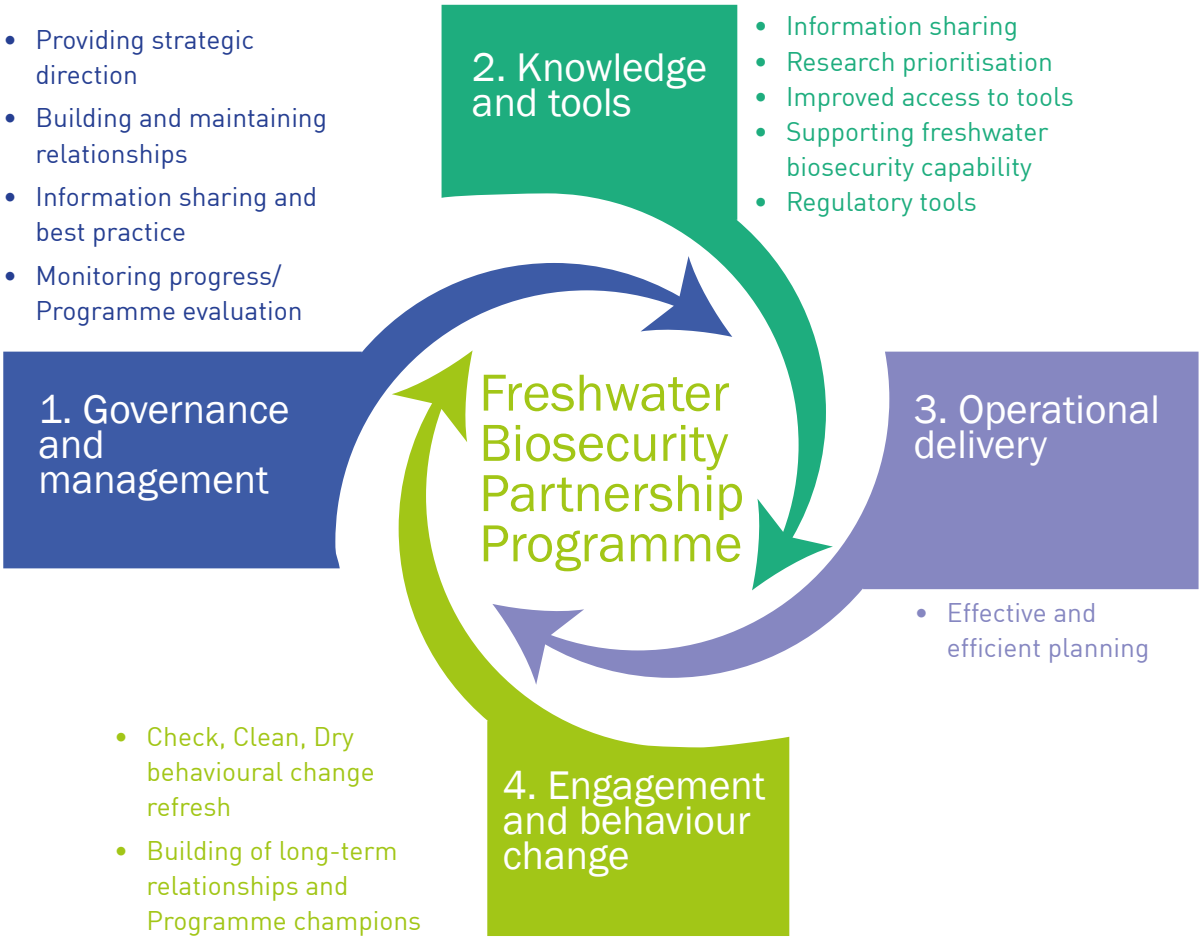
The Programme will be aligned with existing freshwater activity, leveraging from and supporting other initiatives and system capabilities outside of its scope. See Appendix B for identified pathways and Appendix C for freshwater pests.

IN SCOPE	OUT OF SCOPE
Relationship management (nationally and regionally)	Direct site or species management and development of specific management methods
• Pathway management analysis (focus on freshwater pests that can spread) • Risk identification and planning • Assessment of high-risk spread pests and high-risk waterways	Directly addressing water quality or quantity issues
Behaviour change (refreshed social marketing programme)	Direct international border interventions while remaining alert to emerging risks and opportunities to communicate the Check, Clean, Dry message to high-risk groups before and after they arrive in New Zealand
Stakeholder communication approach	
Identification of science and research gaps and needs related to pathway management	Direct funding of research programmes
Freshwater surveillance best practice support and sharing of knowledge and tools	Active surveillance of freshwater pests
Freshwater response planning support (nationally and regionally)	
Information-sharing processes across stakeholders	
Capability building and training where deemed necessary	
Regulatory development where deemed necessary, including informing legislation relating to freshwater transfers	Developing a National Pest Pathway Plan
Programme evaluation, including monitoring, auditing framework and reporting framework	

Focus areas

Four key focus areas have been agreed to by the partners:

1. **Governance and management:** The Programme is effectively managed through proactive co-ordination and collaboration amongst the partners.
2. **Knowledge and tools:** Knowledge of freshwater domestic pathways of spread is increased alongside the development of management tools.
3. **Operational delivery:** Systems and processes support effective and co-ordinated operational delivery.
4. **Engagement and behaviour change:** Through effective engagement and use of behavioural change tools, waterway users will take personal responsibility for preventing the spread of freshwater pests.

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INFORMATION
Lake Wanaka Outlet

Programme activities

Under each of the Programme's key focus areas a number of the Programme activities have been identified, with actions to be incorporated into annual work planning and measured against. These are outlined below.

1. Management of the Programme

The co-ordination and management of the Programme will have a major influence on its overall effectiveness. The **KEY ACTIONS** for management of the Programme are:

Effective governance	A steering group will govern the Programme, consisting of appropriate representatives from all partners and holding both an operations and a communication focus. **Action 1.1:** Implement the agreed new Programme structure, outlined in the Partnership Agreement. **Action 1.2:** Establish Programme management tools, including clear reporting structures, effective work planning processes, review periods and development of an annual Programme Plan (for further detail, see Action 3.1).
Building and maintaining relationships	Partners will encourage ongoing collaboration between organisations, whether within or outside of the Programme. Collaborative partnerships will help mitigate loss of institutional knowledge, create trust and camaraderie between organisations and partners, and enable information and best practice sharing. **Action 1.3:** Hold regular meetings nationally and regionally to support open sharing of existing and new information.
Monitoring progress and Programme evaluation	The Programme outcomes will be effectively monitored and tracked to demonstrate success of the Programme, and identify gaps in approach. **Action 1.4:** Develop a plan for the ongoing monitoring and evaluation of the Programme, including: — an outcomes framework, including measuring success in the prevention of freshwater pest spread, and collaboration and co-ordination; and — a behaviour change evaluation plan.

2. Knowledge and tools

The Programme needs to improve our knowledge of both the current extent and severity of the problem for all significant freshwater pests in New Zealand, as well as how we control and prevent spread along identified domestic pathways. Ongoing development of knowledge and tools will improve the efficiency and effectiveness of the Programme.

The **KEY ACTIONS** for knowledge and tools are:

Information sharing	Identify and develop systems and processes that facilitate information sharing between partners. This includes: Collation of information on freshwater pests **Action 2.1:** Produce a central repository for information on the location and population status of freshwater pests in New Zealand. A map of freshwater pests will be a short-term goal, with a long-term goal of developing a data repository for freshwater pest information. This will help more clearly define the freshwater pest problem, identify high-risk domestic pathways, and enable better targeting of resources and monitoring of pest-free sites. This will provide the potential to measure success of slowing spread. Promotion of best practice **Action 2.3:** Facilitate proactive engagement between agencies conducting surveillance and monitoring, and provide support for the development and promotion of best practice for pest detection.
Research prioritisation	Increasing our knowledge of freshwater pest domestic pathways and how to influence behaviour change will ensure there is a firm evidence base for the Programme. Research activities include: Stocktake of current freshwater research and prioritisation of future research **Action 2.4:** Undertake a stocktake of current research on freshwater pests in New Zealand to identify gaps in the current knowledge base and identify and prioritise future research needs. Research funding **Action 2.5:** Establish rationale for obtaining research funding for freshwater biosecurity science and investigate funding avenues. Research will help to build our knowledge of both the impacts of freshwater pests and what treatments are required to stop their spread. Research prioritisation activities will need to be linked into wider science development across agencies, such as the Biodiversity Science Challenges. Pathways research **Action 2.6:** Increase our understanding of established and new domestic pathways, how to manage them as effectively as possible and where optimum intervention lies. Complete risk profiling of pathways and at-risk sites (taking into consideration the didymo predictive modelling). Behaviour change research **Action 2.7:** Undertake targeted research into fresh-waterway users' behaviour. Understand the barriers and drivers of behaviours for different freshwater user groups to inform interventions to change behaviour where required (this research will inform the behaviour change plan).

2. Knowledge and tools continued

Tools	The Programme needs to be able to utilise best practice tools for management of freshwater pests and inform the development of new tools with the support of research. **Action 2.8:** Undertake gap analysis of tools for managing the spread of freshwater pests. Tools to be investigated include: **A. Control tools** — Assess gaps in eradication and control tools of freshwater pests. — Identify opportunities to support development of new tools or investigate tools currently in use in other jurisdictions. **B. Pathway management tools** — Assess and continually develop best practice pathway management tools, including treatment and monitoring options. — Ensure decontamination methods continue to be robust and available to partners. — Ensure a consistent, shared approach to pathway management. — Engage with fisheries and land-based aquaculture organisations to ensure risk on domestic freshwater pathways is investigated, and determine what measures could be taken to address risk. **C. Regulatory tools** — Assess regulatory tools available, both nationally and regionally, and investigate how these tools can be used to support the overall goal of the Programme with the most efficient use of resources. — Ensure regulatory acceptance of a standardised pathway management of freshwater pests, including monitoring.
Supporting freshwater biosecurity capability	Partners will actively promote the continual need for freshwater biosecurity and support the maintenance of freshwater biosecurity capability. **Action 2.9:** Develop capabilities for identifying pests through supporting consistent training and resources.


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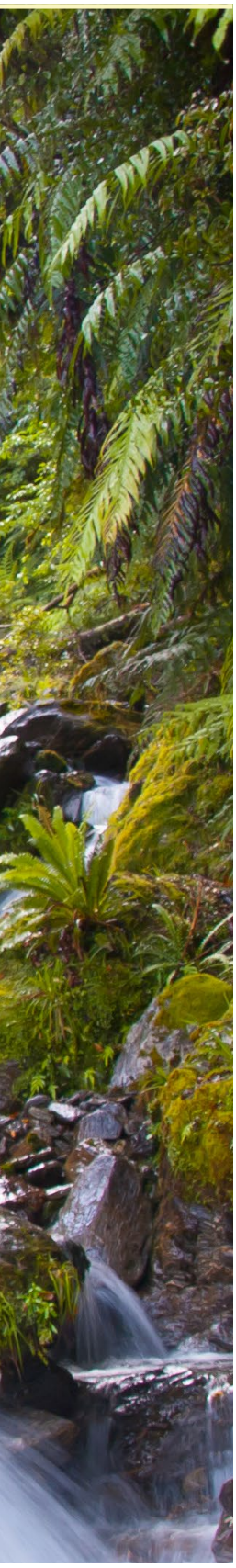

3. Operational delivery

Operational success relies on solid co-ordination and co-operation between partners. The Programme faces a number of operational challenges, including:

- defining regional and national operational priorities;
- targeting resources efficiently so the highest priority domestic pathways or sites are managed;
- identifying the appropriate intervention measures and times; and
- improving reporting and co-ordination of information.

The **KEY ACTION** for operational delivery is:

Effective and efficient planning

We can help stop the spread of pests before they become established with effective operational planning and delivery, by reducing the risk of high-priority domestic pathways and clarifying if interventions are regional or national priorities.

Action 3.1: Develop and implement an operational plan for the Programme to prevent the spread of freshwater pests. The operational plan will:

A. Identify appropriate intervention points along domestic pathways and appropriate intervention techniques

B. Ensure interventions are fit for purpose by taking into consideration:

— the identified high-value sites;
— surveillance and monitoring data and research;
— behaviour change interventions;
— resources and funding;
— identified intervention points; and
— experience gained.

C. Support improved readiness and response for new freshwater pest incursions

Partners need to be adequately prepared to respond to an incursion of a new-to-New Zealand freshwater pest or expansion of a pest's range – for example, didymo reaching the North Island or hornwort into South Island – through proactive planning, taking into consideration:

— partners' roles in such an incursion and the role of the National Biosecurity Capability Network;
— available resources and funding;
— the need to document and learn from all incursions/responses;
— gaps in processes, and systems to improve communication between partners;
— gaps in work programmes; and
— continuous improvement.

4. Engagement and behaviour change

Engagement with freshwater users to change their behaviour is critical to stopping the spread of freshwater pests. Partners of the Programme will continually encourage people to take personal responsibility, as it is essential for reducing the risk of spread.

The **KEY ACTIONS** for engagement and behaviour change are:

Development of a behaviour change strategy and plan	The behaviour change programme will be refreshed to build on the success of the Check, Clean, Dry campaign to date. Adjustments to the behaviour change programme will consider different audience needs and channels, current behaviour patterns, and drivers and barriers to changing behaviour. **Action 4.1:** Develop and deliver a refreshed behaviour change programme. This plan will focus on: — development of targeted approaches for high-risk freshwater body users; — consistent communication of messages through identified channels, nationally and regionally; — encouraging innovation and fresh ideas; — planning resource distribution and activities to target efforts appropriately; — ensuring visibility of the campaign; — providing easy to use, easily accessible and effective tools or relevant information; and — evaluating and monitoring processes to measure change in behaviour as a result of activities.
Building long-term relationships	**Action 4.2:** Develop mechanisms to support the efficient management of key relationships, building and maintaining a network of important relationships across national interest groups. This includes: — targeted and meaningful engagement with stakeholders; — feedback and information to be shared more easily; — audiences connecting through their communities and social structures; — working in partnership with other organisations and programmes; and — education opportunities (schools, outdoor education programmes, etc).

Glossary

Iwi – a set of people bound together by descent from a common ancestor or ancestors.

Pathway – a route by which specified-risk goods or craft move from one place to another within New Zealand that has the potential to spread harmful organisms.

Pest – an organism that has characteristics that are regarded by people as injurious or unwanted.

Appendix A: Linkages between Freshwater Biosecurity Partnership Programme outcomes and Pest Management National Plan of Action outcomes

The Pest Management National Plan of Action[9] sets out changes agreed by central and regional government to improve pest management systems in New Zealand for the future. The Freshwater Biosecurity Partnership Programme's desired outcomes support the Pest Management National Plan of Action outcomes. This relationship is shown in the table below.

9 https://mpi.govt.nz/document-vault/7087

	Economic strength		**Healthy environment**		**Healthy New Zealanders**		**Cultural identity**	
Whole of New Zealand outcomes that biosecurity contributes to along with other inputs	Increased trade and market access for our products Economic opportunities, growth and prosperity are maintained and enhanced		Our natural and historical heritage, the integrity of ecosystems and the character of New Zealand landscapes are protected and enhanced		Human health and well-being are optimised Healthy and rewarding lifestyles, freedom and respect for cultural expression, and enjoyment of the recreational value of the natural environment		Protection of Māori biologically based economic and cultural resources – the relationship of Māori and their culture and traditions with their ancestral lands, waters, sites, wāhi tapu, and taonga is maintained and enhanced	
Overall pest management outcomes	**A. Pest management – unwanted damage caused by harmful organisms that have established in New Zealand is prevented or reduced**						**B. Public participation – New Zealanders are active, informed, and supportive participants in the biosecurity system**	
Pest management intermediate outcomes	**Preventing establishment –** potentially harmful organisms present in New Zealand have not become pests	**Reducing spread on domestic pathways –** the spread of harmful organisms is reduced on domestic pathways	**Eliminating or rolling back –** harmful organisms are eliminated or their distribution is reduced over time	**Controlling the harmful organism –** the harmful organism is controlled to a level where impacts are manageable	**Protecting values in places –** the damage caused by harmful organisms in places is reduced or prevented	**Awareness –** improved understanding by all New Zealanders of biosecurity risks and management activities	**Participation –** increased participation by all New Zealanders in pest management activities	**Support –** support for pest management programmes and tools increases
Freshwater Biosecurity Partnership Programme outcomes	**Preventing establishment** Freshwater pests do not establish in new regions or re-establish where they have been eradicated	**Reducing spread on domestic** pathways The spread of freshwater pests is reduced throughout New Zealand	**Eliminating or rolling back** Managed through other programmes	**Controlling the harmful organism** Managed through other programmes	**Protecting values in places** Valued sites and at-risk species are identified and appropriate mitigation measures installed and maintained	**Awareness** Understanding of freshwater pests and behavioural change programme increases amongst all freshwater users	**Participation** High-risk freshwater users adopt behaviour that prevents the spread of pests and become champions for the Programme	**Support** Key partners of the Programme are engaged and collaborate under the Programme structure

Appendix B: Pathway management

Pathways are routes by which specified-risk goods or craft move from one place to another that have the potential to spread harmful organisms. The pests and pathways that are within the scope of the Programme will benefit from domestic pathway management, greatly reducing the risk of spread and impact to New Zealand's freshwater and associated resources.

The Programme recognises the large number of freshwater pests in New Zealand. The aim of pathway management is to slow the spread of multiple species.[10] Managing the spread of pests through domestic pathway management offers better value for money than managing individual pests after they have spread, and increases the likelihood of success. Pathway management contributes to better preparedness for new incursions of high-priority pests and offers major benefits for the primary sector and natural resource management.

While the Programme is focused on post-border action, it is recognised that biosecurity needs are much wider than just domestic management. The Ministry for Primary Industries, in its leadership role, provides integrated management of the biosecurity system in a continuum from off-shore to border to post-border, and will ensure any risks identified that fall outside the scope of the Programme will be communicated to those responsible.

Pathway identification

Natural pest spread between waterways is limited for many freshwater species, and therefore human-mediated pathways that transfer these pests between waterways pose the highest risk.[11]

Research will be undertaken as part of the Programme to improve the knowledge of key freshwater domestic pathways and high-value sites in New Zealand to enable efforts to be targeted more efficiently. Some identified pathways include:

- sports and recreational gear moving between waterways (fishing, kayaking, events, boating, diving, hunting, mountain biking, swimming, camping);
- movements of vessels such as recreational boats;
- commercial fishing gear and transportation of fish species;
- hydroelectric generation gear and vehicles moving between waterways;
- machinery and equipment movements between waterways, including aggregate extraction, machinery, drainage machinery, spraying equipment and irrigation equipment;
- military off-road exercises with vehicles;
- aquatic life transfers; and
- management agencies.

10 Toy, S (2012) Pilot risk analysis for the domestic machinery pathway. Prepared for MAF Biosecurity New Zealand.

11 ibid.

Appendix C: Freshwater pests

The species targeted through this Programme are those actively managed by agencies and other partners. These include, but are not limited to, the following.

- Didymo *(Didymosphenia geminata)*, formally detected in the South Island in 2004, remains the most recognised freshwater pest throughout New Zealand. Didymo is estimated to have cost $128 million between 2006 and 2011, affecting power generators, irrigators, and tourism and recreational values. It was further estimated that didymo impacts would be at least $210 million from 2011 to 2020.
- Freshwater pest fish, such as koi carp *(Cyprinus carpio)*, are formally managed by the Department of Conservation and are also controlled by regional councils. Our research shows that there is a high level of awareness and concern about the spread and impacts of koi carp amongst waterway users.[12]
- National Interest Pest Response species: Hydrilla *(Hydrilla verticillata)*, salvinia *(Salvinia molesta)*, phragmites *(Phragmites australis)* and manchurian wild rice *(Zizania latifolia)*. National Interest Pest Responses are Ministry for Primary Industries-led responses that aim to eradicate selected established pests from New Zealand. These freshwater pests were selected for national response because of their potential to have a significant impact on our economic, environmental, social and cultural values.
- Macrophytes, such as oxygen weed *(Lagarosiphon major)*, hornwort *(Ceratophyllum demersum)*, and alligator weed *(Alternanthera philoxeroides)*. NIWA estimates that costs of freshwater macrophytes would be greater than those predicted for didymo.

The Programme acknowledges that spread of other pest organisms may be mitigated through this Programme, such as zooplankton and freshwater jellyfish; however, they are not specifically targeted.

12 Toy, S (2012) Pilot risk analysis for the domestic machinery pathway. Prepared for MAF Biosecurity New Zealand.