

## Re: Save the Mary River Technical notes TN01 and TN02

(Downloadable at [www.savethemaryriver.com](http://www.savethemaryriver.com))

### **Mary River Flow Analyses and Consequences of Building a Large Dam at Traveston Crossing**

The Queensland Government's conclusion that a dam on the Mary River at Traveston Crossing will provide a significant and sustainable supply of water for South East Queensland is fatally flawed. The simple fact is that the Mary typically has extremely low flow rates with a huge seasonal variation characterised by periodic flood events, often years apart.

The State Government's own analyses show that the proposed dam, if ever built and operated as proposed, will have dire consequences for river flows to downstream communities and the environment. Analysis of actual flow data at the proposed dam site also casts considerable doubt on the ability of the proposed dam to supply the quantity of water expected of it at the times it will be needed.

These two technical papers provide:

- a summary of statistical analysis of the Mary River flow data published by Department of Natural Resources and Mining for the Dagon Pocket Monitoring Station, downstream of the proposed dam site,
- an evaluation of the flow criteria and statistics quoted in the DNRM Draft Water Resource Plan for the Mary Basin in November 2005.

Analysis of projected river flows come directly from the State Government's own IQQM modelling published for community consultation in the drafting of the Water Resource Plan for the Mary Basin.

#### **Main findings:**

- The main statistic used by government to describe the flow behaviour of the Mary River is inappropriate, misleading and irresponsible. Mean Average Flow (MAF) would be valid if there were minor variations in flow, however this is definitely not the case for the Mary. The median flow just downstream of the proposed dam is 103,000 ML per year, significantly less than the 140,000 ML per year yield target.
- The State Government's own IQQM modelling predicts that for 55 of the 110 years in the study period, the dam would reduce downstream flows to below 57% of their natural level in the vicinity of Gympie.
- Evaporation, seepage, sedimentation and climate change will all have huge additional effects on the performance of the dam. These additional factors are not included in this flow analysis.
- The Draft Water Resource Plan for the Mary Basin (WRP) acknowledges within its legislative schedules the huge effect that building the dam will have on downstream flows. The draft legislation allows for reducing total flow in the river to less than 1ML per day for 18% of the time and stopping all flow in the river for continuous periods of up to 6 months in the vicinity of the City of Gympie.
- The Draft WRP provides no safeguard at all for the protection of the seasonal pattern of flow in the river for a distance of more than 100km downstream from the proposed dam. Downstream allocations of water in this region may simply not be available for use at the times that they are required.