Warragamba Dam Raising The Wall Project - Objection

I do not support the current proposal to raise the dam wall for flood mitigation only. It is a waste of public money, loss or future cheap drink water for Sydney with no real benefit as outlined below.

I would support the raising of the dam wall if it was used for additional water storage for the future needs of Sydney and flood mitigation if it could be incorporated. Governments need to protect the future cheap water supply for Sydney for future generations.

Warragamba Dam was built at the current height based on budget constraints and the low population at the time. I suspect the engineers at the time would have thought that the future generation could pay and raise the dam wall for the future water supply for Sydney when required.

If money was no object the dam would have been built to the ultimate capacity to hold significantly more water at the time. I am sure the engineer's at the time would have considered it. This was the time of significant infrastructure construction across all NSW that included roads, rail, water storage dams, etc.

60 years on Sydney has had many water restrictions and the option to increase the water storage at Warragamba Dam must be preserved not destroyed. I cannot believe government has wasted public money telling Sydney residents to conserve water to flush a major source down to the Pacific Ocean.

There are no other cost effective opportunities, available to protect Sydney's future drinking water supply. Desalination and recycling of sewage water for drinking is very costly. I believe the NSW government is planning a large sewerage water recycling plant at Kemps Creek for $5 Billion.

Planning for the Sydney Harbour Bridge was designed for a future generation in mind, not just the current population. If the bridge was just to service the current population at the time it would have only been a one lane bridge in each direction. The motor vehicle was in its infancy at the time with very few on the road.

The current population in Sydney in 2021 is now estimated at 4,991,654.

The following quote is from Transport for NSW

"Over the next 40 years, Sydney's population is projected to swell to over 12 million residents and regional NSW will accommodate an extra 700,000 people. Transport for NSW is delivering an unprecedented $72.2b investment into a truly game changing Future Transport strategy which will bring together several modes and cutting edge technologies to deliver satisfaction and safety for our customers while supporting a rapidly growing economy."

How long does a dam last?

According to the internet, the average lifespan of a dam is often estimated to be **50 years**. Another water policy expert estimates that, on average, between 0.5% and 1% of a reservoir is filled by sediment each year, meaning that most dams would have a lifespan of 100-200 years. I can only assume that Warragamba has already a large amount of silt in the bottom of the dam further reducing drinking water storage at the dam.

As a person looking on the outside, it seems that WaterNSW and Sydney Water are not working together well. Warragamba Dam was constructed by Sydney Water and formally the Metropolitan, Water, Sewerage and Drainage Board. Warragamba Dam has the potential to significantly increase drinking water supply capacity for the future generation of Sydney and needs to be preserved not destroyed.

WaterNSW formally Water Resources traditional supplied water for irrigation for farms in rural NSW and regional centres. I believe it is showing little interest in preserving water resources for the fast growth of Sydney.

I believe Warragamba Dam would be better managed by Sydney Water as was in the past, to manage the whole water supply package to supply drinking water in the Sydney area. I believe there is now a conflict between Sydney Water and WaterNSW. Sydney drinking water supply should be managed by one and not two organisations.

Sydney Water manages the largest sewerage treatment network in Australia including the sewerage outfalls built in the 1990s.

Many residents in the Hawkesbury – Nepean floodplain want Warragamba Dam in its current can be better managed for flooding. I am annoyed by the Minister for Water at the time and the current operators of the dam that refused to open the dam gates early despite a repeated request from the Emergency Minister (**GOOD CALL** from the Emergency Minister!!!) during the March 2021 flooding, which caused additional flooding, road closures, major disruption and havoc over a large area for no reason. I am disappointed by the response by the Minister for Water at the time and the dam operators in the media justifying why the dam gates were not opened early when they knew the water was flowing into the catchment and had to create extensive flooding for no reason. They waited until the dam reached full capacity and the catchment area was inundated with heavy rainfall. This same request has been made by the public in the area for decades that has been completely ignored.

My understanding, the severe flooding of the Hawkesbury – Nepean River is mainly caused by the narrow section (choke point) of the Hawkesbury River around Sackville. This is a short section. Floods in this area are large and deep and are known as one of Australia high risk flood areas. Widening of the Hawkesbury River or drilling several short tunnels around Sackville 10 km long is a better option for flood mitigation. The cost I believe is similar and a better outcome to manage all flood events in the area and not just some. Widening or tunnelling or both of the Hawkesbury River will preserve the future water supply for Sydney and is failsafe requiring little or no human intervention and equipment failure. The extra capacity only needs to be the size of the gates of the Warragamba dam.

The Suez Canal in Egypt is a manmade canal built 151 years ago, 193 kilometres long used as a shortcut for boats. Built by human hands and donkeys.

The Panama Canal through Panama is a manmade canal built 107 years ago, 82 kilometres long used as a shortcut for large boats. Built by human hands and donkeys.

Donkeys must be better for construction than a big D11 Caterpillar bulldozer and dynamite we have today.

So why can't they widen the Hawkesbury River?

The NSW government is building many kilometres of rail (Sydney Metro) and difficult road tunnels projects (NorthConnex, WestConnex, M5 East proposed M9 Motorway from Campbelltown to Gosford through very rough mountainous terrain that will require either massive tunnels or cutting through sandstone adjacent to the Hawkesbury River) across Sydney. What is going to happen to the tunnel boring machines on these projects when are they finished? Are they being scraped? Repurpose these machines and use these machines to dig tunnels to widen the flow of the Hawkesbury River around Sackville Gorge. Road header machines were used to build NorthConnex, Westconnex, M5East motorway and many other projects.

We have built the Snowy Hydro and Snowy Hydro 2.0 is under construction right now. They are using three 11 m wide tunnel boring machines that can be reused to increase the capacity of the Hawkesbury River. These tunnel boring machines are drilling holes the size of a 2 storey house including the roof just to generate power. See the following link.

https://www.waterpowermagazine.com/features/featuretunnel-vision-at-snowy-20-8492452/

If this could be done for the Snowy Mountains project with no population why not the Hawkesbury River? Why the lower standards for the people in the Hawkesbury area. The area is booming with a large predicted population growth north of the Hawkesbury River that is cut off during major storm events. There is no suitable crossing the Hawkesbury and Nepean between the M4 and Great Western Highway in Penrith to the M1 Motorway at Brooklyn. For residents to cross the Hawkesbury River during major flooding it is a 5 hour trip via the GWH and Bells Line of Road via Bell or the M1 Motorway and the Putty Road via Singleton. This is a similar distance trip from Sydney to the Victoria border. NSW built the F3 Freeway through deep sandstone from Hornsby to Gosford and now to the Queensland border. NSW Government needs to stop procrastinating and get on with the job and do a proper job not a cheap job at the expense of the future.

If the Hawkesbury River has greater capacity, many roads, bridges, rail, communities and services will no longer be cut and isolated during major rainfall events. Reduce the pressure off emergency services and keep businesses and taxes flowing to governments to pay for more infrastructure projects.

Widening or tunnelling or both of the Hawkesbury River around Sackville can be done in stages and there is no rush to build all at once. Once complete more value land will become available providing a huge benefit and could fund the project. Landowners who benefit from the reduced impact of flooding could contribute to the funding of the works. The widening of the Hawkesbury River could be done at a reduced cost to the NSW Government and the people of NSW. I guess the NSW government may own land along the Hawkesbury River. If a tender was announced to quarry the sandstone and sell on the open market, I believe it could be done at no cost or low cost to the government.

My major concern is that the temporary holding of floodwater behind the dam wall and relying on operators and equipment not to fail including damage to the dam wall is a high risk option. This could result in a major catastrophe disaster destroying most of Western Sydney and a high death toll

as seen during the flooding of Brisbane in 2011 or the Chernobyl nuclear disaster. Many dams have failed across the world. Only takes one accident just like Chernobyl. See below.

Teton Dam, USA, 1976

Teton Dam was the largest structural collapse in U.S. history, exceeding even the World Trade Centers. The day before the breach, with leaks worsening, the project engineer is on record as being unworried.

Vajont Dam, Italy, 1963

Europe's tallest dam was almost complete in the Italian Alps, when a giant landslide turned the reservoir into an 800-foot tsunami that crashed over the dam and destroyed five towns in seven minutes. Vajont has been called one of the "great failures of science and engineering" - but it was very human choices that pushed the project on past warning signs.

Read more: http://www.groundtruthtrekking.org/Issues/OtherIssues/understanding-dam-failure.html#ixzz7AkNMkQBi

Poor Flood Evacuation Routes that do not work:

Richmond Road floods at South Creek at Marsden Park during a 1:20 year flood event. See below

During the flood of March 2021 see below it just remain open and provided the only access route for residents of Berkshire Park, Windsor Downs, Bligh Park, South Windsor and Londonderry.

The flood evacuation routes along The Northern Road between Londonderry Road and Richmond Road Berkshire Park, St Marys Road and Llandilo Road at Berkshire Park and Llandilo are poor and do not work and are not suitable for use as flood evacuation routes as they flood not from backwater flooding of South Creek but rainfall in a 1 in 5 year storm events.

Please fix the flood evacuation routes immediately. Thousands of people would have been trapped if Richmond Road was flooded at South Creek.

Please do not raise the dam wall at Warragamba Dam that only fixes some of the flooding of the Hawkesbury Nepean and destroy the future cheap water supply needed by Sydney.

Build a proper job and widen or tunnel or both the Hawkesbury River around Sackville to fix the flooding problems in the area permanently and fix the flooding for thousands of years to come.

Regards