Submission to the Inquiry into Additional Water Supplies for South East Queensland - Traveston Crossing Dam

Senate Rural and Regional Affairs and Transport Committee

Submitted by: **Firth family, landholders affected by the proposed Wyaralong Dam**

Background

The Wyaralong Dam was one of the two dams announced by the Queensland Government in July 2006 as part of their emergency response to the water needs of South East Queensland. While the terms of reference for the inquiry specifically mention the Traveston Dam the committee needs to examine the broader issue of water supply to the SE, including the process by which both dam sites were selected.

We are directly affected by the proposed Wyaralong Dam as a significant proportion of our landholding will be required if the project goes ahead. However our main concerns relate to the lack of transparency in the site selection process and the complete failure by the Queensland Government to present a comprehensive business case supporting the construction of the dam.

While not attracting the media attention of the Traveston proposal, Wyaralong would be an even shallower and less productive dam. Since the decision to build these dams in July 2006 a lot has changed. There are more demand management procedures in place, purified recycled water is to be added to the supply, and other options such as piping water from wetter areas are under active consideration. Completion of the Bromelton off-stream storage facility has been brought forward from 2011 to 2009, and the Queensland Government has announced a $50 million recycled water research alliance which aims to provide SEQ with 90,000ML of water per annum in the short term, and water security in the long term. There should - at a minimum - be a moratorium on these dams until other options are fully considered and costed.

The Wyaralong Dam proposal

The proposed dam is situated on the Teviot Brook, an ephemeral tributary of the Logan River characterised by infrequent major flood events separated by long periods of low or non-existent flow. The dam is approximately half way between the towns of Boonah and Beaudesert, with the dam wall in the Beaudesert Shire but most of the ponded area in the Boonah Shire.

Even the simplest data such as the expected yield of the proposed dam is almost impossible to come by. The best information the Government is willing to provide is a "system yield" estimate which includes the Cedar Grove Weir on the Logan River as

well as Wyaralong on the dry Teviot Brook. This figure is 21,000ML/annum (compared with 70,000ML/a for Stage 1 of Traveston, and 45,000ML/a for the rejected Tilleys Bridge dam on the Logan).

The Government has been reluctant to provide landholders and residents with a separate yield for the Wyaralong Dam. Attempts to come up with a figure for Wyaralong by subtracting the 3000-4000ML/a contribution of the Cedar Grove Weir have been rejected by Government representatives because "the whole was greater than the sum of its parts". We can only assume that the yield is somewhere under 17,000ML/a.

While the Government can only supply a system wide figure on the yield they provide a cost figure which only covers the Wyaralong Dam and does not include the Cedar Grove Weir or the associated infrastructure works such as treatment plants, pumping stations and reticulation systems. The estimated cost of the dam alone is $500 million.

Having the costs and yield presented on a different basis makes it difficult to calculate the unit cost of water delivered from the scheme. However even using the system yield figure combined with the cost of the dam alone gives a cost per litre higher than that for water produced from a desalination plant. Using more realistic yield figures Dr Bradd Witt and Katherine Witt have estimated the cost of water from the dam to be $1.73 per kilolitre compared to the $1.00 per kilolitre of water from a seawater desalination plant. More recently, using a “prudent yield” of 18,000ML/a, the Institute for Sustainable Futures and Cardno have calculated a unit cost of $2.23 per kilolitre for Wyaralong Dam water (before distribution and operating costs).

There are serious doubts about the ability of the system to maintain average yields during long dry spells (such as the current drought). As noted above the Teviot Brook is an ephemeral stream with average flows heavily influenced by infrequent flood events. With the small capacity of the proposed dam and the high evaporation rates likely from the very shallow ponded area the dam will soon run dry during extended periods of low rainfall.

To sum up the Wyaralong Dam would, in times of relatively good rainfall, provide a small quantity of additional water at a higher cost than a desalination plant and far higher than water from existing storages. During long dry periods, when additional water would be most needed, the dam is likely to run dry.

The wider picture

The Queensland Government has not conducted any detailed economic study aimed at finding the most cost-effective options for addressing the water supply problems in the SE corner. The decision to build the two dams seems to be a case of being seen to be doing something rather than trying to find the best solutions.

The inquiry should insist that the Queensland Government look at the wider question of how best the water supply problems can be met, ensuring that all options including recycling, pricing, improved utilisation of existing infrastructure, desalination, the

transfer of water from outside the region and new storage options (including off-stream storage) are examined.

The examination of alternatives must include estimates of the available yields and indicative unit costs for the water produced from each alternative identified. Without this information it is impossible to build a business case for the preferred option.

The Queensland Government should also be asked to provide details of its yield calculations for the proposed dams. This must include a detailed analysis of historic rainfall and stream flow measurements and a full description of the methodology used to project sustainable yields from this historic data. This information has not previously been made available to the public.

The historic time series data used in the analysis should cover the longest time period for which reliable data exists and must include data covering the current sustained dry period. The analysis also needs to address the usefulness of the historic record given the likely impacts of climate change and changing rainfall patterns. The analysis of sustainable yield must explain how the risks associated with these impacts have been incorporated in the analysis.

Conclusion

The process by which the Queensland Government came up with the Wyaralong and Traveston Crossing dam sites is clearly deficient. The selection process has lacked transparency and basic data on the costs and yields for the projects has been difficult to obtain. There has been no comprehensive economic analysis aimed at identifying the most cost efficient options for addressing the South East Queensland water supply problems. The examination of alternatives to the proposed dams has been cursory.

We ask that the committee clearly identify these deficiencies and recommend a more considered approach to the future water needs of the South East. Neither dam provides any relief for the current water crisis and therefore there is no need to rush the decision making process as the Queensland Government is attempting to do. In fact funding construction of these dams may be diverting resources away from projects, such as the recycled water pipeline, seawater desalination and an improved water grid, that could have an immediate impact.