Hughes Creek Project Update

HI all

My apologies I have not been in touch for quite some time. Though a couple of small grant projects have commenced I have really been awaiting the finalisation of the geomorphic investigation to clarify where works should be focused. The good news is, it is now almost finalised and will be available on the website shortly.

The report, prepared for the CMA by a consultant with a strong knowledge and history of the Hughes Creek and Macquarie Perch, is very interesting reading,. The report titled *River Reaches, Historical Channel Changes and Recommended Methods to Improve Macquarie Perch Habitat on Hughes Creek,* Victoria provides recommendations that will be used to help guide investment and effort in the Hughes Creek Catchment and to assist in the management of the resident Macquarie perch population. The report clarifies historic channel change of the Hughes Creek, with particular consideration to sand slug development and movement. The risks to the threatened Macquarie Perch population are a focus of this investigation, with several key recommendations defined with the aim of improving their habitat and potential range.

In order of priority, the primary recommendations for CMA consideration include:

1. Improve riparian vegetation within Reach 4 (Kulaba Hornfels Confined Reach) where Macquarie perch reside and above in Reach 5 (Bungle Boori Granite Confined Reach) and its tributaries (Bunding Creek and unprotected sections of Stewart, Ponkeen and County Creek). Protecting streamside vegetation enhances instream habitat and reduces sand flux (movement). GB CMA supported fencing and revegetations works in these sections of stream will therefore be encouraged. Additionally, if feasible to undertake with low environmental risk, sand extraction in reach 5 be encouraged.
2. Increased length, area and cleanliness of gravel riffles in reaches 4, 3 (Boorola Granite Confined Reach) and 5, because recruitment of Macquarie perch is dependent on the presence of good quality gravel riffles. As gravel is mostly mobilised in floods, water licensees must be discouraged from preferentially pumping out water during floods. The GB CMA will investigate options to promote this with Goulburn Murray Water. Additionally the report also suggests further research be undertaken to better understand the threshold for gravel movement.
3. Following reduction of sand movement (priority 1), increase the number, length and depth of pools in reaches 4, 5 and 3. This can be achieved by appropriate placement of large wood instream to induce bed scour between existing pools and possibly construction of pile fields or groynes to improve existing pools. The GB CMA will work with adjoining landholders and Arthur Rylah Institute (ARI) DEPI, to best determine where these actions should occur within the targeted reaches. A monitoring project is already underway with ARI DEPI to survey in early 2015 for Macquarie perch more extensively than previously undertaken, to confirm their present range. The last monitoring undertaken of Macquarie Perch was in 2013.

Management of exotic fish species and further monitoring are also identified within the report. Maintenance of 70-75% ground cover to reduce surface runoff and soil erosion throughout the surrounding catchment, especially during the dry summer period, is recognised as a critical component to ensure further sediments do not enter the waterway. The report identified that works by Landcare Groups and farmers to achieve this targeted level of groundcover have been highly successful, but may still need to be expanded.

A long term objective, to re-establish connectivity to the Goulburn River for Macquarie perch, is considered to require 20+ years for pools to reform and sand to coarsen to gravel. In the meantime, investigations are underway with the King Parrot Creek population of Macquarie perch, monitoring their movements via pit tags in the lower reach of the creek and adjoining section of the Goulburn

River. Should this summer be as hot and dry as expected, it will be an interesting test case to clarify whether the Goulburn River is a suitable drought refuge for these threatened fish.

As always, if you have any queries or would like to discuss anything further, please contact me on 5797 4412.

Kind regards

Christine Glassford
River Health Officer