

STAFF REPORT

TO: Mayor and Councillors

FROM: Philip Drummond, Rivers Asset Manager

REFERENCE: R600

DATE: 29 July 2009

SUBJECT: **CRACK WILLOW MANAGEMENT**

1 PURPOSE

The purpose of this report is to inform the Engineering Services Committee of Tasman District Council's Crack Willow Management programme.

2 BACKGROUND

Crack Willow (*salix fragilis*) was added to the New Zealand Unwanted Organism list by the Biosecurity Division of the Ministry of Agriculture and Forestry in September 2007. Regional and Unitary Authorities were not advised ahead of time that this was going to happen.

The Tasman District Council reviewed the Tasman-Nelson Pest Management Strategy the month before the list was made public. The strategy is due for review again in 2012. Currently we need to develop a manageable methodology to meet the expected control target that is both practical and affordable within the current budgets.

The law requires each regional authority to consider and impose a suitable pest management strategy for each of the nationally listed organisms. A region may decide to eradicate, control or simply manage the situation. Tasman District Council has a range of control and management strategies in place for each item listed in its Pest Management Strategy.

Prior to the declaration on crack willow it was recognized that the River Management programme was spending in excess of 60% of the river maintenance budget on riparian management. The method being used in many places was to simply cut and layer the crack willow stems along the berms and allow them to re-sprout at even greater density than there was before cutting them down. This practice simply increased the long-term costs of riparian tree management. All willow needs to be managed in a manner that minimises the older trees falling into the river and causing problems during floods.

Additional funding was agreed through the Ten Year Plan process in 2006 to allow a crack willow removal programme from any area that did not have a high erosion potential. These river banks could therefore be managed with a long-term objective to lower plant regime costs and not have increased erosion risks.

Crack willow is recognised as an invasive species. MAF Biosecurity staff advised that propagation of the plant is illegal. The material associated with trees such as twigs can break off during storms. This material can then propagate further down the river and on beaches and then grow into trees. The advice we received warned that where an authority knew this was happening then there would be grounds for claiming that we were party to a propagation process.

By the time crack willow was declared an unwanted organism nationally, Tasman District Council can show that it actually had a control strategy in place. We have been developing several methods of removal and replanting with alternative willow species. In some cases the use of a variety of native plants has been introduced. The emphasis is on using plants with superior rooting structures.

Tasman District Council has an annually increasing number of flax, toi toi, cabbage tree and *pittosporum* species on order at a local nursery for this purpose. We also have a viable nursery of willow and poplar species available. The Land Resource Scientist manages this with some input from the Rivers Asset Engineer on quantities required. The new river maintenance contract will provide further development of the nursery's production in subsequent years.

It is essential that it is recognised that the new planting regime does not intend to provide patches of native bush or to develop bird corridors. The practice of fencing off river banks will be encouraged as an essential part of the establishment process.

The wider implications of this may drive some thought on how and why we must move forward with a review of the river rating system. Currently there are crack willow infested river banks in "River Z" areas. In these areas we do not have enough control to enforce a removal programme where a minimum 50% cost input is required directly from landowners.

3 GOING FORWARD

The Rivers AMP states that we will be removing crack willow from about 15 km of river bank each year. It would be most efficient if the process started at the top of each catchment and worked downstream. From a practical point of view this will not be achievable. Therefore we are targeting areas with lower erosion potential such as the middle Motueka. This section of the river is classified as "River Y" and the removal of the crack willow is expected to have greatest immediate success. Based on the fact that there are two banks to each kilometre of classified river length, the target is about 3% of the total length per year. However there are places where there is no crack willow and the actual progress is estimated to be about 5% pa. This gives a target life for the first complete removal process of about 20 years.

It has taken more than fifty years to get from no willow to where we are today.

Council's River Maintenance Contractor from 1 July 2009 is Ferguson Contracting Ltd from the West Coast. They have inherited all of the productive work force from Sicon and introduced a completely new management team and computer-based administration system. One of their staff has made a recent visit to Australia where they have a similar invasive crack willow management problem.

The Australian Government and Catchment Authorities have invested a large sum into developing a "Willow Management Manual" which includes a range of methodologies and riverside work instruction processes. We have begun adapting these technologies into a system to guide the changes necessary on our river network. This will ensure that the contractor and consultant are working to the same end goal and work instructions that will give us the best chance of a steady and successful cracked willow removal programme.

In many cases firewood will be made available to the public as was the case at the Motueka Bridge and the Peach Island last year. A high percentage of the trees are on private land and only the landowners can decide to allow the public access. In many instances burning will clear up the stacks. The fire authorities are already providing support for our contractor in this operation.

Alternative methods of processing the trunks are being investigated. This may include burning at special times of the year, chipping, or turning the logs into a product that can be used for some cost effective process. Each concept needs to compete on a cost benefit basis, and with appropriate environmental considerations.

Engineering and Environment & Planning staff consult informally whenever advice is needed. This will ensure that the field results will be ready, at any time in the future, for whatever audit process the biosecurity authorities place upon us.

4 RECOMMENDATION

THAT this report be received.

Philip Drummond
Asset Engineer, Rivers/Roads