LAKE BIOSECURITY –
LOCAL ACTIONS AND RESULTS

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Hamish is a Biosecurity Officer for the BOPRC. He co-ordinates the freshwater biosecurity programme for the Rotorua Lakes. His talk is on the BOPRC freshwater biosecurity programme local actions around the Rotorua lakes.

TRANSCRIPT

Thank you, I keep my biography short and sharp and probably should add that in a cruel twist I was born the year hornwort first invaded Lake Rotorua. I have been working from the Rotorua office for 11 years as a biosecurity officer focusing mainly on freshwater biosecurity.

Today I will go through our freshwater biosecurity programme. We have five main work streams:-

- Aquatic pest awareness programme (communications/ behaviour change)
- Weed Cordons
- Surveillance
- **Incursion response**
- Aquatic Pest Co-ordination Group

I have highlighted the incursion response because that is my main topic.

Our Aquatic Pest Co-ordination Group is made up from partners that have a management role around the Rotorua Lakes. This APCG group meet twice a year and talk about research, information sharing, work planning, shared coms and issues that we have. A hot topic is the spray programme around the Rotorua Lakes.

Tracey Burton from NIWA covered the freshwater invasive species in her presentation so I will only add to this quickly. This slide shows some of the invasive freshwater species that are present in New Zealand. Lagrosiphon is present in 9 Rotorua lakes, hornwort is in 7 lakes, hydrilla is not in any lakes but there have been infestations in other regions in the North Island. Egeria is in 6 lakes and there are no koi carp present in any Rotorua lakes.

Communications/behaviour change is really important work in our programme. Behaviour change is hard to do but we have some awesome communications people within Council that come up with good slogans - such as '*Clean your prop and trailer'* - using short sharp messages. It is all about telling people what the behaviour is that you want them to undertake i.e. too clean/clear their boat and trailer of lake weed. These are some of our summer giveaways and signage to tell people what to do, such as **Check, Clean and Dry** before going from one water way to another.

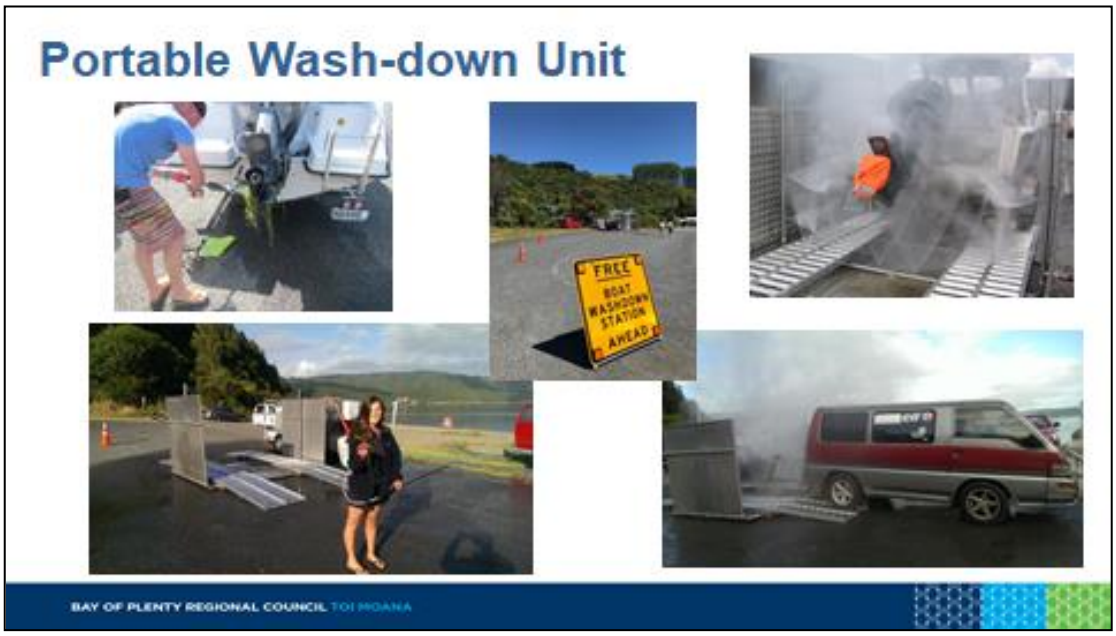
An important part of the programme is summer students. For 13 years we have employed two summer students who do a brilliant job. They talk to lake users about the issues, which a lot of lake users do not know. The students hand out giveaways such has prop flags, fish bags and floating key rings for when keys are lost over the side of the boat. The giveaways are designed to be useful to the lake user in some way.

The students collect data enabling us to target different areas and events over the summer with our messaging. This slide has two graphs, the top one relates to a question that the students asked the lake users over the summer period "*was the vessel checked or cleaned before launching their boat*". The blue line on the graph is 'Yes' and the data over the years is reasonably positive showing that we are going in the right direction. The red line is 'No' and going down which shows our communications programme is working well. The students produce a council published report at the end of the summer.

A big issue here in Rotorua is that there are large numbers of lake users travelling between lakes which are the main vector for lakeweed transportation. We have weeds in some lakes that are not in others and they can be situated in close proximity to each other.

We have a portable wash-down unit managed by a contractor. It is the only one in New Zealand made by the same company that built the wash-down at Sulphur Point boat ramp in Tauranga. It is set up at events, can be put anywhere and is a good education tool. When parked up it is a big piece of machinery and very noticeable. People ask questions, relating to lake weed management, and while carrying on the conversation they get their boat cleaned for free. We have intercepted hornwort at Lake Rotoma through the wash-down unit which sprayed it off.

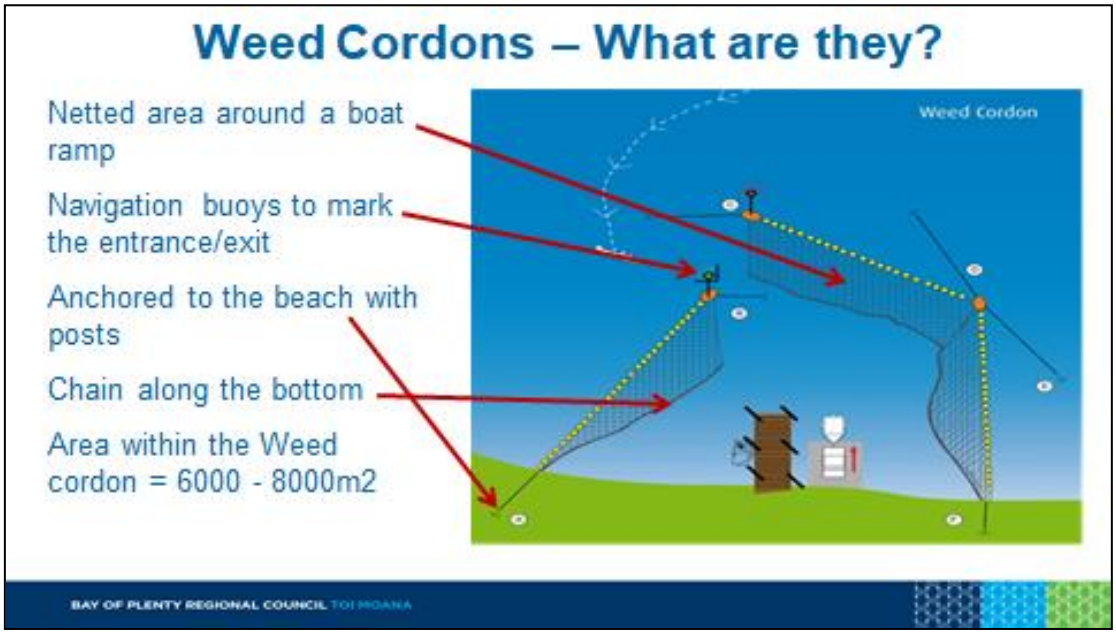
We undertake a lot of surveillance and have our own dive team consisting of 6 people available within Council. We also use contractors that we use as Biosecurity divers within the team. We use underwater scooters for our surveillance these are a brilliant adaption to our team because they cover large areas and allow less fatigue with the diver operating



the scooter. We also do beach searches, spot dives, manta boarding. We do surveillance in 8 lakes, Rotomā, Ōkataina, Rotokakahi, Tikitapu, Ōkāreka, Ōkaro, Rerewhakaaitu and Rotomahana, these lakes are chosen because they are our high value lakes with the least amount of pest weeds. Within those lakes we determine high risks sites that are the vector points such as slip ways or boat ramps. However now we are at the point of checking everywhere looking for aquatic pest plants and fish such as catfish and koi carp.

We've been doing surveillance for about 15 years. In a recent NIWA review of our surveillance programme they stated that overall we were using best practice. Our surveillance programmes have had consistent personnel involved, getting better and better. This slide is the Lake Ōkataina surveillance overview which shows we check everywhere apart from spots where we know there will be plants growing, such as sheer drop rock walls or depths down to 40 metres. When we find a pest plant we stop and put a surface buoy, which is attached to the diver, so we can mark exactly where each plant is for control purposes.

Weed cordons are a weed management tool set up in 9 different locations in 7 lakes around the Rotorua lakes and are a netted buoyed area acting like a fenced off containment zone around a boat ramp or bay. Navigation buoys are at the entrance so boaties know where to go in and out. They have posts on the shore to hold the cordon in place, chain along the bottom. The average cost of a weed cordon is about $40,000 to install. They have been working very well; research showed they were around 80% to 85% effective for keeping fragments in. Theoretically when somebody drives in with a trailer that has not seen all our signs or talked to our students or knows what they need to do, if all the fragments come off their trailer and boat, they will be encapsulated within that fenced off cordon area.



Weed cordons have been installed at Lakes Rotoehu, Rotoiti, Ōkataina (2), Rotomā (2), Otamangakau, Rerewhakaaitu and Ōkāreka**.**

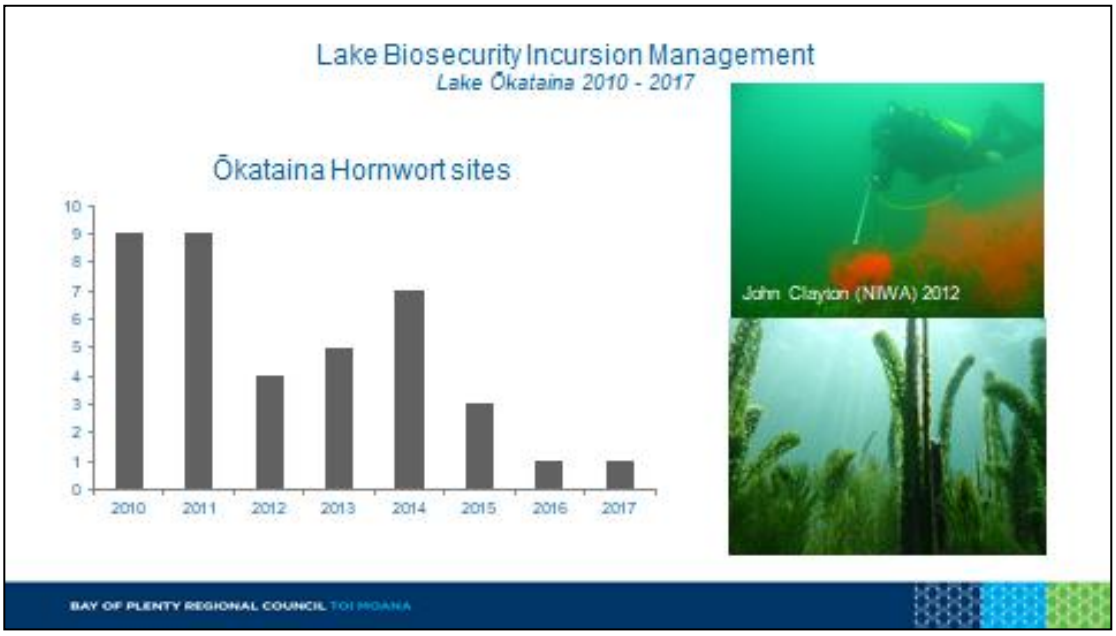
What do we do when we have a new incursion? We develop an incursion response plan which will include:

- Eradication plan
- Ongoing surveillance
- Containment using a weed cordon
- Prevention of human assisted spread
  (Sec100 and Sec130 Biosecurity Act)
- Increased public awareness

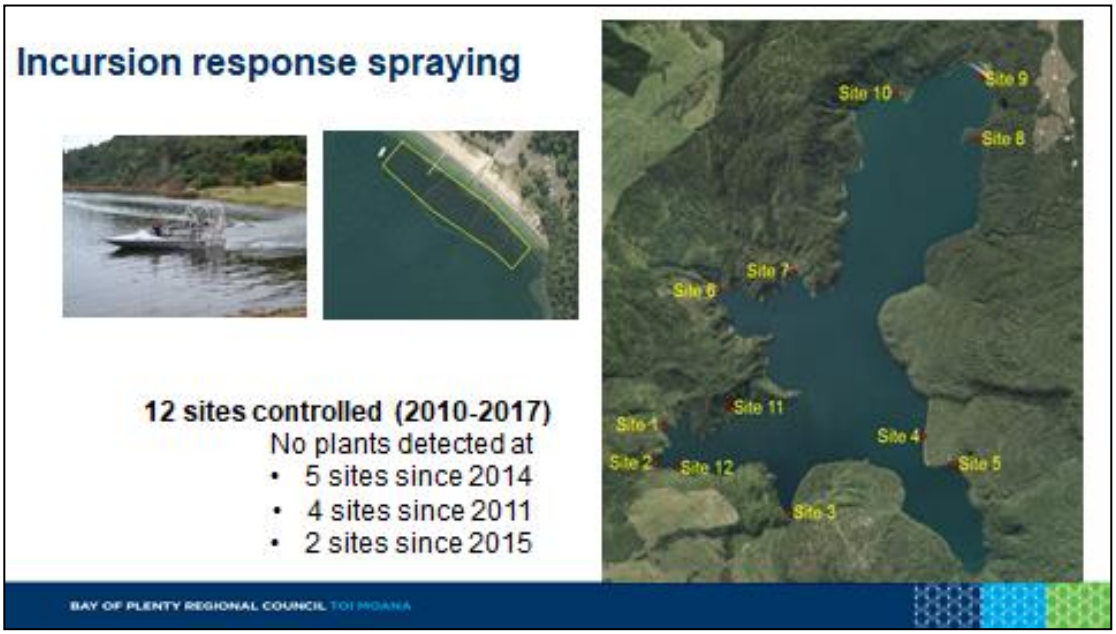
In 2010 at Lake Ōkataina an incursion of hornwort was detected by Council and NIWA staff. We initiated an incursion management plan which had three options, do nothing, which was not really an option, containment or eradication. We had the incursion management plan signed off by Council. It was decided that we would set our target for eradication. We undertook a delimiting survey in early 2010 as a result we detected 9 sites with hornwort present. These sites were sprayed with excellent results seen. In August 2010 we installed a containment weed cordon at the southern end of the lake where the main infestation was found, thus blocking the whole area off. We also installed a weed cordon in 2011 at the boat ramp to protect that area.

There has been progress over the last 8 years; we did surveillance, found sites, more surveillance, found more sites, surveillance again, each time finding less and less, and now in 2017 there is one site left.

We have had some highlights. In 2012 John Clayton did an underwater gun and hose spray using the aquatic herbicide Diquat. At this site plants were detected in 8 to 10 metres. We also used an Airboat to control these plants. We went there in March this year and spent a good day delimiting this site. We found no plants as a result of the spraying. This is a great result.



The last 7 years have been encouraging. Over the entire programme of surveillance work we have found 12 sites. We have not detected any plants in 5 of these sites since 2014, four more of the sites since 2011 and two of the sites since 2012. The incursion response spray programme is funded by LINZ and Bay of Plenty Regional Council.



In the future, we will use summer students again, they do a great job, and people know they come around and talk and have free stuff so everybody loves them. We are buying an underwater ROV, which will be here next week. It will open up another area for more surveillance at different depths. It will be useful for other things too, a water monitoring adaption and a sediment adapter to take samples. More summer surveillance this year and we will continue to work with our partners, a valuable piece of the programme.

Thank you.