



## No. 13 Incorporating the results of the weir review into the water sharing plans

### What is the weir review?

There are 3328 licensed dams and weirs on freshwater rivers of NSW. These structures provide water supply to towns and properties but this has been at a significant environmental cost. The structures can reduce water quality, obstruct the passage of native fish and create an environment that favours introduced species, such as carp.

The NSW Weirs Policy was developed to “halt, and where possible, reduce and remediate the environmental impacts of weirs. A “weir”, under the Policy, is defined as a structure (including a dam, lock, regulator, barrage, causeway or floodgate) across a defined watercourse that will pond water, restrict flow or hinder the movement of fish along natural flow paths, in normal flow conditions. This definition therefore incorporates more structures than the 3328 licensed dams and weirs above.

The State Weir Review Committee (SWRC) is responsible for overseeing the implementation of the NSW Weirs Policy and the development of a program to assess the current status of weirs in NSW. This program is known as the “Weir Review Program” and was established in November 1998.

The Department of Land and Water Conservation (DLWC) coordinates the Weir Review Program for the SWRC, the aim of which is to examine the impacts of existing works and to develop a strategy which would lead to benefits for the environment. This will be achieved by first undertaking an initial assessment of all weirs throughout the State, and

assessing each weir against a set of established criteria.

From the results of this initial review, options for modifications to a weir will be explored. These might include structural changes, changes in weir operational rules, installation of a fishway, or removal of the weir. However, weirs will not be removed or changes made, without consideration of the needs of the communities they serve and the socio-economic impact of removal.

NSW Fisheries carried out the initial review of licensed weirs in NSW. This review was completed in 2001 for all catchments. The initial review included a desktop assessment and site inspection of each of the structures. Recommendations on the management options to reduce the environmental impacts of each structure were recorded. A report and photograph of each structure has been produced and will be incorporated into a Weir Review report for each catchment.

To date a total of 1364 weirs had been inspected throughout NSW. Of these structures, a total of 135 fishways have been recommended to improve fish passage at key sites on NSW rivers. The bulk of these fishways are suggested for weirs that are owned by the State Government (Table 1). This result was expected given that most of the weirs owned by the State occur in lowland reaches of main river channels. They are required in this position to service irrigated agriculture however this location provides a significant impediment to the free passage of fish.

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**Table 1: Ownership of weirs recommended for removal or fishway construction**

<b>Owner</b>	<b>Fishway</b>	<b>Removal</b>
State owned	54	20
Council owned	43	43
Privately owned	28	18
Owner unknown	10	7
<b>Total</b>	<b>135</b>	<b>88</b>

It is suggested that 88 weirs are candidates for removal. This removal would require further detailed review to confirm the use of the weir pool and the weir and may only include partial removal of the weir as part of the remediation action. The bulk of these sites are Council owned structures (Table 1) that have been allowed to deteriorate because the weir has been replaced by another nearby structure. Alternatively the land use for which the weir pool was originally required is no longer carried out.

Sixty-nine dams and regulators have been suggested as requiring some form of management. This includes maintenance of existing fishways, improved use of gates to manage the weir pool and associated effects, construction of gates for the same reason, desilting the weir pool (particularly where it effects the operation of gates or fishways) and renewed or improved operation of regulators.

During the review 202 weirs were found not to be in existence at the time of the review. In many cases, the structures had never been built and the licenses were being retained for future purposes or to add value to the properties which held them. Often structures were washed away and the continued maintenance of these were uncertain.

### **What are the issues?**

The NSW government is responsible for ensuring that the NSW Weirs Policy is implemented as part of the NSW Water Reforms process. The Water Sharing Planning (WSP) process allows for the incorporation of the findings of the Weir Review program into these plans. This is consistent with addressing River Flow Objective 9 - "Minimise the impacts of in-stream structures" which deals with the impacts of in-stream barriers to the delivery of environmental flows, and the impacts of weirs on fish passage and water quality.

The central issue for the Water Sharing Plans will be the degree to which the management recommendations for any proposed weir removal or

weir modification impacts on water sharing. While weir removal and modification can improve the delivery of flows to the environment (by reducing restrictions or barriers to water delivery on certain river sections and improving instantaneous flow delivery to the environment), it may also affect the degree to which flow can be regulated for use in satisfying water supply demands, or affect the ability to deliver supply to portions of the system.

### **Assessing the results of the weir review for water sharing plans**

NSW Fisheries, in consultation with the State Weir Review Committee, has completed a report for each catchment summarising the outcomes of the initial assessment of licensed weirs. The results and recommendations should be reviewed to ensure that they are consistent with local knowledge, and to determine whether the outcomes proposed have any implications that could impact on components of the water sharing plan.

The results of the initial weir assessments will also be considered within the catchment management planning process and as a component of future water management planning under the Water Management Act.

### **Committee Role**

The committee will need to:

- ◆ review the findings of the initial weir review for their management area; and
- ◆ evaluate whether the findings have any water sharing plan implications, and if so, determine how to accommodate this in the plan.

### **Government Role**

- ◆ Provide the committee with the results of the Weir Review program and the initial assessment of the impact of weir review recommendations on water sharing in the plan area.

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- ◆ Ensure that the Catchment Management Boards review and consider the recommendations of the initial weir assessment for incorporation into the relevant catchment management plan which encompasses the water management area.