From: Don Paterson <nat.opc@xtra.co.nz>
Sent: Friday, November 16, 2018 12:37 PM
To: 'Pim De Monchy' <Pim.deMonchy@boprc.govt.nz>
Subject: Whakapoukorero Te Arawa wetland restoration project recommendation

Hi Pim

Further to my previously emailed comment 14 October 2018 re I believe that v-drains could provide the most efficient usage of any area of land for producing ideal shaded wetland habitat and maximum utilisation of available space in the same way that straight parallel lines are drawn on a writing page for that reason, and because there is already a straight drain running approximately and I believe ideally north south adjacent to Maketu Road and Whakapoukorero Te Arawa wetland, I recommend that you could best construct another v-drain parallel to it and then another v-drain parallel to the second ongoing and connect water flows at their ends over shallow sills that will maintain fresh water pond depth and keep salt water out.

I recommend that a digger could excavate a new v-drain while building solid ground for itself to stand on as it progressed. I recommend that a digger could mound up excavated soil on both sides of itself as it progressed through the swamp making a deep v-drain as it went and burying weeds including pussy willow under the soil mounded on both sides of itself.

I recommend that the mounds could be planted with flax and kahikatea and other natives to control weeds, to provide habitat and food for native birds and to eventually purify v-drain wetland water slow flows.

I recommend that v-drain shallows could be planted with raupo to help purify water, to provide shaded habitat and to dominate other water plants while enhancing habitat for galaxius (whitebait) and tuna (eel) as it spread over open water and until kahikatea had grown tall enough to take over those roles.

I recommend that glyphosate and other agrochemical poisons be kept out of Whakapoukorero Te Arawa wetland so that the wetland waterways remain attractive to migratory native fish species to make it their home. I believe that fish must know to avoid agrochemical poisons because they are naturally intelligent to survive.

I believe that a successful template now created at Whakapoukorero Te Arawa wetland could then ideally be applied to other lowland areas throughout the Kaituna River catchment and beyond within a few kilometres of the coast.

I believe that deep shaded v-drain ponds could best be created by Councils in all farm drains to purify runoff and to create galaxius (whitebait) and tuna (habitats) to rebuild fisheries production food chains that I believe had once started from New Zealand's extensive fresh water wetlands before 99% (quote: Dr Mike Joy, Massey University) had been drained for pasture.

It follows that creating farm drain wetlands as well as converting lowlands within a few kilometres of the coast into v-drain wetlands, as well as damming gullies where practical to make ponds throughout a catchment and all in connection with estuary galaxius spawning habitats could rebuild fisheries production.

Whakapoukorero Te Arawa wetland could now be leading the way which could be very beneficial for Maori who own most of the fisheries quota and so stand to gain significantly from fisheries production increase.

Kindest regards

Don Paterson
CLM; HbT SRF SNTR

Chairman, History Focus Group
Kaituna River & Maketu Estuary Management Strategy
BOP Game Fishing Charters
Natural Therapies 28 Jellicoe Street Te Puke 3119
Ph 07 573 5533 fax 07 573 9363
www.naturaltherapiesnz.com
www.gamefishingcharters.co.nz
www.wetlandsnz.com