

Goulburn - Murray Water Connections Project— Expert Review Panel

31 July 2013

The Hon. Peter Walsh
Minister for Water
121 Exhibition Street
GPO Box 4509
Melbourne Victoria 3001

Dear Minister

ADVICE ON ENVIRONMENTAL WATERING PLANS – CAMPASPE RIVER REACH 2 AND BROKEN RIVER

The Expert Review Panel (ERP)¹ of the Goulburn-Murray Water Connections Project (GCP) (previously known as the Northern Victoria Irrigation Renewal Project) has been charged with the responsibility of providing advice to GCP, the Minister for Water, and the Secretary of the Department of Environment and Primary Industries in relation to the relevant conditions in the decision of the Minister for Planning that an Environmental Effects Statement (EES) is not required for the GCP. Condition 5 of the decision states that Environmental Watering Plans are required for 'at risk' waterways and wetlands before operation of the relevant GCP work commences. An Environmental Watering Plan (EWP) is prepared in response to the commitment to ensuring no net impacts on high environmental values resulting from the GCP and in accordance with guidelines set out in the Water Change Management Framework.

This advice is for EWPs for two flowing water systems; Broken River and Campaspe River, as foreshadowed in Table 8 of the WCMF (Version 3), noting that for the Campaspe only Reach 2 is considered (as explained below).

The ERP has structured its advice on these EWPs around three criteria:

- i. Adherence to the provisions of the WCMF Version 3
- ii. Adequacy of the technical advice in relation to:
 - a) Environmental values, objectives and goals
 - b) Hydrology and the requirement for interim mitigation water,
- iii. Soundness and reliability of the conclusions.

¹ The ERP consists of Jane Roberts and Terry Hillman; independent consultants experienced in the relationships between hydrology and ecology, and in evaluating the ecological consequences of changing hydrology.

CAMPASPE RIVER (REACH 2)

An EWP for the Campaspe River was submitted to the Victorian Minister for Water and approved in July 2010. It documented the approach to mitigating the potential impacts of the G-MW Connections Project due to significant reductions in channel outfalls to the waterway. The section of waterway assessed was the Campaspe River from Campaspe Weir to its confluence with the Murray River, or Reaches 3 and 4 of the environmental flow recommendations.

The potential to decommission the Campaspe Irrigation District (CID) raised the possibility of substantial changes in the hydrology of Reach 2, which is the Campaspe River between the Lake Eppalock outlet and Campaspe Weir north of Elmore. This would normally trigger the preparation of a new/revised EWP to account for these hydrological changes. However the EWP could not be produced as no decision had been made prior to the 2012/2013 irrigation season regarding the distribution of the water savings from the CID decommissioning. To avoid unnecessary disruption to the GCP a study assessing the ecological risks of not supplying mitigation water (specifically) in the 2012/2013 irrigation season was carried out. It assessed the following:

- o The risk of harm being caused to the high environmental values of Reach 2 of the Campaspe River by not having an approved EWP to guide mitigation of the potential ecological impacts arising from hydrological changes due to the CID decommissioning
- o The risk of harm being caused to the environmental values of Reach 2 of the Campaspe River by not releasing the 8020 ML (LTCE) of water recovered by the CID decommissioning.

It found that there was negligible risk of ecological harm in 2012/2013.

The current EWP deals with environmental flows and mitigation water, in Reach 2 of the Campaspe, from 2013-2014 into the future. The development of environmental values, objectives and goals for Reach 2 is based on an earlier study, which used FLOWS version 1 applied to the whole Campaspe system. The FLOWS method develops a recommended environmental flow regime by linking key ecological objectives with critical elements of the river's hydrology that may be under threat from management actions. Modelling carried out on behalf of NCCMA showed there was a major shortfall in meeting those recommendations under current management conditions. This EWP examines the potential to use newly available environmental water resulting from the decommissioning of the CID.

Although the flow recommendations were derived outside the process prescribed in the WCMF (Version 3), the environmental considerations and findings are presented in a manner consistent with the WCMF (Version 3). We note that although the Framework was designed to be applied to incidental water and to ensure no net negative impact as a result of irrigation modernisation, the case in Reach 2, resulting from the decommissioning of an entire irrigation district, is a novel test of the Framework and it proved to be an effective and robust guide.

We believe that the process for evaluating the need for mitigation water that is presented in the Campaspe Reach 2 EWP is an appropriate and effective application of the protocol. We consider that the finding that mitigation water is required is soundly based and presented.

The status of the calculated volume of mitigation water as a component of the total water saving and the consequent implications for accounting and sharing recovered water and for restrictions on deploying the environmental water is yet to be decided. There is a need to resolve this issue as it is likely to arise again in future GCP developments, however this does not impinge on the validity and soundness of the current EWP and its recommendations.

BROKEN RIVER

The Broken River was the subject of a major environmental flow study, the findings of which were incorporated in developing water sharing plans in 2001. Since that time there have been some significant changes in the catchment and river management, most notably the decommissioning of Lake Mokoan in 2009 and increased flexibility of water trading out of the Valley. Works and measures undertaken as part of the GCP are expected to result in a decrease of approximately 850ML in outfalls into the lower reaches of the Broken River and, as a consequence, an EWP is required for the Broken River.

The Broken River EWP has two unusual features:

- o the irrigation water entering the Broken River as outfalls and drainage water from the Shepparton Irrigation Area is not actually sourced from the Broken River itself,
- o In setting the environmental values and ecological objectives for the Broken River, as required by the WCMF, this EWP is largely based on an updated environmental flows study which is integrated into the EWP.

This updated flows study used FLOWS version2, and the Broken River EWP document serves as the third (and last) report of that process. Unlike FLOWS version1, version2 considers seasonal conditions and for the Broken River this contributed significantly to understanding the need for mitigation water. The move towards integrating EWP and FLOWS studies where appropriate is sensible, particularly as the FLOWS version 2 is to be the standard method for the development of environmental flow recommendations in Victoria. However, as a result of this integration, this EWP differs slightly from the preferred format/structure as given in WCMF (Section 15.2.1). These differences are not material in relation to the estimation of mitigation water or the development of recommended environmental flow regimes.

The EWP divides the Broken River downstream of Lake Nillahcootie into three reaches largely reflecting hydrological differences, based on management, and geomorphology. In line with the FLOWS version2 method it determines a recommended flow regime for each reach under wet, medium, and dry precedent conditions. The EWP determines that the reduced volume of return flows can affect only a small portion of Reach 3 of the Broken (between the outfall of East Goulburn Main Channel and the confluence with the Goulburn River). Based on modeling results, this is likely to result in a shortfall relative to the recommended flows, only in summer, infrequently and for relatively short periods only. Given this particular set of conditions, the report considers that mitigation water is not required.

We consider that this finding, that mitigation water is not required for the Broken River and which is based on a thorough analysis, is both sound and responsible.


CONCLUSION.

The two EWPs presented for your consideration both vary slightly from the detailed instructions of the WCMF (version 3). It is the belief of the ERP, however, that both comply with the spirit and intent of the WCMF and both plans are equivalent with earlier EWPs for wetlands and streams submitted for your approval. The ERP believes that the assessment of the requirements for interim mitigation water is transparent and well reasoned.

It is therefore the advice of the ERP that the Campaspe (Reach 2) EWP and Broken River EWP have been thoroughly prepared consistent with the WCMF, provide a sound and reliable base for implementation, and warrant being approved.

The ERP is pleased to have had the opportunity to provide this advice in the interests of progressing the environmentally responsible operation of the modernised irrigation system for which the GCP has responsibility.

Yours Sincerely,



JANE ROBERTS



TERRY HILLMAN

Copy To:

Secretary of the Department of Environment and Primary Industries

Project Director G-MW Connections Project