

My response to original feedback

15 August 2018

Te Rangimārie Williams
Environmental Consultant
Te Ātiawa ki Whakarongotai Charitable Trust
Otaki

Manchurian Wild Rice – Kawakahia Wetland, Ngarara Stream

Kia ora Te Rangimarie,

Thank you for supplying the Mana Whenua Impact Assessment Table with the recommendations to address your concerns regarding our intended resource consent to relation to undertaking control work on Manchurian Wild Rice (MWR)

We have contacted our Consents Department who confirm that the conditions of,

- Any spraying of Haloxyfop is not to occur during fish migration and spawning periods.
- Te Atiawa is provided with monitoring results,
- In the event of an accidental spill or uncontrolled discharge, Te Atiawa is notified and is involved in decision making relating to any spill / discharge,

Are all conditions that would be included in this consent given the high importance of the wetland and streams under the provisions in our Proposed Natural Resources Plan.

Greater Wellington Regional Council is part of the Ministry of Primary Industries led national initiative to eradicate Manchurian wild rice as a "National Interest Pest Response" species, with the aim to contain it within the Kaipara District and eradicate everywhere else in NZ. Therefore the intended plan is the permanent removal of the plant from our site.

As part of the national programme MPI oversees the plans, methods and tools being utilised constantly looking for improvements in reducing impacts of the control work and anything else to aid in meeting its goals. Any new improvements are outlined and implemented after the annual meeting of everyone involved in this programme, including any input from the freshwater scientists at NIWA.

The infestations of MWR situated on the Kapiti Coast have had control work undertaken on it by a range of methods including manual removal, ground based spraying and aerial spraying.

Originally the majority of the control work was based on high volume application methods through ground based gun and hose equipment on large areas of MWR which were easily accessible on the ground or by wading across waterways to raised areas.

In addition to this the stream was regularly cleared out by diggers attempting to keep the stream 'open' and considerable sediment containing MWR was deposited alongside the streambank in places, where it established and was sprayed initially then subsequently dug out manually as it was deemed that spraying was not having the desired effect.

Unfortunately when we attempted to replicate the success of this work in other areas where the soils were clays not silt we found the disruption to the soils and recovering vegetation was very destructive so we reverted to more targeted spraying.

During recent years due to the stream not being “opened up each year the native vegetation recovered drastically filling in the streams, which has in turn lead to a raised water table which has subsequently



Manchurian wild rice excavated from streambed silt showing established and spreading but interconnected underground rhizome system

led to areas that were previously predominately rank pasture, reverting back to large areas of carex geminata, raupo and harakeke.



Original infestation of Manchurian wild rice before control operations commenced. At this point the drains were artificially kept open and the whole area was accessible on dry ground during summer.



The same area seen a few years ago, with the higher water table making access impossible. Currently the area to front has reverted to thick raupo.

A few years ago in response to this increase in the raised water depth and increased vegetation it was recognised that it was becoming very difficult and more importantly unsafe to expect staff or contractors to continue to try to access those infestation within the wetland.

It was also identified that contractors were using a lot of chemical attempting to get good coverage of 4 metre high plants while standing in a metre of water in tight vegetation.

Subsequently it was decided that using the more targeted application method of using helicopters utilising a single nozzle would not only obtain the level of control needed to control the plants, lead to a reduction of herbicide being applied but eliminate health and safety aspects of ground based work, so helicopter based control has been utilised over the last 4 years.

We are currently investigating the use of drone equipment to assist us in our management of this site to reduce the cost and disturbance of helicopter operations, however currently this is at the early stages of development.

As Manchurian wild rice is part of the grass family of plants and haloxyfop is a grass specific herbicide its selectiveness to controlling only grasses which makes it the preferred herbicide to use as opposed to glyphosate which would damage or kill the surrounding carex, raupo and harakeke.

When notifications went out to surrounding neighbours they were intended to cover both land based and aerial application operations and some confusion occurred.

In the past ground based operations utilised glyphosate, haloxyfop and spray additives such as surfactants and crop oils to obtain the best results which will continue, as all products are registered for use over land and several infestations are outside the wetland and stream designated boundaries ,however for application over water on only haloxyfop is used for the MWR.

While we still utilise manual control for any small infestations, and still spray other larger infestations where can access safely from the ground, we have not determined another method to control the inaccessible infestations in water other than aerial application.

Aerial application using haloxyfop is currently the best option that will continue the progress towards meeting the goal of eradication of MWR at this particular site.

As before I am more than happy to take any opportunity to meet you or any representative to show them around the site, and to discuss the planning of the operational programme.

Nga mihi



Darryl Kee
Biosecurity Officer – Pest plants
Greater Wellington Regional Council