Submission No 296

INQUIRY INTO PROPOSAL TO RAISE THE WARRAGAMBA DAM WALL

Name: Ms Helen Mackay

Date Received: 9 September 2019

Submitted by: Helen Mackay

I am opposed to the proposal to increase the height of Warragamba Dam mainly on the basis that the assertion that it will protect the Hawkesbury from flooding is incorrect.

In the Molino Stewart, "Hawkesbury Nepean Flood Damage Assessment. Report to Infrastructure NSW (2012), Department of Primary Industries (2014) and Hawkesbury City Council provided facts on the flooding of the river system. Sydney Water has also conducted modelling which provides similar advice.

Think of the Hawkesbury as a giant bathtub. It has one drain hole (at Brooklyn). It as 5 major "taps" flowing into it. The Nepean River, the Grose River, the Colo River, the Macdonald River and South Creek. ALL of these inflows join the river BELOW the dame wall. This no matter what height the wall is, it will not affect flood events resulting from rain events in thses catchments. The Colo and Grose Rivers are "wild rivers" and have excessively large catchment areas; some of the largest in the State. A major rain event in the Capertee Valley or Blue Mountains results in a huge flow into the Hawkesbury. Due to the high cliffs on each side of the river in the vicinity of Wisemans Ferry and Sackville, a "choke" is created. The water cannot flow out of the "drain" quickly enough and backs up, resulting in flooding all along the Hawkesbury. If this should also coincide with an East coast low weather event, the sea water rushes in at Brooklyn and further exacerbates the back up (as happened for example in 1867). The only role Warragamba has to mitigate this, is if the dam is at overflow capacity and the spill way opened. Granted this makes the flooding more severe, but otherwise the dam height has no bearing on the events described. In my lifetime I have seen flood events in the Hawkesbury which were not caused by rainfalls in the Warragamba catchment or the immediate Hawkesbury area. Similar conditions occur in the macdonald River catchment (Wollomi area). Once the river backs up at Wiseman's Ferry, the upper river rises.

South Creek flows into the Hawkesbury many, kms below the dam wall. Its catchment area is Picton/Camden/ Narella/ St Marys areas. While not a wide river, this water system is deep and can carry a large volume of water. About 2/3 years ago, a flood event occurred in the Camden main town. This caused the whole of McGraths Hill flats, near Windsor to be totally flooded and feeder creeks to back up. The height of the Hawkesbury River was not affected. In my life time, modest rainfall events in the South Creek and Hawkesbury catchment areas have resulted in serious flooding in McGraths Hill, Pitt Town, Ebenezer etc. A raised dam wall would not have any effect on this.

In addition, Warner (2014) in Water and Environment Journal, no.38, quantified the alternating flood and drought dominated regimes in the Hawkesbury. These average roughly at 30-year intervals (22-48) depending on La Nina and El Nino patterns. For the last 30 years we have been in a drought dominated pattern, which explains the lack of flood events. Some erroneously believe that as there has not been a major flood for 25 years, it is unlikely there will ever be and building and infrastructure has occurred on the well documented flood plain. Overseas scientists and actuaries are now advocating that it is more cost effective to move people and infrastructure from known flood plains than to try to "control" flood events. This is also of benefit to the environment.

As part of the proposal it has been argued that the motivation for it is to avoid a catastrophic flood endangering many lives. A more cost effective and sensible way to spend the billions of dollars to raise the dam wall would be to build evacuation routes and place valuable infrastructure above flood levels. Residential building should cease immediately on the flood

plain. Again, having seen a number of significant floods in the Hawkesbury area, I am appalled at where approvals have been given for construction works.

Warragamba was originally designed as a water reservoir. It was never intended to have a role in flood control. If the motivation is to provide better water storage for the growing population then there are a number of alternative locations that could be utilized for smaller , less invasive and damaging reservoirs, rather than relying on one huge reservoir. Should there be a "failure" of the dam, then the bigger it is the more devastating the damage would be.

If raising the dam wall is to allow for greater development of the flood plain, then that is extreme negligence, given the known science. Not only would it irrevocably impact in a negative way on the food bowl of Sydney, it is playing Russian roulette with peoples' lives (keeping in mind that many developments have occurred where there are only one exit point should a flood be imminent.) Flood evacuation routes should come first.

I am also opposed to the proposal on environmental/ cultural grounds. The presumption to ignore the UNESCO protection listing is indeed an act of hubris. Not unexpected from this government who "consults" with experts and the community and then IGNORES them all.