

Aquatic Pest Co-ordination Group

Annual reporting 2011/2012

Planning summary 2012/2013

Prepared for:

Bay of Plenty Regional Council

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1. Background

New Zealand has an historic legacy of introductions of exotic flora and fauna throughout colonisation by both Maori and European settlers. Freshwater environments have been no exception with introductions of many invasive plants, fish, invertebrates as well as diatoms such as Didymo (*Didymosphenia geminata*) being intentionally or accidentally released in waterways. The effect of these introductions has often been dramatic on the ecology of lakes, rivers and streams. Aquatic environments are also notoriously difficult in which to control or eradicate species once introduced. There is also a distinct lack of tools available for control particularly in large waterbodies such as lakes. Best practice usually involves advocacy and education to help prevent the spread or introduction of pest or unwanted species rather than a focus on control after incursions have occurred.

The waterways of the Bay of Plenty region have always been considered of high quality and have a range of values – cultural, recreational, amenity, biodiversity and as a world renowned trout fishery. Of particular focus and value are the Te Arawa lakes and their inflows situated around the Rotorua area along with other high value sites such as the Wairoa, Rangitikei, Tarawera and Kaituna Rivers as well as many streams flowing from the Kaimai Range and around the East Coast near Opotiki.

The Te Arawa lakes in particular have had aquatic weed infestations of various species occurring since the 1950's which have in various ways impacted on the values of the lakes. The effect of these introductions has often varied from lake to lake depending on the species of aquatic weed introduced and other factors including lake bathymetry, lake nutrient levels, existing lake vegetation and lake use. Efforts to control some of these weeds/pests have been in place since the 1960's (Rotorua Te Arawa Lakes Strategy Group, 2011).

The only currently known pest fish species to establish throughout the region is Gambusia (*Gambusia affinis*). Other pest fish species such as Koi Carp (*Cyprinus carpio*), Rudd (*Scardinius erythrophthalmus*), Brown bullhead catfish (*Ameiurus nebulosus*), Tench (*Tinca tinca*) and Perch (*Perca fluviatilis*) have also continued to pose a threat to the waterways of the region but have yet not become established in natural waterways. This in some ways seems surprising given the proximity of the region to the Waikato where many of these fish species are prolific. Some populations of pest fish do exist in the region including Rudd and Tench in Lake McLaren and Koi in several private man made ponds which are currently being controlled. Goldfish (Morihana) are also present in most of the Te Arawa Lakes having been extensively released throughout New Zealand in the early 1900's primarily as a source of food. Goldfish are not currently considered a pest species in the Bay of Plenty Region and are thought to have minimal impact on the ecology of waterways (McDowall, 2000).

The arrival of Didymo to New Zealand in 2004 has also posed another threat to the Bay of Plenty Region's waterways however to date has not yet been discovered in the North Island.

Many agencies have been active in trying to preserve the values of the region's waterways with particular focus on work since the late 1990's. The focus of much of this work has been on preserving water quality of both the Te Arawa lakes and other waterways. However, a large amount of effort and resource has also been targeted

at the management of aquatic pests both to aid in the protection of water quality and to help in maintain other values associated with the waterways of the region.

Management of aquatic pest issues combines responsibilities from a number of agencies and organisations. This report provides focuses on those involved in the Aquatic Pest Co-ordination Group and documents the group's purpose, agency roles and summarises key outputs and expenditure for 2011/2012 and 2012/2013 financial years.

1.1 The Aquatic Pest Co-ordination Group (APCG)

The APCG was formerly known as the Aquatic Pest Technical Advisory Group (APTAG) and was established in August 2004. This multi-agency initiative was originally designed as a mechanism for the agencies to work in partnership in regards to improving public awareness relating to aquatic pest plant dispersal between freshwater waterways and advocacy and work programmes in general (Bay of Plenty Regional Council, 2012).

Since the groups inception, several key events have occurred which have modified the role and function of the group. These have included the formulation and signing of the Te Arawa Lakes Settlement Act 2006 as well as the discovery of Didymo in New Zealand in 2004. The influence of these changes and the subsequent impact on aquatic pest management in the region has led to an expanding role of the group.

To reflect these changes and realign the group's purpose, the terms of reference for APTAG were revisited in 2010 and resulted in both a change of name and a more structured role and objectives. The current purpose and objectives of the APCG is outlined below:

“The purpose of the is for those agencies with a role in the management of aquatic pests to effectively network, pool resources where possible and share information to achieve the integrated planning and management of aquatic pests in the Rotorua Lakes”.

The APCG members are:

- Department of Conservation (DOC)
- Eastern Region Fish and Game Council (Fish and Game)
- Bay of Plenty Regional Council (BOPRC)
- Rotorua District Council (RDC)
- Te Arawa Lakes Trust (TALT)
- Land Information New Zealand (LINZ)
- National Institute of Water and Atmospheric (NIWA)

The objectives of the Group are:

- To facilitate communication and liaison regarding aquatic pest issues between the representative organisations.
- To act as a forum to promote further discussion and input on technical issues from relevant organisations.
- To plan, implement and report on operational activities in regard to aquatic pests within the Rotorua Lakes.
- To raise awareness and understanding of aquatic pest issues in the Rotorua Lakes. To promote consistency of policy and strategic direction between agencies for the management of aquatic pests within the Rotorua Lakes.

- Regularly review these objectives, how they will be achieved and the overall effectiveness of the group

As part of the groups Terms of Reference, an annual plan will be developed to facilitate achieving these objectives. This annual plan will also be reported by the group by the end of July each year.

The group currently meets formally 3 times per year although at various times many of the agencies are working closely and more frequently on specific projects or areas of work.

2. Purpose of report

The purpose of this report is to provide a template for production of an annual reporting mechanism for the members of the APCG. The need and desire to report on aquatic pest work was agreed during the review of the group's terms of reference and purpose in 2011. Although agencies have until now completed various internal reporting, this report provides information at a level enabling the scope and extent of activities to be summarised across all areas of work and the full extent of resource commitment to aquatic pest management realized.

The format of this report and associated spreadsheet will be useful for agencies to use individually for internal reporting mechanisms or provide an overview of all aquatic pest work undertaken within the Bay of Plenty Region – particularly within the Rotorua Lakes Area for the collective group.

For the purposes of this report, figures for both costs and staff hours reported on in the 2011/2012 and 2012/2013 spreadsheets presented in sections 5 and 6 of this report are generally indicative.

3. The agencies and their roles in management of Aquatic pests in the Bay of Plenty region

Aquatic pest management in the Bay of Plenty is the role of all members of the APCG group by various mechanisms. This is particularly so within the Rotorua Lakes Area. The following section seeks to outline these roles and identify the synergies and overlap between agencies.

3.1 Bay of Plenty Regional Council (BOPRC)

As well as being represented on the Te Arawa Rotorua Lakes Strategy Group, BOPRC is responsible for managing the control of pest plants and pest animals in the Bay of Plenty region. Landowners and occupiers, the community and other agencies also have responsibilities.

BOPRC exercises a variety of roles in pest management, including a leadership role in promoting, influencing, motivating, enforcing, educating and informing those involved in pest management across the region.

BOPRC prepares statutory documents to assist in the management of pests within the Region. The current Regional Pest Management Plan (RPMP) for the Bay of

Plenty 2011-2016 has been created by BOPRC in accordance with the Biosecurity Act 1993.

The Plan sets out what BOPRC is trying to achieve through our efforts to manage pest plants and pest animals in the Bay of Plenty region. It identifies a set of key outcomes to achieve and high level objectives and rules that need implementing to achieve these outcomes. The Plan identifies the primary pest management roles and responsibilities for BOPRC as well as landowners and occupiers across the region.

Aquatic pest plants and animals are also covered by the RPMP. Specific rules relate to the control and movement of some aquatic pests and as well as who is responsible for their control.

For the Te Arawa Lakes, the control of aquatic weeds attached to the lakebed are the responsibility of the Crown (or their agent) under the Te Arawa Lakes Settlement Act 2006. In the case of the Te Arawa Lakes that fall within the BOP Region (except Ōkaro and Rotokakahi), this Crown agent is LINZ. The role of LINZ is further explained below (Section 3.5).

Other aquatic animal pests (fish and other) are managed under the Biosecurity Act either via the RPMP or specifically by the Crown when they are of national interest.

Some work implemented by BOPRC is funded from within the Rotorua Lakes Management Strategy programme of work however other workstreams are funded through the 10-Year plan process and also through the implementation of the RPMP.

3.2 Te Arawa Lakes Trust (TALT)

Te Arawa Lakes Trust (formerly Te Arawa Maori Trust Board) is the governance entity that received and manages the redress received from the Te Arawa Lakes Settlement Act 2006 on behalf of Te Arawa.

The mission of TALT is "Utilisation and management of the assets and resources to provide cultural social environmental and economic sustainability for Te Arawa"

The settlement Act covers 14 lakes of which Te Arawa was given ownership of 13 of the lake beds (excluding Ōkaro).

The lakes are:

Rotoehu, Rotomā, Rotoiti/Te Roto- Whaiti-i-kite-ai-a-Ihenga-i-Ariki- ai- a Kahumatamomoe, Rotorua / Rotorua-nui-a Kahumatamomoe , Ōkātina / Te Moana i kātina a Te Rangitakaroro, Ōkareka, Rerewhakaaitu, Tarawera, Rotomahana, Tikitapu, Ngāhewa, Tutaeinanga, Ngāpouri/Opouri and Ōkaro/Ngakaro (Te Arawa Lakes Trust , 2013).

As a landowner of the Te Arawa lake beds, the Trust provides input, support and advocacy to activities and work associated with the Te Arawa lakes in the Rotorua area. TALT are also represented on the Rotorua Lakes Strategy Group (see Section 3.4).

3.3 Rotorua District Council (RDC)

The role of RDC in aquatic pest management is primarily from an amenity and recreational aspect. Many of the boat ramps in the Rotorua Lakes area are located on land administered by RDC. RDC is involved in conjunction with BOPRC in maintaining the access to these structures and ensuring the public have the ability to use these facilities and use to not be inhibited by aquatic plants. RDC's reserve and park department are also responsible for amenity cleanup of aquatic weeds which have washed up on lakeshores on council's reserves. Much of this work is undertaken at the Rotorua lakefront (Rotorua Te Arawa Lakes Strategy Group, 2011).

RDC are also represented on the Rotorua Lakes Strategy Group (see Section 3.4).

3.4 Rotorua Lakes Strategy Group

A Lakes Management Working Group (consisting of TALT, BOPRC and RDC) was initially established in 1998 to identify and address the problems arising from a lack of coordination between the many groups with interests in managing the lakes, and to consider how those concerned could work together to solve problems as effectively and efficiently as possible.

The commitment of the various authorities was to unite efforts and resources to achieve sustainable lake and catchment management through the Lakes Management Working Group. The Group identified the best way to achieve this was through the development of a lakes management strategy.

In 2000 the Lakes Management Strategy was released to the community for consultation and feedback. A Draft Strategy was adopted in October 2002. The document sets goals for the protection, use, enjoyment and management of the lakes.

The Rotorua Lakes Strategy Group (previously known as the Rotorua Lakes Strategy Joint Committee) was established under the Local Government Act 2002 through the Te Arawa Lakes Settlement Act 2006. The Lakes Strategy Group consists of TALT (previously Te Arawa Māori Trust Board), BOPRC and RDC with each agency having two representatives on the Group. The Strategy Group have worked cooperatively on a programme of action for the protection and restoration of the Te Arawa Lakes as agreed in the vision and purpose:

“The lakes of the Rotorua district and their catchments are preserved and protected for the use and enjoyment of present and future generations, while recognising and providing for the traditional relationship of Te Arawa with their ancestral lakes.”

In April 2007, a Memorandum of Understanding between the Crown and the Rotorua Lakes Strategy Group was signed to formally establish a working relationship between the parties for the purpose of maintaining and improving the water quality of the lakes through the Rotorua Lakes Protection and Restoration Action Programme (Human Rights and the Treaty of Waitangi, 2013) . The MOU was associated with the Crown contributing \$72.1 million over 10 years and RDC and BOPRC jointly contributing an additional \$72.1 million to focus on improving the condition of the Te Arawa Lakes (Bay of Plenty Regional Council, 2008).

Although much of the Rotorua Lakes Management Strategy is focused on implementing and achieving water quality gains, a component of the work is focused on aquatic pest management and also achieving outcomes of an associated recreational strategy.

The Rotorua Lakes Management Strategy that was prepared in 2002 is currently being reviewed.

3.5 Land Information New Zealand (LINZ)

LINZ manages biosecurity on Crown land under its administration and works with landowners, regional councils and other agencies to mitigate the threats posed by plant and animal pests to New Zealand's biodiversity values (Land Information New Zealand, 2013).

For the Te Arawa lakes, LINZ is the Crown agency through which aquatic plant pests are managed under the Te Arawa lakes Settlement Act 2006.

Boffa Miskell Limited (BML) was appointed as service provider to LINZ and is responsible for the management and coordination of biosecurity services (pest control) on Crown Land. BML assumed the management of these services on 1 July 2009. BML's role includes the following key tasks on behalf of LINZ:

- Site inspections
- Preparation of annual pest control programmes
- Liaison and consultation with interested parties and stakeholders
- Preparation of tenders and contracts for the engagement of pest control contractors
- Monitoring and inspection of operations
- Monitoring of resource consent compliance
- Preparing annual reports on control works operations at various sites
- Reporting on other issues relevant to biosecurity operations
(Boffa Miskell Limited, 2012)

For aquatic plant pest control in the Rotorua Lakes, Boffa Miskell and LINZ are represented on the APCG.

3.6 Department of Conservation (DOC)

DOC have a role in aquatic pest management as an administrator of Crown land under the Biosecurity Act and the relevant RPMP. DOC also has some responsibilities under the Conservation Act (1987) in regards to Section 26ZM transfer or release of live aquatic life - which requires the permission of the Minister of Conservation.

Under the Freshwater Fisheries Regulations (1983), the Minister of Conservation also has the power to issue licences for the harvest of Koi or European Carp and control the removal of these species within the gazetted containment area (sections 67A, 67B and 67C).

The Department's primary role in APCG is through advocacy and education and as part of a joint agency technical and operational response to any pest fish incursions.

3.7 Eastern Fish and Game

Fish and Game New Zealand is the collective brand name of the New Zealand Fish and Game Council and 12 regional Fish and Game Councils, established in 1990 to represent the interests of anglers and hunters, and provide coordination of the management, enhancement, and maintenance of sports fish and game (under Section 26B of the Conservation Act 1987) (Fish and Game New Zealand, 2013) (Fish and Game New Zealand, 2013). The Council/s are responsible to the Minister of Conservation but are both administratively and financially independent of government.

In the Bay of Plenty Region, Eastern Fish and Game Council represent the interests of anglers and hunters and is a member of the APCG group and has a focus on advocacy and education through existing work programmes.

3.8 NIWA

NIWA's purpose is to enhance the economic value and sustainable management of New Zealand's aquatic resources and environments, to provide understanding of climate and the atmosphere and increase resilience to weather and climate hazards to improve the safety and wellbeing of New Zealanders (National Institute for Water and Atmospheric Research, 2013).

NIWA provides expertise on aquatic pest issues as required for individual agencies and fulfills a science advisory role on the APCG.

4. Key work programmes

Many work programmes have now been active for several years within the Bay of Plenty Region. This section provides an outline of the inception, timing and content of the main work programmes undertaken by agencies in regards to aquatic pest work.

4.1 Advocacy and Education

Advocacy and education programmes have formed a large component of the work undertaken by agencies in the Bay of Plenty Region in the prevention of aquatic pest incursions and spread in the last 10 years. Work programmes that have focused on aquatic weed and exotic fish issues have been underway since at least the year 2000 and have included promotional material and educational resources. Since the detection of *Didymosphenia geminata* (Didymo) in October 2004, a greater level of resourcing has been targeted at raising awareness of Didymo and prevention of its spread. This has enabled information and messaging to be incorporated from other aquatic pests (weeds, fish and other) into the general "aquatic pest" advocacy campaign and the general themes, messages and behaviours amalgamated with those specifically targeted towards Didymo. This has resulted in a more holistic aquatic pest message.

Both DOC and BOPRC have had summer employees since 2004 whose sole function has been to focus on working within the Bay of Plenty Region on aquatic pest advocacy and education. Most work has focused on the Rotorua area and the Te Arawa lakes however attention has been paid to many large river systems such as the Rangitikei and Wairoa which are also a focus of recreational activities.

Eastern Fish and Game Council has also maintained a high level of advocacy work which is generally executed through existing work programmes and identification of opportunities to engage with licence holders.

All three agencies try to co-ordinate their efforts and coverage as much as possible.

4.2 Weed cordon construction and monitoring

The concept and development of weed cordons came through discussions in the APCG group around 2007/2008. The concept involved construction of netted “cordons” at key launching points at Te Arawa lakes currently still with relatively intact native plant populations and of high vulnerability to pest weed introduction. The idea is that as boats and other craft launch, any fragments of pest weed species transported on the boat or trailer will drop off within the cordon before being transported into the main body of the lake. Trials of the design indicated they were particularly effective at capturing fragments within the cordon area in various conditions (Lass, 2012).

Table 1 summarises the location and timing of the current weed cordons in the Te Arawa lakes.

Lake	Location	Year	Purpose
Rotomā	Merge Lodge boat ramp	2008	Prevent introduction of aquatic pest weeds
Ōkātina	South west area of lake	2010	Contain a hornwort incursion
Rotomā	Matahi spit boat ramp	2010	Prevent introduction of aquatic pest weeds
Rotoehu	Otautu Bay boat ramp	2011	Prevent spread of aquatic pest weeds from Rotoehu to other lakes - containment
Ōkātina	Boat ramp	2011	Prevent introduction of aquatic pest weeds

Table 1: Weed cordon locations, timing and purpose

Existing cordons are monitored for pest weed presence and checked for maintenance requirements at regular intervals.

Funding has been secured for construction of at least one weed cordons per financial year. Another weed cordon will be built at Lake Rerewhakaaitu (Homestead Arm boat ramp) during 2012/2013 and another at Lake Rotoehu (Kennedy boat ramp) in 2013/2014.

4.3 Aquatic pest surveillance, monitoring and control (biosecurity focus)

BOPRC currently carry out monitoring and surveillance of aquatic weeds at many Te Arawa Lakes. Most of this work is primarily targeted at the prevention of aquatic weed spread between lakes. This work has been undertaken since 2005 and has been a significant part of the council’s Biosecurity programme during this time.

The work and methods were reviewed by NIWA in 2009 and were found to be sound in their approach and a targeted method at achieving early warning of incursions and weed spread. In addition to searching for aquatic pest weed species, work now involves the detection of key pest fish species sign as an addition to the program of work.

Several incursions have also been detected during this surveillance since 2005. In summary they are:

Lake Rotomahana – Hornwort and Egeria	2006
Lake Ōkātina – Hornwort	2009
Lake Ōkareka – Hornwort	2012

The incursion in Lake Rotomahana was too far advanced to be able to respond with control methods when detected in 2006. An incursion response has been underway at Lake Ōkātina since 2009 and is at present continuing. A response plan is yet to be developed for Lake Ōkareka and further information will be gathered during March 2013 as to what action is required.

Presently for Lake Ōkātina, the incursion response is being funded equally by BOPRC and LINZ.

Information from surveillance activities is also used to inform LINZ in regards to key priorities for annual aquatic weed control for sites with a biosecurity focus.

4.4 Nuisance/amenity aquatic plant control

BOPRC has responsibilities under both its 10-Year Plan and the RPMP to address aquatic pest weed issues in regard to biosecurity however the recreational and amenity impact of aquatic pest weed species was previously not particularly well understood. The council had continued to receive an increasing number of requests for aquatic weed control from both a safety and recreational use perspective. To address these amenity issues, a budget of \$50,000 has been allocated in the BOPRC 10-Year Plan. Key sites for control are now identified and funded by BOPRC but control work is carried out under the consent currently held by LINZ.

2012/2013 is the first fully funded year for this type of control by BOPRC. As well as general public sites, some landowner specific control is also undertaken within this programme of work. The cost for undertaking landowner requests and control is recovered from the landowner themselves and is not funded by BOPRC.

4.5 Pest fish

The management of pest fish is conducted primarily through other key work programs such as advocacy and education and aquatic weed monitoring. The size of most of the Te Arawa lakes and some of the rivers in the region makes detection of pest fish difficult and generally unreliable. The main source of information comes from recreational users and fishermen in the community who are regularly utilising waterways.

Information is distributed to educate people on the issues associated with pest fish, what they look like and how to go about reporting any sightings. Staff from Fish and Game and DOC follow up on these sightings and initiate any action as required.

BOPRC maintains a pest fish database where all recordings and actions are entered by the various agencies to enable detection of any continuing trends in particular locations.

BOPRC staff use their annual monitoring of aquatic pests in eight Te Arawa lakes to primarily look for aquatic pest plants but to also look for key pest fish sign which may indicate presence of particular species.

The last response to a pest fish incursion was in 2007 when a large Brown Bullhead catfish washed up dead in Okawa Bay, Lake Rotoiti. After extensive surveying using netting techniques and diving transects no further fish were found. Analysis of the fish was inconclusive as to where it had originated from and if it had been present in Lake Rotoiti for its entire life. It is still unclear as to whether these fish are present in the lake.

BOPRC have recently initiated a brown bullhead catfish surveillance plan (2012-2016) and are in the process of undertaking surveys at several Te Arawa lakes.

4.6 Pond surveys

Since 2009, BOPRC have undertaken pond surveys on private land surrounding priority lake catchments. The benefits of undertaking this activity were highlighted as an additional benefit to the aquatic pest programme during NIWA's review of activities in 2008/09.

Table 2 summarises the work undertaken to date.

Lake	Year surveyed
Lake Ōkareka	2009
Lake Rotomā, Lake Rotoehu and part Lake Rotoiti	2010
Lake Tarawera	2011
Lake Rotorua (High risk areas such as Hamurana)	2012

Table 2: Pond surveys – catchments and timing

Work planned for 2012/2013:

- Remaining part Lake Rotoiti and Ngongotaha (Lake Rotorua)

To date over 2000 properties have been visited and over 300 ponds found and examined for aquatic pests.

4.7 Didymo Sampling

Since Didymo was discovered in New Zealand, BOPRC, DOC and Fish and Game have been responsible for regular sampling at key high risk waterways throughout the Bay of Plenty to test for Didymo presence. This work is undertaken on behalf of Ministry for Primary Industries.

Samples are collected every 3 months from the Kaituna, Motu and Ngongotaha rivers and information entered into a national database and samples sent away to Waikato University for analysis.

5. 2011/12 work undertaken

Please note - for the purposes of this report, figures for both costs and staff hours reported on in the 2011/2012 and 2012/2013 spreadsheets presented in sections 5 and 6 of this report are generally indicative. Also note that any work conducted by the Department of Conservation in both Opotiki and Tauranga area offices has not been included.

Site	Agency	General Work Programme description	Work Completed	Timing	Actual Operational costs (\$)	Actual staff hours	Outputs_actions	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Objective met?
General area work											
Rotorua Lakes Area											
Rotorua Lakes Area	BOPRC	Pest Fish incursions	Support DOC when needed	July 2011- June 2012	N/A	0	No incursions responded to	Biosecurity Act	Regional Pest Management Plan	No new incursions	
Rotorua Lakes Area	BOPRC	Planning_Coordination_Policy Development	APCG coordination, RPMP reporting etc	July 2011- June 2012	N/A	96	Three Meetings held	Biosecurity Act	Regional Pest Management Plan	3 APCG meetings held	
Rotorua Lakes Area	BOPRC	Complaints_Queries_Reports	Respond to public complaints, queries, sightings	July 2011- June 2012	N/A	40	All complaints responded to in 48 hours	Biosecurity Act	Regional Pest Management Plan	All complaints and reports responded to	
Rotorua Lakes Area	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	30000	850	Advocacy material distributed to 99 hotels motels and retail sites within the Rotorua area. 10 Sporting Events attended 794 surveys of individuals and groups undertaken across the whole region	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased	Yes
Rotorua Lakes Area	BOPRC	Monitoring aquatic pests	Surveillance 8 lakes (BOPRC and NIWA - funded by BOPRC)	October 2011- March 2012	70000	850	New incursion of Hornwort detected at Lake Ōkāreka	Biosecurity Act	Regional Pest Management Plan	Any new Incursions detected prior to widespread establishment	
Rotorua Lakes Area	BOPRC	Weed cordon monitoring_maintenance	Monitored all weed cordons and maintained as required	December 2011-March 2013		40	Weed cordons checked, areas monitored and repairs made	Biosecurity Act	Regional Pest Management Plan	Weed cordons effective, no new incursions, cordons functioning and maintained	
Rotorua Lakes Area	BOPRC	Lake SPI	Conducted at 6 Lakes (by NIWA for BOPRC)	April 2012	25000	40	Technical Report produced	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health	Yes
Rotorua Lakes Area	NIWA	Planning_Coordination_Policy Development	Attendance at APCG meetings to provide technical input and ongoing technical support when required (funded by BOPRC)	July 2011- June 2012	N/A	40	Provided assistance and technical input when required for APCG	Aquatic Pest Co-ordination Group	Not applicable		
Rotorua Lakes Area	Fish and Game	Advocacy	Club visits, events, press releases, web information, angler checks	1 Sep 2012 - 31 Aug 2012	N/A	80	11 angler clubs, 9 school groups, 4 other interest group talks/ tours, 2 public open day seminars. 3094 angler contacts (see lake list below)	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions	Yes
Rotorua Lakes Area	Fish and Game	Aquatic plant incursions	Didymo delimiting survey	Quarterly (Mar,Jun, Sep,Dec)	800	8	Ngongotaha Stream survey completed	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions, Reported as clear of didymo	Yes
Rotorua Lakes Area	Fish and Game	Planning_Coordination_Policy Development	APCG attendance	1 Sep 2012 - 31 Aug 2012	N/A	10	Input as required	Biosecurity Act	Fish & Game Operational Work Plan	APCG group meetings attended	Yes
Rotorua Lakes Area	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	N/A	40	Support and input provided as required	Te Arawa Lakes Settlement Act	Not applicable	Input and support as required	Yes
Rotorua Lakes Area	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	November 2011 - March 2012	11870	894	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Rotorua Lakes Area	RDC	Amenity weed control	Removal of nuisance weed at boat ramps (weekly or fortnightly) and at other sites as required	June 2012 - July 2013	50000	25	Boat ramps and lakeshores cleared as required	Rotorua District Plan	Not applicable	Boat ramps and lakeshores cleared as required	Yes
Rotorua Lakes Area	LINZ	Vector management control	Management of biosecurity weed issues on behalf of the Crown in the Te Arawa Lakes	December 2012 - March 2013	Specific details contained under each lake	Specific details contained under each lake	Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes

Site	Agency	General Work Programme description	Work Completed	Timing	Actual Operational costs (\$)	Actual staff hours	Outputs_actions	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Objective met?
Whakatane District											
Whakatane District	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Advocacy material distributed to 17 hotels motels and retail sites surveys of individuals included in regional statistics	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Whakatane District	Fish and Game	Advocacy	Club visits, events, press releases, web information, angler checks	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	2 club meeting, 1 high school visit	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions	Yes
Whakatane District	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Tauranga District											
Tauranga District	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Advocacy material distributed to 20 hotels motels and retail sites surveys of individuals included in regional statistics	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Tauranga District	Fish and Game	Advocacy	Club visits, events, press releases, web information, angler checks	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	5 club meetings, 7 high school group visits	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions	Yes
Tauranga District	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Specific Lake Work											
Lake Okaro											
Lake Okaro	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Okareka											
Lake Okareka	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Okareka	LINZ	Vector management control	2.2ha - Acacia Road Bay area - Lagarosiphon	December 2011	\$3,080	N/A	Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes
Lake Okareka	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Support and input provided as required	Te Arawa Lakes Settlement Act	Not applicable	Input and support as required	Yes
Lake Okareka	DOC	Advocacy	visited Boyes Beach and Acacia Point Reserve	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Lake Okareka	BOPRC	Weed cordon monitoring_maintenance	Weed cordons effective, no new incursions, cordons functioning and maintained	March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Weed cordons effective, no new incursions, cordons functioning and maintained	Biosecurity Act	Regional Pest Management Plan	No new incursions	
Lake Okareka	BOPRC	Monitoring aquatic pests	Surveillance 8 lakes (BOPRC and NIWA - funded by BOPRC)	October 2011- March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	New incursion of Hornwort detected at Lake Ōkāreka	Biosecurity Act	Regional Pest Management Plan	No new incursions	
Lake Rerewhaakitu											
Lake Rerewhaakitu	BOPRC	Advocacy	Summer Students, public surveys, events	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	
Lake Rerewhaakitu	LINZ	Vector management control	1ha - Homestead Arm - Lagarosiphon	December 2011	\$1,400	N/A	Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes

Site	Agency	General Work Programme description	Work Completed	Timing	Actual Operational costs (\$)	Actual staff hours	Outputs_actions	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Objective met?
Lake Rerewhaakitu	DOC	Advocacy	Visited Ashpit road, Brett Road and Roe Reserve	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Lake Rerewhaakitu	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community (conducted by NIWA for BOPRC)	April 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Survey undertaken and reported on	Not applicable	Not applicable	Monitoring information gathered for aquatic plant composition and health	
Lake Rotorua											
Lake Rotorua	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	
Lake Rotorua	Fish and Game	Aquatic plant incursions	Didymo delimiting survey (Ngongotaha Stm)	Quarterly (Mar,Jun, Sep, Dec)	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Survey undertaken every quarter and processed	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions at survey site	Yes
Lake Rotorua	Fish and Game	Advocacy	Summer Survey and angler communications (Face to Face).	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Summer - 201 summer contacts,	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions	Yes
Lake Rotorua	LINZ	Vector management control	42.8ha - Kawaha Point area - Lagarosiphon	December 2011 - April 2012	\$59,920	N/A	Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes
Lake Rotorua	DOC	Advocacy	Visited Hannahs Bay, Waiteti, Reeme Road, Hamuarna, Hamurana Springs, Sulphur Point and Lakefront.	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Lake Rotorua	BOPRC	Pond surveys	Surveyed High risk areas such as Hamurana and follow up as required	Ongoing	15000	N/A	Survey carried out and reported on	Biosecurity Act	Regional Pest Management Plan	Pest plants identified and appropriate action taken. Advocacy and education of landowners increased	
Lake Rotoiti											
Lake Rotoiti	BOPRC	Advocacy	Summer Students, public surveys, events	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Rotoiti	Fish and Game	Advocacy	Lake creel surveys and angler communication (Opening Day, Summer and Winter creel surveys).	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Oday - 396 contacts, Summer - 678, Winter - 285	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions	Yes
Lake Rotoiti	LINZ	Vector management control	20.1ha - Cherry Bay, Gisborne Point, Hauparu Bay, Okere Inlet, Okawa Bay, Otaramarae, Te Weta Bay Hot springs, Kakaho Bay, Te Ruato Bay	December 2011 - April 2012	\$28,140	N/A	Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes
Lake Rotoiti	DOC	Advocacy	Visited Otaramarae, Ohau Channel, Gisborne Point, hinehopu and Kaituna	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Lake Tarawera											
Lake Tarawera	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Tarawera	Fish and Game	Advocacy	Lake creel surveys and angler communication (Opening Day, Summer and Winter creel surveys).	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Oday - 622 contacts, Summer - 482, Winter - 123	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions	Yes
Lake Tarawera	LINZ	Vector management control	5.4ha - Boat shed bay, Hot water beach, Humphries Bay, Stoney Point, the Landing-	December 2011	\$7,560		Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable		Yes
Lake Tarawera	DOC	Advocacy	VisitedThe Landing, Boatshed Bay, Stoney Point, Otumutu Bay and Outlet	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Lake Tarawera	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community (conducted by NIWA for BOPRC)	April 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Survey undertaken and reported on	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health	

Site	Agency	General Work Programme description	Work Completed	Timing	Actual Operational costs (\$)	Actual staff hours	Outputs_actions	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Objective met?
Lake Tikitapu											
Lake Tikitapu	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Tikitapu	DOC	Advocacy	Visited Tikitapu. Attended Tri Series, Hospice Half Ironman and Kayak regatta events for CCD	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required			No new incursions	Yes
Lake Tikitapu	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community (conducted by NIWA for BOPRC)	April 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Survey undertaken and reported on	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health	
Lake Rotokakahi											
Lake Rotokakahi	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Rotokakahi	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community (conducted by NIWA for BOPRC)	April 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Survey undertaken and reported on	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health	Yes
Lake Rotomahana											
Lake Rotomahana	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Okataina											
Lake Okataina	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Okataina	Fish and Game	Advocacy	Lake creel surveys and angler communication (Opening Day, Summer and Winter creel surveys).	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Oday - 177 contacts, Summer - 91 Winter - 39	Biosecurity Act	Fish & Game Operational Work Plan	No new incursions	Yes
Lake Okataina	LINZ	Vector management control	5.2ha - Haumingi Bay, Oruaroa Point Beach, Boat Ramp, South West Corner	April 2012	\$7,280	N/A	Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes
Lake Okataina	BOPRC	Aquatic plant incursions	Hornwort incursion respoons	November 2011 - March 2012		250	Response plan followed	Biosecurity Act	Regional Pest Management Plan		
Lake Okataina	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Support and input provided as required	Te Arawa Lakes Settlement Act	Not applicable	Input and support as required	Yes
Lake Okataina	DOC	Advocacy	Visited Okatina. Talk given for Rotary Club Okatina Swim event at Aquatic centre February 29	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Lake Okataina	BOPRC	Weed cordon monitoring_maintenance	Weed cordons effective, no new incursions, cordons functioning and maintained	March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Weed cordons effective, no new incursions, cordons functioning and maintained	Biosecurity Act	Regional Pest Management Plan	No new incursions	
Lake Okataina	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community (conducted by NIWA for BOPRC)	April 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Survey undertaken and reported on	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health	Yes
Lake Rotoma											
Lake Rotoma	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Rotoma	BOPRC	Weed cordon monitoring_maintenance	Weed cordons effective, no new incursions, cordons functioning and maintained	Mar-13	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Weed cordons effective, no new incursions, cordons functioning and maintained	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes

Site	Agency	General Work Programme description	Work Completed	Timing	Actual Operational costs (\$)	Actual staff hours	Outputs_actions	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Objective met?
Lake Rotoma	LINZ	Vector management control	3.5ha - Whangaroa Bay Boat Ramp, Te Matahi Boat Ramp	December 2011	\$4,900	N/A	Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes
Lake Rotoma	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Support and input provided as required	Te Arawa Lakes Settlement Act	Not applicable	Input and support as required	Yes
Lake Rotoma	DOC	Advocacy	Visited Merge Lodge and Matai Spit. Attended Lake Rotoma Ruamata Waka Ama for CCD	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required	Biosecurity Act	Not applicable	No new incursions	Yes
Lake Rotoehu											
Lake Rotoehu	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Results included in regional information	Biosecurity Act	Regional Pest Management Plan	No new incursions	Yes
Lake Rotoehu	LINZ	Vector management control	7.5ha - Otautau Bay and Kennedy Bay	December 2011 - April 2012	\$10,500	N/A	Spraying achieved as planned, biosecurity risks reduced	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes
Lake Rotoehu	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Support and input provided as required	Te Arawa Lakes Settlement Act	Not applicable	Input and support as required	Yes
Lake Rotoehu	DOC	Advocacy	visited Kennedy Bay and Otautau Bay	November 2011 - March 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Events attended, material distributed, general advocacy as required			No new incursions	Yes
Lake Rotoehu	BOPRC	Lake Nutrient reduction	Hornwort Harvesting up to 3000tonnes programmed	March - June 2012	70,000	80	Hornwort removed	Rotorua Lakes Strategy	Regional Pest Management Plan	Nutrients reduced through removal of hornwort	Yes
Lake Rotoehu	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community (conducted by NIWA for BOPRC)	April 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Survey undertaken and reported on	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health	Yes

Table 3: Summary of 2011/2012 APCG agency work

6. 2012/2013 planned work

Please note - for the purposes of this report, figures for both costs and staff hours reported on in the 2011/2012 and 2012/2013 spreadsheets presented in sections 5 and 6 of this report are generally indicative. . Also note that any work conducted by the Department of Conservation in both Opotiki and Tauranga area offices has not been included.

Site	Agency	General Work Programme description	Planned work	Timing	Planned Operational costs (\$)	Planned staff hours	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Work completed	Objective met?	Actual Operational cost (\$)	Actual staff time cost (\$)
General area work													
Rotorua Lakes Area													
Rotorua Lakes Area	BOPRC	Pest Fish incursions	Support DOC when needed	July 2012-June 2013	0	40	Biosecurity Act	Not applicable	No new incursions				
Rotorua Lakes Area	BOPRC	Planning_Coordination_Policy Development	APCG coordination, RPMP reporting etc	July 2012-June 2013	0	120	Aquatic Pest Co-ordination Group	Regional Pest Management Plan	3 APCG meetings held Report detailing groups activities produced				
Rotorua Lakes Area	BOPRC	Complaints_Queries_Reports	Respond to public complaints, queries, sightings	July 2012-June 2013	0	120	Regional Pest Management Plan	Not applicable	All complaints and reports responded to				
Rotorua Lakes Area	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	30000	840	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Rotorua Lakes Area	BOPRC	Monitoring aquatic pests	Surveillance 8 lakes	October 2012- May 2013	70000	850	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment				
Rotorua Lakes Area	BOPRC	Amenity weed control	Spraying in Feb March 2013	February_March 2013	40000	20	Not applicable	Not applicable	Reduction in nuisance weeds				
Rotorua Lakes Area	BOPRC	Aquatic plant spray monitoring	Monitoring pre and post for amenity weed control	Pre spray October- November 2012 Post spray Feb - March 2013	5000	240	Biosecurity Act	Regional Pest Management Plan	Intended spraying successful, amenity and biosecurity values maintained				
Rotorua Lakes Area	BOPRC	Weed cordon monitoring_maintenance	Monitor cordons for weed incursions and check structures - maintain if necessary	December 2012 - March 2013		40	Biosecurity Act	Regional Pest Management Plan	Weed cordons effective, no new incursions, cordons functioning and maintained				
Rotorua Lakes Area	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community (Conducted by NIWA for BOPRC)	April 2013	25000	24	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health				
Rotorua Lakes Area	Fish and Game	Complaints_Queries_Reports	Respond to angler enquiries/ check samples/ photos, pass on to DOC	1 Sep 2012 - 31 April 2013	N/A	20	Biosecurity Act	Not applicable	All complaints and reports responded to				
Rotorua Lakes Area	Fish and Game	Advocacy	Club visits, events, press releases, web information	1 Sep 2012 - 31 April 2013	0	80	Biosecurity Act	Not applicable	No new incursions				
Rotorua Lakes Area	Fish and Game	Aquatic plant incursions	Didymo delimiting survey	Quarterly (Mar,Jun,Sep,Dec)	800	8	Biosecurity Act	Not applicable	No new incursions				
Rotorua Lakes Area	Fish and Game	Planning_Coordination_Policy Development	APCG attendance	1 Sep 2012 - 31 Aug 2012	0	4	Not applicable	Not applicable	No new incursions, public knowledge increased				
Rotorua Lakes Area	TALT	General support and advocacy, landowner	Work with other stakeholders, support and provide input	Ongoing	N/A	40	Te Arawa Lakes Settlement Act	Not applicable	Support and input provided as required				
Rotorua Lakes Area	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	16606	772	Biosecurity Act	Not applicable	No new incursions				
Rotorua Lakes Area	LINZ	Vector management control	Management of biosecurity weed issues on behalf of the Crown in the Te Arawa Lakes	December 2012 - March 2013	Specific details contained under each lake	Specific details contained under each lake	Te Arawa Lakes Settlement Act	Regional Pest Management Plan	Intended spraying successful, amenity and biosecurity values maintained				
Rotorua Lakes Area	RDC	Amenity weed control	Removal of nuisance weed at boat ramps (weekly or fortnightly) and at other sites as required	June 2012 - July 2013	50000	25	Rotorua District Plan	Not applicable	Recreational and amenity values maintained				

Site	Agency	General Work Programme description	Planned work	Timing	Planned Operational costs (\$)	Planned staff hours	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Work completed	Objective met?	Actual Operational cost (\$)	Actual staff time cost (\$)
Whakatane District													
Whakatane District	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Whakatane District	Fish and Game	Advocacy	Club visits, events, press releases, web information, angler checks	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions				
Whakatane District	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions				
Tauranga District													
Tauranga District	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Tauranga District	Fish and Game	Advocacy	Club visits, events, press releases, web information, angler checks	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased				
Tauranga District	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased				
Specific Lake Work													
Lake Okaro													
Lake Okaro	BOPRC	Advocacy	Summer Students, public surveys, events	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Lake Okaro	BOPRC	Monitoring aquatic pests	Lake surveillance of aquatic vegetation for new aquatic plant incursions - transect dives	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment				
Lake Okaro	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community	June 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health				
Lake Okareka													
Lake Okareka	BOPRC	Aquatic plant incursions	Treatment and surveillance of hornwort incursion	February 2013			Biosecurity Act	Regional Pest Management Plan	No new incursions				
Lake Okareka	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Lake Okareka	BOPRC	Monitoring aquatic pests	Lake surveillance of aquatic vegetation for spread of hornwort or new incursions of other species - transect dives	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Lake Okareka Action Plan	Any new Incursions detected prior to widespread establishment				
Lake Okareka	BOPRC	Weed cordon monitoring_maintenance	Monitoring of vegetation in cordon and cordon condition	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Lake Okareka Action Plan	Weed cordons effective, no new incursions, cordons functioning and maintained				
Lake Okareka	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Te Arawa Lakes Settlement Act	Not applicable	Support and input provided as required				
Lake Okareka	BOPRC	Aquatic plant spray monitoring	Monitoring (pre and post) of amenity weed control	Pre spray October- November 2012 Post spray Feb - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained				

Site	Agency	General Work Programme description	Planned work	Timing	Planned Operational costs (\$)	Planned staff hours	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Work completed	Objective met?	Actual Operational cost (\$)	Actual staff time cost (\$)
Lake Okareka	BOPRC	Control marginal aquatic pest plants	Control of marginal vegetation - Yellow Flag Iris	November 2012 - February 2013		40	Regional Pest Management Plan	Lake Okareka Action Plan	Control undertaken and YFI contained				
Lake Okareka	LINZ	Vector management control	2.2ha sprayed. No further work this season.	December 2012 - March 2013	N/A	N/A	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes		3080	
Lake Okareka	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased				
Lake Okareka	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community	June 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health				
Lake Rerewhaakitu													
Lake Rerewhaakitu	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Lake Rerewhaakitu	BOPRC	Monitoring aquatic pests	Lake surveillance of aquatic vegetation for spread of hornwort or new incursions of other species - transect dives	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment				
Lake Rerewhaakitu	BOPRC	Weed cordon construction	Build and install new weed cordon for ramp at Homestead Arm	March 2013	20000	80	Regional Pest Management Plan	Not applicable	Weed cordons effective, no new incursions, cordons functioning and maintained				
Lake Rerewhaakitu	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Te Arawa Lakes Settlement Act	Not applicable	Support and input provided as required				
Lake Rerewhaakitu	LINZ	Vector management control	1ha sprayed. No further work this season.	December 2012 - March 2013	N/A	N/A	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes		1400	
Lake Rerewhaakitu	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased				
Lake Rotorua													
Lake Rotorua	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Lake Rotorua	BOPRC	Amenity weed control	Undertake annual program of amenity site specific aquatic plant control	February - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	Intended spraying successful, amenity and biosecurity values maintained				
Lake Rotorua	BOPRC	Aquatic plant spray monitoring	Monitoring (pre and post) of amenity weed control	Pre spray October- November 2012 Post spray Feb - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained				
Lake Rotorua	BOPRC	Pond surveys	Survey of ponds on private land for plant and animal aquatic pests	Ongoing	15000	80	Biosecurity Act	Regional Pest Management Plan	Pest plants identified and appropriate action taken. Advocacy and education of landowners increased				
Lake Rotorua	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community	June 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health				
Lake Rotorua	Fish and Game	Aquatic plant incursions	Didymo delimiting survey- Ngongotaha Stm)	Quarterly (Mar,Jun,Sep,Dec)	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				

Site	Agency	General Work Programme description	Planned work	Timing	Planned Operational costs (\$)	Planned staff hours	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Work completed	Objective met?	Actual Operational cost (\$)	Actual staff time cost (\$)
Lake Rotorua	Fish and Game	Advocacy	Summer Survey and angler communications (Face to Face).	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased				
Lake Rotorua	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased				
Lake Rotorua	LINZ	Vector management control	25ha sprayed. Further follow up boat spraying planned.	March - April 2013	\$10,000	N/A	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes	Yes	35000	
Lake Rotoiti													
Lake Rotoiti	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Lake Rotoiti	BOPRC	Aquatic plant spray monitoring	Monitoring (pre and post) of amenity weed control	February - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained				
Lake Rotoiti	BOPRC	Amenity weed control	Undertake annual program of amenity site specific aquatic plant control	February - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Lake Rotorua and Lake Rotoiti Action Plan	Intended spraying successful, amenity and biosecurity values maintained				
Lake Rotoiti	BOPRC	Control marginal aquatic pest plants	Hinehopu properties_Yellow flag iris	November 2012 - February 2013		8	Regional Pest Management Plan	Not applicable	Intended spraying successful, amenity and biosecurity values maintained				
Lake Rotoiti	Fish and Game	Advocacy	Lake creel surveys and angler communication (Opening Day, Summer and Winter creel surveys).	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased				
Lake Rotoiti	LINZ	Vector management control	18.6ha sprayed. Further follow up boat spraying planned.	March - April 2013	\$5,000	N/A	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	No		26040	
Lake Rotoiti	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased				
Lake Rotoiti	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community	June 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health				
Lake Tarawera													
Lake Tarawera	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased				
Lake Tarawera	BOPRC	Monitoring aquatic pests	Surveillance whole lake	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment				
Lake Tarawera	BOPRC	Amenity weed control	Undertake annual program of amenity site specific aquatic plant control	February - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Not applicable	Intended spraying successful, amenity and biosecurity values maintained				
Lake Tarawera	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community	June 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health				
Lake Tarawera	LINZ	Vector management control	4.5ha sprayed. No further work this season.	December 2012 - March 2013	N/A	N/A	Biosecurity Act	Regional Pest Management Plan	Intended spraying successful, amenity and biosecurity values maintained	Yes	Yes	6300	
Site	Agency	General Work Programme description	Planned work	Timing	Planned Operational costs (\$)	Planned staff hours	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Work completed	Objective met?	Actual Operational cost (\$)	Actual staff time cost (\$)

Lake Tarawera	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased					
Lake Tikitapu														
Lake Tikitapu	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased					
Lake Tikitapu	BOPRC	Monitoring aquatic pests	Lake surveillance of aquatic vegetation for new aquatic plant incursions - transect dives	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment					
Lake Tikitapu	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased					
Lake Rotokakahi														
Lake Rotokakahi	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased					
Lake Rotokakahi	BOPRC	Monitoring aquatic pests	Lake surveillance of aquatic vegetation for new aquatic plant incursions - transect dives	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment					
Lake Rotomahana														
Lake Rotomahana	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased					
Lake Rotomahana	BOPRC	Monitoring aquatic pests	Lake surveillance of aquatic vegetation for new aquatic plant incursions - transect dives	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment					
Lake Rotomahana	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community	June 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health					
Lake Okataina														
Lake Okataina	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased					
Lake Okataina	BOPRC	Monitoring aquatic pests	Lake surveillance of aquatic vegetation for new aquatic plant incursions - transect dives	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment					
Lake Okataina	BOPRC	Weed cordon monitoring_maintenance	Monitoring of vegetation in cordon and cordon condition	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Weed cordons effective, no new incursions, cordons functioning and maintained					
Lake Okataina	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Te Arawa Lakes Settlement Act	Not applicable	Support and input provided as required					
Lake Okataina	BOPRC	Aquatic plant incursions	Okataina Hornwort Incursion	December 2012	18000	225	Biosecurity Act	Regional Pest Management Plan	Incursion dealt with according to plan and contained					
Lake Okataina	Fish and Game	Advocacy	Lake creel surveys and angler communication (Opening Day, Summer and Winter creel surveys).	1 Sep 2012 - 31 Aug 2012	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased					
Lake Okataina	LINZ	Vector management control	Boat spraying planned.	March - April 2013	\$7,500		Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained					
Site	Agency	General Work Programme description	Planned work	Timing	Planned Operational costs (\$)	Planned staff hours	Overarching Strategic Document	Secondary guiding document	Objective_Outcome	Work completed	Objective met?	Actual Operational cost (\$)	Actual staff time cost (\$)	
Lake Okataina	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and	December 2012 - March 2013	Work included in	Work included in	Biosecurity Act	Not applicable	No new incursions, public knowledge increased					

			talks.		total for Rotorua Area	total for Rotorua Area									
Lake Rotoma															
Lake Rotoma	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased						
Lake Rotoma	BOPRC	Monitoring aquatic pests	Lake surveillance of aquatic vegetation for new aquatic plant incursions - transect dives, pre spray monitoring of sites	October 2012- May 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Any new Incursions detected prior to widespread establishment						
Lake Rotoma	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Te Arawa Lakes Settlement Act	Not applicable	Support and input provided as required						
Lake Rotoma	BOPRC	Weed cordon monitoring_maintenance	Monitoring of vegetation in cordon and cordon condition	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Weed cordons effective, no new incursions, cordons functioning and maintained						
Lake Rotoma	BOPRC	Lake SPI	Survey lake using LakeSPI method to assess aquatic plant community	June 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Rotorua Lakes Strategy	Not applicable	Monitoring information gathered for aquatic plant composition and health						
Lake Rotoma	LINZ	Vector management control	3.5ha sprayed. No further work this season.	N/A	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained	Yes	Yes		4900		
Lake Rotoehu															
Lake Rotoehu	BOPRC	Advocacy	Summer Students, public surveys, events (contribution of funding from Ministry of Primary Industries for this work)	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Regional Pest Management Plan	No new incursions, public knowledge increased						
Lake Rotoehu	BOPRC	Weed cordon monitoring_maintenance	Monitoring of vegetation in cordon and cordon condition	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Regional Pest Management Plan	Not applicable	Weed cordons effective, no new incursions, cordons functioning and maintained						
Lake Rotoehu	TALT	General support and advocacy, landowner	Support for cordons as landowner	Ongoing	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Te Arawa Lakes Settlement Act	Not applicable	Support and input provided as required						
Lake Rotoehu	BOPRC	Lake Nutrient reduction	Hornwort Harvesting up to 3000tonnes programmed	March - June 2013	Work on hold	Work on hold	Rotorua Lakes Strategy	Lake Rotoehu Action Plan	Nutrients reduced through removal of hornwort						
Lake Rotoehu	LINZ	Vector management control	Boat spraying planned.	March - April 2013	\$7,000	N/A	Biosecurity Act	Not applicable	Intended spraying successful, amenity and biosecurity values maintained						
Lake Rotoehu	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased						
Lake Ngapouri															
Lake Ngapouri	DOC	Advocacy	Advocacy distribution at high profile sites/events/businesses. Surveys and talks.	December 2012 - March 2013	Work included in total for Rotorua Area	Work included in total for Rotorua Area	Biosecurity Act	Not applicable	No new incursions, public knowledge increased						
Lake Ngahewa															
Lake Ngahewa															
Lake Tutaeinanga															

Table 4: Summary of 2012/2013 APCG agency work

7. Summary

A range of activities in relation to aquatic pests are undertaken by members of the APCG group. These activities fit within a variety of legislation and mandates. The amount of work and funding for work within the aquatic pest area also varies between each of the APCG members and relates to this range of mandates and responsibilities.

The APCG group of activities has a particular focus on the Te Arawa lakes/Rotorua Area although some activities, particularly advocacy are conducted throughout the entire Bay of Plenty Region.

Many of the work programmes are now well established and the APCG itself has a clear terms of reference for the functioning of this group. This reporting will help to add cohesion to this group of activities and enable the work and expenditure to be tracked for the group over time.

For the 2011/2012 financial year, the total expenditure for APCG agencies collectively in work programmes associated with aquatic pests was \$395,450.00 operational dollars and 3343 staff hours.

Table 5 summarises the percentage of expenditure and hours by agency for 2011/2012.

Agency	Operational \$\$	Staff hours
BOPRC	53%	67%
DOC Rotorua Lakes Area Office (excludes Opotiki and Tauranga Area offices)	3%	27%
Eastern Fish and Game	1%	3%
TALT	0%	1%
RDC	13%	1%
LINZ	30%	0%
NIWA	0%	1%

Table 5: Summary of percentage contribution of operational expenditure and staff hours by agency for 2011/2012

By comparison, for the 2012/2013 financial year, the total anticipated expenditure for APCG in aquatic pest work is \$396,626.00 (of which \$76,720.00 has been spent at the time of writing) while the total anticipated staff hours are 3676.

As this APCG reporting continues, the total commitment from the agencies in both operational and staff hours will be able to be tracked and provide a picture of the level of importance this area of work has in the Bay of Plenty Region.

Table 6 summarises APCG activities against group objectives as outlined in the APCG terms of reference.

Objective	Activities undertaken to achieve objective
1. To facilitate communication and liaison regarding aquatic pest issues between the representative organisations	Meetings held every 3 months and information shared Liaison between various members on particular issues and work undertaken
2. To act as a forum to promote further discussion and input on technical issues from relevant organisations	Technical issues have been discussed where appropriate and expertise of members drawn on when required.
3. To plan, implement and report on operational activities in regard to aquatic pests within the Rotorua Lakes	Formulation of this annual report and planning for the coming year has been completed – all agencies contributed
4. To raise awareness and understanding of aquatic pest issues in the Rotorua Lakes	All agencies are doing this within their relevant mandates. Significant resources have been used to raise awareness through advocacy programmes from several of the APCG agencies
5. To promote consistency of policy and strategic direction between agencies for the management of aquatic pests within the Rotorua Lakes	Information sharing contributes to achieving this objective. Each agency the ability to comment on planning and policy documents from other agencies and APCG provides a forum for discussion of these policies and direction
6. Regularly review these objectives, how they will be achieved and the overall effectiveness of the group	Review is ongoing and would benefit from being part of the annual reporting and planning cycle

Table 6: Summary of key activities undertaken to meet APCG objectives

8. Recommendations

During the course of this work it has been identified some areas where improvements could be made. The following recommendations have come through undertaking this work:

- Clearer reporting on the aquatic weed spray programmes in regard to what work is being undertaken for vector management control, amenity values or other requirements.
- Improve clarity on who has undertaken which spray programme, for what purpose and from which area of funding to provide transparency to the programme
- For BOPRC to continue to work on collation of the master lakes spreadsheet to bring all work areas together for each Te Arawa lake to provide a cohesive summary of both recent and current work within the extensive BOPRC work programmes.

- Consideration given to a more holistic approach to include work and issues relevant to Lakes Ngāpouri, Ngāhewa and Tutaeinanga which fall within the Waikato Regional boundaries. These lakes may be at risk from aquatic pests or pose a risk to other Te Arawa lakes. It would be worthwhile to liaise with Waikato Regional Council in regards to activities as well as the work currently being undertaken by DOC Rotorua Lakes on wetland restoration.
- Ensure the 2012/2013 planned work is reported on and a 2013/2014 plan developed by the end of July 2013.

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