From: John Allan
To: Records
Cc: [redacted]
Subject: Submission re. Dunoon /The Channon Dam proposal
Date: Tuesday, 8 September 2020 9:06:51 AM
Attachments: channon dunnon dam submission.docx

My submission is below in the body of the email AND as a word doc. attachment

7th September 2020
Rous County Council,
Lismore NSW 2480
council@rous.nsw.gov.au

John Allan
[redacted]

Dear Rous Councillors and General Manager

Submission. Proposed Dunoon / The Channon Dam

I write to express my profound opposition to this Mega Dam. The wall of this proposed structure is approx. 600 metres upstream of my property (in a straight line). I have walked this area extensively over the years and know it well.

About a decade ago extensive environmental and cultural sites research, investigations and analysis were done on the area and extensive reports were filed, and a Dam in that location was ruled out primarily on those grounds. You will be aware of this.

As those factors have not changed and you wish to proceed with this Dam it seems you, corporately, have little regard for these matters of environmental protection and cultural sites protection.
The only conclusion is your majority is following outmoded and flawed 'economic' and supposed 'development' agendas.

I will be brief, as I know full well the majority of your minds seem made up and you are merely going through the motions of the pretence of 'consultation,' so well known to the public when dealing with governmental organisations

From what I can see this seems to me to be a proposal made in a political situation where

the term ‘climate emergency’ is still viewed as ‘radical’ or delusional rather than settled science. State and Federal governments still don’t talk openly about addressing these matters. For example the Bushfires Royal Commission has NOT listed one case of arson as a cause for the major bushfires, despite many State and Federal politicians peddling the Conspiracy Theory that ‘arson not climate change was the reason for the fires.’

On one hand this leads to not laying all matters on the table regarding a major development like this; whilst making knee jerk decisions about ‘water security.’ Without open consideration of the broad and detailed impacts of climate change on population centres, infrastructure climate etc. etc., into the coming decades and centuries any decision is flawed.

On the other hand it seems there is massive ‘magical thinking’ at work with regard to future proposed population growth, far, far above normal increases, driving this too.
I am aware of Govt. ‘plans,’ of the fanciful wish list variety, ‘propose’ to boost population in the region with migration. This seems to be a major driver.
This ‘economic modelling’ is fatally flawed for it reflects and is driven by the very thinking that has brought on the Climate Emergency.

Much, much smarter thinking needs to be engaged; not this outmoded narrow ‘growth’ model that doesn’t take into account the broader range of costs and impacts. The time for the fallacy of ‘closed systems’ and shallow ‘economic’ analysis is long over. This type of proposal might have been seen as cutting edge a century ago, or even 30 years ago. But times have changed, and this type of thinking and supposed ‘solutions’ are part of the reason times have changed for the worse.

Emblematic of this folly is this. I heard recently that a Rous County Councillor is promoting a 'plan' to have steamboat tours on the dam as part of ‘economic activity’ benefits!! Seriously? Such a notion reflects little understanding of the complexity of running a business beyond a supposed ‘big idea’ or the deep critical analysis required to make large economic decisions.

WHAT TO DO
For a start I recommend Rous Water Councillors consider, deeply, Dr Stuart White’s overview as a secure, reliable and affordable alternative to the dam. See these alternatives laid out in these slides by Professor Stuart White from Institute for Sustainable Futures (UTS) Sydney on proposed "Rous Sustainable Water Program" - Details on how to achieve optimal water efficiency in Rous. This approach shows why the proposed dam can be seen as unnecessary and indeed financially, socially and environmentally irresponsible.
Slides in PDF form: www.bit.ly/Prof-Stuart-White-Rous-slides
Further summary by Prof. White: www.bit.ly/Prof-Stuart-White-Rous-Water-augmentation-proposal
I note that Prof. Stuart White has recently engaged with Rous staff around this proposal. Please give serious consideration to Prof. White’s work.

This is a time of global crisis from the Pandemic, with the Climate Emergency continuing to escalate at alarming rates. Serious melting of ice in Polar Regions is happening now, decades before many ‘best case’ scenarios, that were called ‘alarmist,’ predicted. It is

important to realise that if a still highly resourced county like Australia can't come up with something better than a White Elephant dam we are in serious trouble.

Rous has an opportunity to engage in leadership in more sustainable and more employment producing initiatives to meet future water demands than this dinosaur technology dam that will require astoundingly high-energy inputs to construct AND run.

I know there are other proposals coming your way that contain high quality information of proven technologies to meet realistic water security projections and make building a mega expensive, mega destructive, mega dam redundant.

If you don't engage in the critical thinking necessary to walk away from this dam folly, I expect you, and those opposed to this big mistake, will have to engage in long political and court battles.

Though I know that governments are engaging in anti democratic bulldozing of environmental protections via corrupted legislation, much of it recent as befits political parties still beating the drum of top down neo-liberal politics and economics. However there are still plenty of avenues to explore in stopping this silliness. Due to the Pandemic, many people have not yet engaged with this issue. I expect you are aware of this. This too will change.

Yours sincerely

John Allan

From: bigclair
To: Records
Subject: The Channon Dump in 50ML Dam
Date: Tuesday, 8 September 2020 11:05:10 AM

I strongly oppose the possible development of this dam.

My reasons, as follows.

Loss of habitat for local flora and fauna.
Loss of 34 ha of lowland rainforest.
With the serious issues of climate change and Australia's very poor record re extinction of native flora and fauna, we definitely should not be flooding forest, especially our little remaining rainforest.
We must come up with smarter and certainly, much more environmentally friendly options.

Yours in good faith,
James Sinclair,
[redacted]

From: Lorinda Wood
To: Records
Cc: [redacted]
Subject: RE: The proposed Dunoon Dam within the Future Water Project 2060
Date: Tuesday, 8 September 2020 11:07:07 AM

Rous County Council, Lismore NSW 2480

Dear Rous Councillors and General Manager

Re: The proposed Dunoon Dam within the Future Water Project 2060

Firstly, thank you for supporting the extension of the submission date. The community appreciates it. We also acknowledge the complexity of what Rous does to provide water to our region.

About me:

Lorinda Wood

[redacted]

[redacted]

Gender: Female

8th September 2020

I beg you, Please Please, this is not a way forwards for our community.

There are many alternatives for water security.

My parents moved our family from [redacted] in 1980. My father was one of the core group who established The Northern Rivers Area Health Service, he then went on to be the Organisational Manager for decades. He introduced me and my brothers to local rainforest trees, we planted and recreated a remnant rainforest on [redacted].

We spent our youth swimming at Whian Whian Falls well before the general public knew it was there. We explored the creeks and rainforest all the time. We were healthy happy kids.

I worked at a local nursery at The Channon, growing Australian natives. After I finished university studies in Social Science and Community Development I went on to TAFE and studied Conservation and Land Management. I have spent almost 20 years working as a Bush Regenerator in the Big Scrub and surrounds. After studying Workplace Training and Assessment I went on to training and engaging different marginalised groups with our natural environment for mental and physical health benefits. The outcomes from such programs are astounding. We need to retain these magical natural areas for the mental and physical health of all people in the northern rivers. These are of world wide significance. This is a biodiversity hotspot. International research has proven now that engagement with natural spaces that give a feeling of awe have a profound impact on human health. For example, reducing the stress hormone cortisol and lowering blood pressure. And so much more research in this regard. We can not afford to lose these spaces. We must retain what

is left, to repair it further and maintain a healthy environment for future generations.

I am lost for words to be honest. My heart is breaking at what is proposed. This will be a sad time if this dam goes ahead.

My family and I have enjoyed the rainforests, creeks and wildlife in the northern NSW region for 40 years. Words cannot describe our deep appreciation for this land. In addition to the local community of farmers and local nature enthusiasts, local and national scientists, ecologists, hydro & sewage engineers, and politicians, have come forth in their outrage and support towards protecting this land we always felt was a unique ecosystem.

My mother, brother, uncle and niece still [redacted] as do many people I have known since childhood. This dam is breaking all of our hearts. We have all worked so hard to restore and regenerate our beautiful home.

Please don't destroy our home, the creatures, the trees and the sacred sites that are so important to the Widjabul People of the Bundjalung Nation.

From the Rous Water Web page:

GALAMAH BUDGERAM. PLACE OF CREATION.

(Spoken by R.C. Gordon, Widjabul descendant and linguist)

The catchment area surrounding Rocky Creek Dam is known in Widjabul ideology as Ngathanggali jogunba – the Creator's Country.

It is an area high in spiritual significance to all Bundjalung People. Wi-abul/Widjabul people are acknowledged as the Custodians – the Guardians/Keepers/Protectors of this very sacred country.

There are many Spiritual Sacred sites in this Country. The knowledge of these sites has been handed down generation to generation from the Budgeram (the Creation Period). This was a time where all laws were explained to man to live appropriately in relationship to his role within the environment.

Whian Whian is derived from the common Bundjalung word 'weeung weeung' meaning clever fella clever man or men of high degree. These men were responsible for the appropriateness of duty and responsibility to Country and People.

Please be careful not to unbalance the Spiritual Harmony of this Place for this place is here for all of us.

Our responsibility to water

Everyone knows their place by the stories handed down to them from the creation. The creation was a significant period in explaining the laws to man, and his place in the cycle of life. This cycle of life represents his role as

custodian, or as a caretaker, to the land, the environment and people. We as people must be mindful of our place in this process. This process applies to all of us.

Just like the blood that runs through our veins, to keep us alive and sustain us through our daily lives, so is water important, not just for us as humans but for the environment we live in, the animals that we care for, and for the food that is provided to us.

The main source of water for our people was the spring water. The people had a responsibility to care for that water. Water was shared with the animals. Water was shared by everyone. Water didn't belong to anyone. Everyone was responsible for that water.

There was, and there still is, a spirit of the waterhole. Be mindful.

No-one can live without water.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency** - this is the cheapest & fastest

  way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an

  additional 950,000 people without a rise in consumption. (Metropolitan Water Plan 2006, NSW

  (1)

- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century. It would swallow all resources in one big expensive 'white dinosaur' project.

- **The dam would encourage continued inefficient and often wasteful water management by local governments.** They would have no incentive to do things differently.

Government)

● **Destruction of important Indigenous cultural heritage,** including burial sites (Cultural *(2)*

Heritage Impact Assessment, 2011) . Ongoing disregard for First Nations' heritage.

● **Destruction of The Channon Gorge and its endangered ecological community of**

lowland rainforest (including regionally rare warm temperate rainforest on sandstone), and its *(3)*

threatened flora and fauna species. (Terrestrial Ecology Impact Assessment, 2011) .

Rous is planning to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone. Offsetting is problematic because the type of vegetation offered as recompense is never equivalent. This example is worse than most. (Nan Nicholson, botanist)

Councils are required under State planning regulations to: “Focus development to areas of least biodiversity sensitivity in the region and implement the ‘avoid, minimise, offset’ hierarchy to biodiversity, including areas of high environmental value.” NSW Department of Planning, Industry and Environment 2019, ‘Delivering the plan’, Sydney, viewed 03 August 2020 <

https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-t he-plan >, Direction 2: Enhance biodiversity coastal and aquatic habitats and water

(4) catchments.

Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.

- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.

- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.

  (5)

- **The small population increase** predicted for the four Rous-supplied councils of 12,720

  between 2020-2060 **does not justify** such a large and destructive dam. The dam risks being

  an expensive white dinosaur, diverting expenditure away from more sustainable, flexible and

  effective solutions. NSW Department of Planning, Industry and Environment 2019, *‘NSW*

  population projections ’, Sydney, viewed 03 August 2020,

  <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projecti

  (5) ons> scroll down to “Local Government Factsheets”.

● **Catastrophic flooding downstream in worst floods,** particularly for the first 3 kilometres (6)

below. (Environmental Flows Assessment 2011)

● **Potential for a big dam to drive unneeded population growth, as the government**

attempts to gain value from an otherwise unnecessary, and stranded, asset.

I SUPPORT these alternatives:

I believe we need to take action on a suite of smart water options and proven alternatives.

The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too. This is 21st century thinking.

● An investment in system-wide water efficiency and strong demand management.

Analysed, costed and deployed, creating jobs. (We understand Rous has *not* costed this in

creating their future water plan)

Existing research over the past decade consistently finds that the best 'bang-for-buck'

investment in water supply comes from demand management and identifying savings within

(7) (8)

the existing supply.
Professor Stuart White from UTS has provided a detailed and costed proposal "The Rous Sustainable Water Program" which shows exactly how and why system-wide optimisation of water use is possible and economical. In comparison, the proposed dam is simply financially,

(9)
environmentally and socially irresponsible. (Stuart White, 2020

www.bit.ly/Prof-Stuart-White-Rous-slides)

● **Water re-use in various ways,** including Purified Recycled Potable water.

A wealth of global research and experience already exists regarding potable reuse of water as

set out in Water Research Australia's report, Potable Water Reuse: What can Australia learn

from global experience?

(9)

Example: The city of Windhoek in Namibia in Southern Africa has been using purified recycled

(10)

- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments. *This builds community resilience - much needed, as the recent extreme bushfire season has shown.*

  The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the

need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."

Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local

(12)
flooding and scouring of creeks. https://www.yourhome.gov.au/water/rainwater

- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.

- **Groundwater, where this is environmentally safe**

The Australian government provides a lot of information on the ecological impacts and

(13)

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

https://www.waterra.com.au/publications/document-search/?download=1806

water for 30 years using advanced technology. https://www.wingoc.com.na/our-history

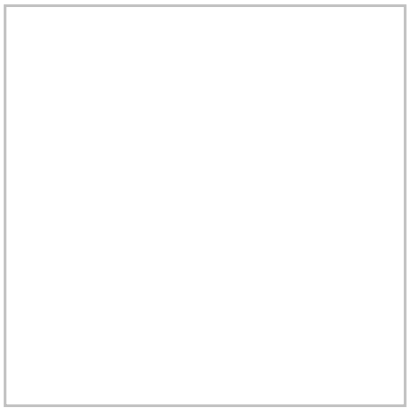
(11)

groundwater usage. https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-ground water-drawdown

Please reconsider this Dam, it is a catastrophic plan and will change our region and destroy some of the last remaining intact parts of the Big Scrub. Important Sacred Sites and so many memories from generations.

Warm regards
--
Lorinda Wood

[redacted]



From: Rohan Stewart
To: Records
Cc: [redacted]
Subject: Submission regarding the proposed Dunoon Dam within the Future Water Project 2060
Date: Tuesday, 8 September 2020 10:59:59 AM

RE: The proposed Dunoon Dam within the Future Water Project 2060

8th September 2020

Rous County Council,

Lismore NSW 2480

Email: council@rous.nsw.gov.au

Dear Rous Councillors and General Manager

I am a long term resident of the area being a fourth generation resident from a farming background. Having spent the better part of my life in the region of the proposed Dunoon Dam I have a strong connection and attachment to the surrounding lands. I have walked and paddled the creeks that will be flooded, on many occasions.

I understand the importance of water security and the need for Rous County Council to be proactive in planning for the region's future water supply needs, however I have grave concerns about the Dam proposal and believe that the project is based on flawed assumptions setting the region on a trajectory that is not aligned with a future that is sustainable in the long term. I believe a new and large dam is unnecessary and unwarranted. I believe there are other innovative options that have not been thoroughly investigated and that the costs and damage done by such a dam far out weigh the perceived benefits.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- Lost opportunity to invest in system-wide water efficiency - this is the cheapest & fastest

way to ensure supply-demand balance.

● A large dam keeps water in a centralised reservoir, thus centralising power and control over that water. As we enter an era of climate uncertainty we need people to be more responsible for their water usage and needs. Out of sight out of mind causes people to be less aware and less accountable for their water use. The decision making power and responsibility of water use should be returned to people not controlled by some central governing authority. Water tanks, water efficiencies, small localised dams, compost toilets all play a major part in this.

● Destruction of important Indigenous cultural heritage, including burial site.. Ongoing disregard for First Nations' heritage.

● Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest (including regionally rare warm temperate rainforest on sandstone), and its threatened flora and fauna species.

.● Industrial/construction zone for The Channon/Dunoon community; noise, machinery, trucks,visual impact. Ongoing sound impact from pump house etc.

● Higher prices for consumers due to a 4x increase in the cost of water. Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built. In a time of increased economic uncertainty this is crazy to assume householders can afford to pay four times the current cost of water!

● The small population increase predicted for the four Rous-supplied councils of 12,720 between 2020-2060 does not justify such a large and destructive dam. The dam risks being an expensive white dinosaur, diverting expenditure away from more sustainable, flexible and effective solutions.

● Catastrophic flooding downstream in worst floods, particularly for the first 3 kilometres below.

● Potential for a big dam to drive unneeded population growth, as the government attempts to gain value from an otherwise unnecessary, and stranded, asset.

I SUPPORT these alternatives:

I believe we need to take action on a suite of smart water options and proven alternatives.

The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too. This is 21st century thinking.

● An investment in system-wide water efficiency and strong demand management. Analysed, costed and deployed, creating jobs. (We understand Rous has not costed this in creating their future water plan) Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.

● Water re-use in various ways, including Purified Recycled Potable water.A wealth of global research and experience already exists regarding potable reuse of water.

● Water harvesting (urban runoff; rain tanks): Water tanks on all new (and existing) developments.

● Mandating the use of Composting and water efficient toilets in all new developments and retrofitting them in old developments would in itself saving hundreds of thousands of litres of fresh drinking waters!!

● Contingency planning would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.

Yours sincerely,

Rohan Stewart

[redacted]

[redacted]

[redacted]

[redacted]

From: Gai Taylor
To: Records
Cc: [redacted]
Subject: FW: The proposed Dunoon Dam within the Future Water Project 2060 -
Date: Tuesday, 8 September 2020 11:10:28 AM

Gai Taylor

[redacted]

Dear Rous Councillors and General Manager,

Re: The proposed Dunoon Dam within the Future Water Project 2060

Firstly, thank you for supporting the extension of the submission date. The community and myself really appreciates this as I have not been able to do before this. I also acknowledge the complexity of what Rous does to provide water to our region.

I have lived in the Northern Rivers since 1977 running a mixed farm with my family for 10 years and then moving to [redacted] to study environmental science in the 1990s.

We have spent much of our time off visiting many areas and love the rainforests, creeks and wildlife in the northern NSW region for over 40 years. This area is wonderful and has provided us with not only a living but an exceptional place for our kids to grow up in, who now also live in the area. We love the area and have seen and at times been involved with the preservation of a number of key areas of biodiversity, Mt Nardi, Protestors Falls, etc much which, if not for that support, would have been decimated but are now part of the World Heritage South East Forest regions. We feel pretty proud of playing our small bit for that and so we've again joined local farmers, nature enthusiasts, local and national scientists, ecologists, hydro & sewage engineers, and politicians, to say that we feel gutted and angry about the proposal for this dam and want it to be protected for future generations.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

● **Higher prices for consumers due to a 4x increase** in the cost of water. In response to a question from councilor Vanessa Ekins, Mr Rudd said he expected a fourfold increase in the cost of supplying water if the dam is built. [Phil Rudd, Rous general manager]

● The **small population increase** predicted for the four Rous-supplied councils of 12,720 (5) between 2020-2060 **does not justify such a large and destructive dam**. The dam risks being an **expensive white dinosaur**, diverting expenditure away from more sustainable, flexible and effective solutions. NSW Department of Planning, Industry and Environment 2019, 'NSW population projections ', Sydney, viewed 03 August 2020, <https://www.planning.nsw.gov. au/Research-and-Demography/ Population-projections/ Projections> scroll down to "Local Government Factsheets".(5)

● **Lost opportunity to invest in system-wide water efficiency** - this is the **cheapest** & **fastest** way to ensure supply-demand balance. By focusing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption for 25 years. (Metropolitan Water Plan 2006, NSW Government) (1)

● The **21st century is about a suite of smart water options**. This dam would be a lost opportunity to make our system fit for the 21st century. It would swallow all resources in one big expensive 'white dinosaur' project.

● The **dam would encourage continued inefficient and often wasteful water management** by local governments. They would have no incentive to do things differently.

● **Destruction of beautiful Whian Whian Gorge**, the second largest remnant of the 99% cleared Gondwanna Sub-Tropical Rainforest. At more than 60ha this represents over 10% of this precious habitat and is 40% the size of the World Heritage recognised Big Scrub Flora Reserve to which it connects geographically, 7 kms downstream from the Rocky Creek Dam.

● **Destruction of beautiful The Channon Gorge** and its endangered ecological community of lowland rainforest (including regionally rare warm temperate rainforest on sandstone), and its threatened flora and fauna species.

[Terrestrial Ecology Impact Assessment, 2011]

Rous is planning to offset the loss of rainforest on sandstone with regeneration of

degraded land in the buffer zone."'Offsetting' with similar plantings is problematic because the type of vegetation offered as recompense is never equivalent. This example is worse than most." [Nan Nicholson, botanist]

Councils are required under State planning regulations to:

1. “Focus development to areas of least biodiversity sensitivity in the region and implement the ‘avoid, minimise, offset’ hierarchy to biodiversity, including areas of high environmental value.”

[NSW Department of Planning, Industry and Environment 2019, ‘Delivering the plan’, Sydney, viewed 03August2020 https://www.planning.nsw.gov. au/Plans-for-your-area/ Regional-Plans/North-Coast/ Delivering-the-plan],

2. Enhance biodiversity coastal and aquatic habitats and water catchments. (4)Rous is required to avoid this destruction because there are economically viable and more effective solutions.

● **Catastrophic flooding downstream** in worst floods, particularly for the first 3 kilometres below. (Environmental Flows Assessment 2011)(6)

● **Flooding of half of the popular Whian Whian Falls recreational area**. This involves Aboriginal women's ceremonial pools, and in high rainfall periods would make the main Falls unusable.

● **Accelerate extinction of a multitude of vulnerable species**. Extinction level pressures on 3 vulnerable fish species due to destruction of 6kms and genetic islanding of over 18 kms of migratory native fish habitat. Extinction pressure on 19 threatened plant species, and 24 threatened fauna species. [As recorded within the 2011 Rous Ecological Surveys].

● **Koala habitat and important "corridors"** connecting Whian Whian, Dunoon and The Channon populations.

● **Geotechnical considerations**: basalt soil landslides and sandstone leakage with potential dam failure & massive cost blowouts.

[Interview with Michael Mackenzie, Rous Engineer on 20.08.20]

● **Desecrating Indigenous culture**: The Channon/Dunoon has an extensive and rich cultural landscape belonging to the Widjabal-Wiyabal People of the Bundjalung nation. The unique geology of "Basalt Meets Sandstone" at this site lends itself to a meeting place for tool building, rich fertile land and sanctuary. The waterholes, trees and rocks of the Rocky Creek landscape tell one of an intact and

well documented Australian dream-time story in the epic battle of goanna (Ngumarhl) and snake (Ngoonjbear) which formed the Northern Rivers waterways and headlands. Local Preschools and Councilors alike pay their respects to the Bundjalung People and Ancestors' safe custodianship of our lands and waterways over tens-of-thousands of years.

The Rous Reconciliation Action Plan (RAP) 2017 is to be commended in their recent efforts:: "Bundjalung people have lived in the region for many thousands of years in a sustainable relationship with the natural environment. The water catchment areas managed by Rous County Council are a part of the natural landscape that forms the identity, culture, spirituality and resource base for the Widjabal/Wiyabal people of the Bundjalung nation. Despite the significant changes of the past 200 years, the Widjabal/Wiyabal people still maintain a responsibility and deep relationship with the land and water. Rous County Council acknowledges this relationship and deeply values their traditional laws, knowledge and lessons about places and sustainability. Rous County Council conducts all business activities in accordance with its values of Integrity, Commitment, Trust, Social Responsibility, and Accountability."

[https://rous.nsw.gov.au/cp_ themes/default/page.asp?p=DOC- NWB-13-07-78]

Despite these well stated intentions, should the dam proceed, important Indigenous archeological sites, burial grounds, creation waterholes and artefacts would be destroyed. [Cultural Heritage Impact Assessment, 2011]

Widjabal/Wiyabal representatives such as Elder John Roberts and Noel King's position on this project remains a clear "NO DAM!" and serious concerns as to the failures in engagement since 1989 are to be tabled.

I therefore fully support their position on strongly rejecting this dam issue.

I SUPPORT these alternatives:

I believe we need to take action on a suite of smart water options and proven alternatives. The tide is turning on renewable and sustainable resource use. It is time for the tide to turn on how we meet our water needs too. This is 21st century thinking.

● An **investment in system-wide water efficiency and strong demand management**. Analysed, costed and deployed, creating jobs. (We understand Rous has not costed this in creating their future water plan). Existing research over the past decade consistently finds that the best value for money investment

in water supply comes from demand management and identifying savings within the existing supply. (7) (8)

● **Water reuse** in various ways, including Purified Recycled Potable water. A wealth of global research and experience already exists regarding potable reuse of water as set out in Water Research Australia's report, Potable Water Reuse: What can Australia learn from global experience?

https://www.waterra.com.au/ publications/document-search/? download=1806 (9)
Example: The city of Windhoek in Namibia in Southern Africa has been using purified recycled water for 30 years using advanced technology.
https://www.wingoc.com.na/our- history (10)

● **Water harvesting via urban runoff & rainwater tanks**: Water tanks on all new (and existing) developments. Remove the rubbish law that prevents urban use of rainwater in the Ballina Shire. (11) This builds much needed community resilience, as the recent extreme bushfire season has shown. The cost of a 22,000L rainwater tank is only $2,500. If this were spread over each new 2 person household (est 13,000 pop by 2060) the cost would be a mere $16 million, and combined with automatic-mains top-up, can provide 100% reduction in mains water use!
The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs." Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.

(12) https://www.yourhome.gov.au/ water/rainwater

● **Deep underground water storage with surface runoff integration**.

[https://www.abc.net.au/news/ 2020-03-04/water-banking- aquifers-australia-facing- future-drought/12009702]

[Dillon, P, Stuyfzand, P, Grischek, T et al 2019, 'Sixty years of global progress in managed aquifer recharge', Hydrogeology Journal, vol. 27, no. 1, pp. 1-30.]

[Ross, A 2017, 'Speeding the transition towards integrated groundwater and surface water management in Australia', Journal of Hydrology, vol. Article in press.]

● **Contingency planning** would enable Rous to be ready to rapidly implement

supply measures if it becomes necessary in times of drought. Multiple sources of water rather than putting all our "eggs in one basket" (ie: million$), allows us to route around any points of failure in the water system.

● **Groundwater**, where this is environmentally safe The Australian government provides a lot of information on the ecological impacts and groundwater usage. (13) The Regional Investment Corporation (RIC) which administers the National Water Infrastructure Loan Facility allow up to 49% lending towards: groundwater and managed aquifer recharge supply schemes and water treatment, including desalination, storage and reuse. [https://www.environment.gov.au/water/publications/what- are-the-ecological-impacts-of- groundwater-drawdown]

With scalable supply alternatives in place, the **existing supply** from Rocky Ck Dam will be made **resilient** to anticipated times of drought and projected population growth, **without** the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

For a picture journey through part of this incredible landscape please see **David Lowe's amazing photography of the threatened Channon Gorge**:

https://www.flickr.com/photos/ davidlowe1970/albums/ 72157715831462108?fbclid= IwAR3nK782KFszAMwn_74HKC02f-BsGKbYCZmwyWg0GYrSAGmaU0UHZCaq Kgo

Please, for now and future generations, choose a different path, your proposed path is 19 century thinking, we've left that world behind, mega is not the path of the future, you can choose a new and more sustainable and future focused way, you can do it and we and future generations with say a HUGE **Thank You** for doing that.

Kind regards,

Gai Taylor

References and Notes:

(1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc. https://www.dropbox.com/s/ pu9898oq6kocrph/

NSW%20Govt%202006%20MWP% 20summary.pdf?dl=0

(2) Ainsworth Heritage, Cultural Heritage Impact Assessment, 2011

(3) SMEC Australia, Terrestrial Ecology Impact Assessment, 2011

(4) NSW Department of Planning, Industry and Environment 2019, 'Delivering the

plan', Sydney, viewed 03 August 2020 https://www.planning.nsw.gov. au/Plans-for-your-area/ Regional-Plans/North-Coast/ Delivering-the-plan, Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments.

(5) NSW Department of Planning, Industry and Environment 2019, 'NSW population projections ', Sydney, viewed 03 August 2020, https://www.planning.nsw.gov. au/

Research-and-Demography/ Population-projections/ Projections

Scroll down to "Local Government Factsheets".

(6) Environmental Flows Assessment Proposed Dunoon Dam, 30 Aug 2012, EcoLogical Australia.

(7) The Rous Regional Water Efficiency Program 1997, Final report of the Rous

Regional Demand Management Strategy : preferred options, Rous County Council,Lismore.

(8) Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures,Sydney.

(9) Kahn,Stuart and Branch, Amos 2019, Potable water reuse: What can Australia learn from global experience?, Water Research Australia Limited, Adelaide.

(10)Windhoek Goreangab Operating Company (Pty) Ltd 2020,Our history | Wingoc,Veolia Environment, Windhoek, viewed 3 August 2020, <https://www.wingoc.com.na/>

(11)$220 million dollars - the estimated cost of the new dam - could provide more than 73,000 rainwater tanks (22,700L) at $3,000 each including installation. That is 1.66GL storage with no evaporation and much increased community resilience for future climate risks. This more than covers the 0.9GL extra water needed by the 12,720 new people predicted to come to our areabased on 194L/person/day average water use (Rous).

(12)Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, <https://www.yourhome.gov.au/ water/rainwater>

(13)Department of Agriculture, Water and the Environment 2018, What are the ecological impacts of groundwater drawdown? | Department of Agriculture, Water and the Environment, Canberra, viewed 6 August 2020, <https://www.environment.gov. au/water/publications/what- are-the-ecological-impacts-of- groundwater-drawdown

From: Zoe Fehlberg
To: Records
Cc: [redacted]
Subject: The proposed Dunoon Dam within the Future Water Project 2060
Date: Tuesday, 8 September 2020 11:13:50 AM

Dear Rous Councillors and General Manager,

My name is Zoe and I live at [redacted]. While the below information has been copied and pasted, because I agree with the below completely.

Thank you for taking the time to hear our submissions and considerations against the proposed Dunoon Dam. I believe our region and council has the capacity to lead the way in smarter water options.

Regards,

Zoe Fehlberg

[redacted]

Please see below submission:

Re: The proposed Dunoon Dam within the Future Water Project 2060

Firstly, thankyou for supporting the extension of the submission date. The community appreciates it. We also acknowledge the complexity of what Rous does to provide water to our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

Lost opportunity to invest in system-wide water efficiency - this is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption. (Metropolitan Water Plan 2006, NSW Government) (1)

The 21st century is about a suite of smart water options. This dam would be a lost opportunity to make our system fit for the 21st century. It would swallow all resources in one big expensive 'white dinosaur' project.

The dam would encourage continued inefficient and often wasteful water management by local

governments. They would have no incentive to do things differently.

Destruction of important Indigenous cultural heritage, including burial sites (Cultural Heritage Impact Assessment, 2011)(2). Ongoing disregard for First Nations' heritage.

Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest (including regionally rare warm temperate rainforest on sandstone), and its threatened flora and fauna species. (Terrestrial Ecology Impact Assessment, 2011)(3).

Rous is planning to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone. Offsetting is problematic because the type of vegetation offered as recompense is never equivalent. This example is worse than most. (Nan Nicholson, botanist)

Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value." NSW Department of Planning, Industry and Environment 2019, 'Delivering the plan', Sydney, viewed 03 August 2020 (4)

Rous is required to avoid this destruction because there are economically viable and more effective solutions.

Industrial/construction zone for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.

Higher prices for consumers due to a 4x increase in the cost of water. Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.

The small population increase predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 does not justify such a large and destructive dam. The dam risks being an expensive white dinosaur, diverting expenditure away from more sustainable, flexible and effective solutions. NSW Department of Planning, Industry and Environment 2019, 'NSW population projections ', Sydney, viewed 03 August 2020, <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections> scroll down to "Local Government Factsheets". (5)

Catastrophic flooding downstream in worst floods, particularly for the first 3 kilometres below. (Environmental Flows Assessment 2011)(6)

Potential for a big dam to drive unneeded population growth, as the government attempts to gain value from an otherwise unnecessary, and stranded, asset.

I SUPPORT these alternatives:

I believe we need to take action on a suite of smart water options and proven alternatives.

The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too. This is 21st century thinking.

An investment in system-wide water efficiency and strong demand management. Analysed, costed and deployed, creating jobs. (We understand Rous has not costed this in creating their future water plan)

Existing research over the past decade consistently finds that the best 'bang-for-buck' investment

in water supply comes from demand management and identifying savings within the existing supply.(7) (8)

Professor Stuart White from UTS has provided a detailed and costed proposal "The Rous Sustainable Water Program" which shows exactly how and why system-wide optimisation of water use is possible and economical. In comparison, the proposed dam is simply financially, environmentally and socially irresponsible.(9) (Stuart White, 2020 www.bit.ly/Prof-Stuart-White-Rous-slides)

Water re-use in various ways, including Purified Recycled Potable water.

A wealth of global research and experience already exists regarding potable reuse of water as set out in Water Research Australia's report, Potable Water Reuse: What can Australia learn from global experience? https://www.waterra.com.au/publications/document-search/?download=1806(9)

Example: The city of Windhoek in Namibia in Southern Africa has been using purified recycled water for 30 years using advanced technology. https://www.wingoc.com.na/our-history(10)

Water harvesting (urban runoff; rain tanks):

Water tanks on all new (and existing) developments.(11) This builds community resilience - much needed, as the recent extreme bushfire season has shown.

The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."

Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.(12) https://www.yourhome.gov.au/water/rainwater

Contingency planning would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.

Groundwater, where this is environmentally safe

The Australian government provides a lot of information on the ecological impacts and groundwater usage.(13)

https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-drawdown

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898oq6kocrph/NSW%20Govt%202006%20MWP%20summary.pdf?dl=0

Ainsworth Heritage, Cultural Heritage Impact Assessment, 2011

SMEC Australia, Terrestrial Ecology Impact Assessment, 2011

NSW Department of Planning, Industry and Environment 2019, 'Delivering the plan', Sydney, viewed 03 August 2020 < https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan > , Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments.

NSW Department of Planning, Industry and Environment 2019, 'NSW population projections ', Sydney, viewed 03 August 2020, <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections> Scroll down to "Local Government Factsheets".

Environmental Flows Assessment Proposed Dunoon Dam, 30 Aug 2012, Eco Logical Australia.

The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy : preferred options, Rous County Council, Lismore.

Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.

Stuart White, 2020 www.bit.ly/Prof-Stuart-White-Rous-slides)

Kahn,Stuart and Branch, Amos 2019, Potable water reuse: What can Australia learn from global experience?, Water Research Australia Limited, Adelaide.

Windhoek Goreangab Operating Company (Pty) Ltd 2020,Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, <https://www.wingoc.com.na/>

$220 million dollars - the estimated cost of the new dam - could provide more than 73,000 rainwater tanks (22,700L) at $3,000 each including installation. That is 1.66GL storage with no evaporation and much increased community resilience for future climate risks. This more than covers the 0.9GL extra water needed by the 12,720 new people predicted to come to our area based on 194L/person/day average water use (Rous).

Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, <https://www.yourhome.gov.au/water/rainwater>

Department of Agriculture, Water and the Environment 2018, What are the ecological impacts of groundwater drawdown? | Department of Agriculture, Water and the Environment, Canberra, viewed 6 August 2020, <https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-drawdown>

From: Yvonne Preston
To: [redacted]
Subject: The proposed Dunoon Dam within the Future Water Project 2060
Date: Tuesday, 8 September 2020 11:44:08 AM

Yvonne Preston

[redacted]

[redacted]

8th September 2020

Rous County Council,

Lismore NSW 2480

SUBMISSION TO OPPOSE THE CHANNON & DUNOON DAM FOR THE FOLLOWING REASONS:.

My name is Yvonne Preston, I came to this area in 1995 to study environmental science. We visited the rare remnants and pockets of the big scrub and the stunning area's that have bounced back after such a massive deforestation era. They have been cared for and nurtured by one of the most progressive communities I have ever lived in.

I have recently learnt of the culturally significant sites to first nations people. The indigenous people need their sites protected, respected and if anything compensated for their loss, not further degradation of the oldest culture in the world. Do not add to this national shame any further and be a shining example of respect!

I understand this is a difficult decision to make, however I feel after the bushfires and the increased demand that humans have placed on forests that

extra care and all alternatives to destructing ANY forests and water bodies is absolutely crucial now. However since the summer of 2019/20 destruction has continued at an alarming rate, impacting the flora and fauna that creates dense and effective ecosystems, this symbiotic relationship for healthy ecosystems is at a critical point. Not mucking about with damming and protecting water flows ensures all groundwater movement can contribute and continue to hydrate vegetation and decrease the drying out of subtropical ecosystems. Therefore would make them less vulnerable to bushfires. This is a time where we need to preserve forested areas and natural ecosystems for our own future survival, we need to extend them and think of ALL alternatives to avoid deforestation.

After all, trees are the land's cloud making pumps!

Having been a volunteer of Greening Australia for many years I am a huge fan of such an organisation. Lately I witnessed a highly successful campaign that was run through triple J. It is clear that the youth of Australia have spoken loud and clear in their support to protect and extend remnants. Destroying more ecosystems at a time when the rest of the world and especially the youth are fighting for its integrity.

There are a myriad of alternatives for water collection and use such as personal tanks, restoration of old tanks and becoming a water wise community. Have you spoken to Leigh Davidson? He was a lecturer of ecotechnology at Southern Cross University, he designed whole systems for both the city and rural areas. A local genius when it came to water saving and environmental engineering. I find it mind boggling that, of all the amazing technology and simple ideas to live an ecologically sustainable life that was taught at Lismore's own SCU, are not the 'go to ideas' that are being implemented at this time. This dam is in conflict with everything this area stands for. If Sydney can increase its population and not increase the size of their Dam so can this area.

Healthy rivers are sadly a rarity. The impact of global warming in Australia and increased droughts are a sign to plant more trees, protect our watery ecosystems and the forests that nurture these systems and become water wise not destroy more forests.

I strongly urge Lismore City Council to not go ahead with such an ecological destructive dam and put into motion the myriad of cheap and truly sustainable alternatives that this area is dripping in and spend this money on making the most of the water we have here. Coming from a city (Melbourne with an average rainfall of 600mL) that celebrates its river with all buildings lining the river facing the river, investments into the bike tracks and ecotourism value with little cafes that line the bike path etc. If I were going to propose an alternative to spending this money I suggest a town reshuffle of some of the industrial businesses that face away from the Wilson and Richmond rivers move to the industrial estate and replace them with an industry that is healthy and celebrates the river.

Yours Sincerely

Yvonne Preston

From: Stacey Speeding
To: Records
Subject: No dam submission
Date: Tuesday, 8 September 2020 11:25:17 AM

Marie Delbridge
[redacted]

To whom it may concern
I Marie Delbridge am against the drowning of the land as I have ancestors that are from the area and am elder from Lismore and don't agree with what you guys are planning for the area .

Ms Trish Clough
[redacted]

Rous County Council,

Lismore NSW 2480

7th September 2020

Dear Rous Councillors and General Manager

Re: The proposed Dunoon Dam within the Future Water Project 2060

I appreciate the opportunity to make this submission on this critical and complex issue.

I also acknowledge the complexity of what Rous does to provide water to our region.

My family and I have enjoyed the rainforests, creeks and wildlife in the northern NSW region for over 50 years. We spent 25 of those years living in [redacted]. I know this area extremely well ad have a deep connection with the land. I am aghast that the destruction of this extraordinary ecosystem on Rock Creek can even be contemplated.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- The lost opportunity to invest in system-wide water efficiency - this is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption. (Metropolitan Water Plan 2006, NSW Government) (1)

- The 21st century is about a suite of smart water options. This dam would be a lost opportunity to make our system fit for the 21st century. It would swallow all resources in one big expensive 'white elephant' project.

- The dam would encourage continued inefficient and often wasteful water management by local Councils. They would have no incentive to do things differently.

- Destruction of important Indigenous cultural heritage, including burial sites (Cultural Heritage Impact Assessment, 2011) (2)

- Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest (including regionally rare warm temperate rainforest on sandstone), and its threatened flora and fauna species. (Terrestrial Ecology Impact Assessment, 2011) (3)

Rous is planning to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone. Offsetting is problematic because the type of vegetation offered as recompense is never equivalent. This example is worse than most.

It would seem Rous' proposals are contrary to NSW planning regulations. https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan >, Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments. (4)

Rous is required to avoid this destruction because there are economically viable and more effective solutions.

• Industrial/construction zone for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.

• Higher prices for consumers due to a 4x increase in the cost of water. Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.

• The small population increase predicted for the four Rous-supplied councils is less than .7% (5) between 2016 -2041 approximately 9,000 people does not justify such a large and destructive dam. The dam risks being an expensive white dinosaur, diverting expenditure away from more sustainable, flexible and effective solutions. NSW Department of Planning, Industry and Environment 2019, 'NSW population projections ', Sydney, viewed 03 August 2020, <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections> scroll down to "Local Government Factsheets". (5)

• Catastrophic flooding downstream in worst floods, particularly for the first 3 kilometres below. (Environmental Flows Assessment 2011) (6)

• Potential for a big dam to drive unneeded population growth, as the government attempts to gain value from an otherwise unnecessary, and stranded, asset.

I SUPPORT these alternatives:

I believe we need to take action on a suite of smart water options and proven alternatives. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too. This is 21st century thinking.

• An investment in system-wide water efficiency and strong demand management. Analysed, costed and deployed, creating jobs. (We understand Rous has not costed this in creating their future water plan). Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply. (7) (8)

Professor Stuart White from UTS has provided a detailed and costed proposal "The Rous Sustainable Water Program" which shows exactly how and why system-wide optimisation of water use is possible and economical. In comparison, the proposed dam

is simply financially, environmentally and socially irresponsible. (9) (Stuart White, 2020 www.bit.ly/Prof-Stuart-White-Rous-slides)

• Water re-use in various ways, including Purified Recycled Potable water. A wealth of global research and experience already exists regarding potable reuse of water as set out in Water Research Australia's report, Potable Water Reuse: What can Australia learn from global experience? https://www.waterra.com.au/publications/document-search/?download=1806 (9)

Example: The city of Windhoek in Namibia in Southern Africa has been using purified recycled water for 30 years using advanced technology. ttps://www.wingoc.com.na/our-history (10)

• Water harvesting (urban runoff; rain tanks): Water tanks and dual pipping on all new developments. (11) This builds community resilience - much needed, as the recent extreme bushfire season has shown. The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs." Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks. (12) https://www.yourhome.gov.au/water/rainwater

• Contingency planning would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.

• Groundwater, where this is environmentally safe The Australian government provides a lot of information on the ecological impacts and groundwater usage. (13) https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-drawdown

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

(1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc

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(2) Ainsworth Heritage, Cultural Heritage Impact Assessment, 2011

(3) SMEC Australia, Terrestrial Ecology Impact Assessment, 2011

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, Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments.

(5) NSW Department of Planning, Industry and Environment 2019, 'NSW population projections ', Sydney, viewed 03 August 2020, https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections Scroll down to "Local Government Factsheets".

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(8) Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.

(9) Stuart White, 2020 www.bit.ly/Prof-Stuart-White-Rous-slides)

(10) Kahn, Stuart and Branch, Amos 2019, Potable water reuse: What can Australia learn from global experience?, Water Research Australia Limited, Adelaide.

(11)Windhoek Goreangab Operating Company (Pty) Ltd 2020,Our history | Wingoc, Veolia Environment,

Windhoek, viewed 3 August 2020, <https://www.wingoc.com.na/>

(12)$220 million dollars - the estimated cost of the new dam - could provide more than 73,000 rainwater tanks (22,700L) at $3,000 each including installation. That is 1.66GL storage with no evaporation and much increased community resilience for future climate risks. This more than covers the 0.9GL extra water needed by the 12,720 new people predicted to come to our area based on 194L/person/day average water use (Rous).

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(14)Department of Agriculture, Water and the Environment 2018, What are the ecological impacts of groundwater drawdown? | Department of Agriculture, Water and the Environment, Canberra, viewed 6 August 2020, https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-drawdown

Yours sincerely,

Trish Clough

SUBMISSION ON ROUS WATER'S "FUTURE WATER PROJECT 2060"

Name – Simon Clough

Address – [redacted]

Re: The proposed Dunoon Dam within the Future Water Project 2060

I served as a Lismore City Council delegate on Rous Water from 2012 to 2016. I would like to thank Rous for extending the time for submitting responses to its proposals. I would also like to acknowledge from my limited experience that these are complex matters and that Councillors are confronted with some very difficult decisions. None of this is made easier by the facts that resources as always are limited and water is an essential to all aspects of life.

Comments on the Consultation Process

I have been extremely disappointed to learn that Rous staff has been addressing constituent Councils on the Future Water Project and strongly advocating for the proposed dam. It is reported that statements have been made that "the dam is the only alternative". How do these activities create trust with our community and encourage the community to participate in a genuine process of considering alternatives?

If trust is to be restored Rous must immediately stop advocating for the dam. There needs to be a pause while the community's concerns are genuinely considered. Rous needs to develop reliable facts and figures on the variety of demand management alternatives and particularly needs to consider the expert opinions of Professor Stuart White who has vast experience both in Australia and overseas in alternatives to dam construction to ensure viable community consultation.

I do not support the proposed second dam on Rocky Creek near the village of The Channon for the following reasons:

1. **The dam proposal reflects a failure to deal with 21st century realities.** It is a retreat to the safety of highly destructive technologies that are part of 19th and 20th century thinking. Essentially we can no longer afford to use enormous quantities of carbon dioxide producing concrete to destroy unique and precious habitats, nor does it make any

sense to build a huge dam when less than 2% of the water is actually needed for potable purposes. Population projections indicate that this dam is being proposed for a population increase of less than 13,000 people. Rous' Councils have grown on average by .7% in the last 5 years. Lismore's population declined by -.1% over the same period.

2. The money that is proposed to be spent on the dam represents a huge opportunity cost. Part of that money should be invested in system-wide water efficiency - this is the cheapest and fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption. (Metropolitan Water Plan 2006, NSW Government) (1)

3. The dam would encourage continued inefficient and often wasteful potable water management by local councils. Councils would have no incentive to do things differently. This is a very poor allocation of water resources at a time when it is apparent that our population is facing major droughts and catastrophic climate extremes because of the increasing amounts of greenhouse gases in the atmosphere. As system does not change unless there are disincentives and imposed limitations (eg the state waste levy on landfill has caused a massive increase in recycling and reuse.

4. Destruction of important Indigenous cultural heritage, including burial sites (Cultural Heritage Impact Assessment, 2011) (2) This amounts to the ongoing disregard for First Nations' heritage. The community is rightly sensitive to this issue since the destruction of the Juukan Gorge in WA by Rio Tinto early this year.

5. Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest (including rare warm temperate rainforest on sandstone), and its threatened flora and fauna species. (Terrestrial Ecology Impact Assessment, 2011) (3).

Rous is planning to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone. Offsetting is problematic because the type of vegetation offered as recompense is never equivalent. This example is worse than most. (Nan Nicholson, botanist). I have seen too many failed 'offsets' in the mining industry to have any faith at all that this unique environment can be reproduced. Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region..." The Channon Gorge

is an area high biodiversity and demand protection. NSW Department of Planning, Industry and Environment 2019, (4)

6. Higher prices for consumers due to a 4x increase in the cost of water. The Rous general manager, in response to a question from Councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built. This huge increase in the price of water will be a major disincentive to water consumption and could well contribute to the dam being a 'stranded asset'

It should also be noted that while there is a degree of affluence on the coastal strip the population further west has relatively high levels of unemployment and poverty. The last thing these communities need is a massive increase in an essential such as water.

7. There is no justification for this huge destructive dam given the small population increase predicted for the four Rous-supplied councils of 12,720 people (5) between 2020-2060. The dam risks being an expensive 'stranded asset', diverting expenditure away from more sustainable, flexible and effective solutions. NSW Department of Planning, Industry and Environment 2019, 'NSW population projections ', Sydney, viewed 03 August 2020, <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections> scroll down to "Local Government Factsheets". (5)

8. There is significant risk of catastrophic flooding downstream in the worst floods, particularly for the first 3 kilometres. This means that there are at least 6 homes that are in grave danger of inundation or being swept away should the dam proceed. It is not at all clear what Rous is proposing to do about this situation. (Environmental Flows Assessment 2011)(6)

9. The dam proposal will involve a huge amount of collateral damage. The proposed site is very difficult in terms of accessibility and will no doubt involve the destruction of much of the environment. There is also the impact of the necessary large machinery on an already failed and inadequate road system. During construction there will be numerous road safety issues as well as the impact of noise, dust and fumes on neighbouring properties. In the longer term there will no doubt be issues regarding pipeline access and the noise from pumping stations etc.

I take the Sydney water experience as part of my inspiration. Sydney water was able to accommodate 950,000 extra people living in Sydney,

using around the same amount of water it did 25 years ago. (NSW Government 2006).

I believe the following alternatives provide the way ahead for Rous water and our community:

1a. An investment in system-wide water efficiency and strong demand management. Analysed, costed and deployed, creating jobs. (I understand Rous has not costed this in creating their future water plan)

Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply. (7) (8)

2a. Increasing recycling - Recycled water can deliver multiple benefits and could have an important role to play in the Future Water Project. Wastewater can be safely recycled and used in industry, agriculture and in new homes for garden watering, toilet flushing and other non-drinking uses. Recycling can reduce the demand for drinking water, deliver benefits to river health by decreasing the level of nutrients discharged by sewage treatment plants and diversify the system with a supply source not relying on rainfall. In the last ten years, the amount of water recycled in Sydney has more than doubled. The recycling measures included in the 2006 Plan will increase the current level of recycling more than fourfold from 15 billion litres a year up to 70 billion litres a year. This will make Sydney one of the largest urban providers of recycled water in Australia. https://www.waterra.com.au/publications/document-search/?download=1806 (9) Example: The city of Windhoek in Namibia in Southern Africa has been using purified recycled water for 30 years using advanced technology. https://www.wingoc.com.na/our-history (10)

I would be very interested in Rous investigating the output from Lismore Council's new South Lismore Treatment Plant and similarly the output from Byron's sewerage treatment system.

3a. Water harvesting (urban runoff; rain tanks): Large rainwater tanks should be required on all new (and existing) developments (11). This would of course require liaison with constituent Councils. This builds community resilience - much needed, as the recent extreme bushfire season has shown. The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."

Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks. (12)
https://www.yourhome.gov.au/water/rainwater

4a. Contingency planning would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.

5a. Groundwater, use where this is environmentally safe. The Australian government provides a lot of information on the ecological impacts and groundwater usage. (13)
https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-drawdown

6a. Hydrosphere Consulting's Coarse Screening Assessment of Options deserve further consideration especially those that have passed the coarse screen

Raising Toonumbar Dam 10 m or 20 m raising has previously been considered. Water would be transferred to the Casino water treatment plant and then pumped into the RCC supply. Availability of high security water is unknown.

Connection to Marom Creek water treatment plant. Raising of Marom Creek Weir and reinstatement of aquifer supplies and upgraded WTP to supply Alstonville/Wollongbar with excess to Lismore. Offers diversification of surface water sources for RCC with expected secure yield of approximately 800 – 1,000 ML/a (NUWS, 2018). ass

Groundwater extraction Various groundwater supplies have been considered (reinstatement of bores at Woodburn and Alstonville, new borefields at Tyagarah, Newrybar and Alstonville) Scheme costs are likely to be higher than first thought but localised groundwater supplies can provide a diversified supply to some areas of the bulk supply network. However, the Water Sharing Plan limits new licences in some groundwater sources.

Desalination Conversion of saline water to fresh water suitable for potable use. Potentially staged desalination plant capacity. Climate resilient water source but with significant power requirements and brine management constraints to be addressed. 9a Indirect potable reuse to surface waters Highly treated reclaimed water supply into Rocky Creek Dam, Emigrant Creek Dam or Wilsons River Source for subsequent extraction, treatment and transfer using existing infrastructure. Climate resilient water source. Quantity of water available has not been

confirmed. NSW government policy has not been developed for planned indirect potable reuse. Pass 9b Dual reticulation (urban) Dedicated reticulation system to deliver treated reclaimed water for outside use and toilet flushing within new urban development areas. Included in Regional Demand Management Plan (Ballina Shire and Byron Bay). Pass

With scalable supply alternatives in place, the existing supply from Rocky Creek Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam. These alternative proposals will also create far more resilience in the community meaning that there is less impact should something happen to the one major water source such as a large dam.

References

(1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc
https://www.dropbox.com/s/pu9898oq6kocrph/NSW%20Govt%202006%20MWP%20summary.pdf?dl=0

(2) Ainsworth Heritage, Cultural Heritage Impact Assessment, 2011

(3) SMEC Australia, Terrestrial Ecology Impact Assessment, 2011

(4) NSW Department of Planning, Industry and Environment 2019, 'Delivering the plan', Sydney, viewed 03 August 2020 https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan , Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments.

(5) NSW Department of Planning, Industry and Environment 2019, 'NSW population projections ', Sydney, viewed 03 August 2020, https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections Scroll down to "Local Government Factsheets".

(6) Environmental Flows Assessment Proposed Dunoon Dam, 30 Aug 2012, Eco Logical Australia.

(7) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand

Management Strategy : preferred options, Rous County Council, Lismore.

(8) Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.

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(10) Windhoek Goreangab Operating Company (Pty) Ltd 2020,Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, <https://www.wingoc.com.na/>

(11) $220 million dollars - the estimated cost of the new dam - could provide more than 73,000 rainwater tanks (22,700L) at $3,000 each including installation. That is 1.66GL storage with no evaporation and much increased community resilience for future climate risks. This more than covers the 0.9GL extra water needed by the 12,720 new people predicted to come to our area based on 194L/person/day average water use (Rous).

(12) Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, <https://www.yourhome.gov.au/water/rainwater>

(13) Department of Agriculture, Water and the Environment 2018, What are the ecological impacts of groundwater drawdown? | Department of Agriculture, Water and the Environment, Canberra, viewed 6th August 2020, <https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-dr

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Elizabeth Guerrero

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency.** This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest,** threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

(1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898oq6kocrph/NSW%20Govt%202006%20MWP%20summary.pdf?dl=0

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(4) NSW Department of Planning, Industry and Environment 2019, 'Delivering the plan', Sydney, viewed 03 August 2020 < https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan > , Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments.

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Kind regards, Signature: [redacted] Date: 16.08.2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Helene Collard

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.[1]
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.[2]
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest**, threatened flora and fauna species.[3] Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."[4] Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720[5] between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.[5]

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.[6] [7]

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 6/9/2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Mirek Oprzedek

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
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- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

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  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
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With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 6/9/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Katrina Jeffery.

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
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- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

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(7) Watson R., Turner A and Fane S 2018, *Water Efficiency and Demand Management Opportunities for Hunter Water*, Institute for Sustainable Futures, Sydney.

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(11) Australian Government Department of Industry 2013, Science, Energy and Resources, *Rainwater | Your home*, Canberra, viewed 3 August 2020, <https://www.yourhome.gov.au/water/rainwater>

(12) Department of Agriculture, Water and the Environment 2018, *What are the ecological impacts of groundwater drawdown? | Department of Agriculture, Water and the Environment*, Canberra, viewed 6 August 2020, <https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-drawdown>

Kind regards, Signature: [redacted] Date: 6/9/20

Date: 4/9/20

To: General Manager
Rous County Council
PO Box 230
Lismore NSW 2480

From: Sean O'Shannessy

Address: [redacted]

Re: The proposed Channon/Dunoon Dam within the Future Water Project 2060

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Destruction of important Indigenous Cultural Heritage,** including burial sites (Cultural Heritage Impact Assessment, 2011). Ongoing disregard for First Nations sacred sites and culture.
- **Destruction of The Channon Gorge and its Endangered Ecological Community of Lowland Rainforest** (including the regionally rare warm temperate rainforest on sandstone), and its threatened species of flora and fauna. (Terrestrial Ecology Impact Assessment, 2011).
  Rous is planning to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone. Offsetting is a worthless exercise because the type of vegetation offered as recompense is never equivalent. This is worse than most. (Nan Nicholson, botanist)
- **Industrial/construction zone** for years for The Channon/Dunoon community; noise pollution; large trucks/machinery on our roads; visual impact. Ongoing sound impact from pump house etc.
- **Water prices will increase by 4x** current cost (or higher) (Rous)
- **Promotes accelerated population growth** in the Northern Rivers. I'm concerned the Dam is being framed as 'water security' to the local population, yet to further afield it is being framed as a development plan for acceleration of growth. I'm concerned the model that predicted the population did not take into account the actual dam's effect on growth.
  This framing is concerning to me: "Everyone needs to understand this Regional development plan which is "focused on ***unlocking the potential*** of one of Australia's most beautiful places. The North Coast will become the best region in Australia to live, work and play". From planning document:
  https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan [1]
- **The entire modelling and the strategy recommendations were made pre-COVID19,** and are no longer economically or demographically valid. COVID has also shown us we need to be able to pivot quickly and flexibly - something this massive 'single solution' won't do.
- **The tiny population increase** for the four Rous supplied councils of only 12,720[2] people between 2020-2060 *does not justify* such a large and destructive dam. It risks being *an expensive white elephant*, diverting money away from more needed and effective solutions.
  It is likely to create division and conflict within our communities after suffering flood, drought and an extreme fire season. What we need are resilience and community building solutions.

I SUPPORT these alternatives:

The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too. We need to take action on a suite of smart water options and proven alternatives. This is 21st century thinking.

- **Strong Demand Management**
  Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.[3] [4]
- **Purified Recycled Water**
  A wealth of global research and experience already exists regarding potable reuse of water as set out in the Australian report, *Potable Water Reuse: What can Australia learn from global experience?* https://www.waterra.com.au/publications/document-search/?download=1806[5]
  Example: The city of Windhoek has been using Purified Recycled Water for 30yrs using advanced technology. https://www.wingoc.com.na/our-history[6]
- **Water tanks on all new (and existing) developments**[7] *This builds community resilience - much needed as the example of the extreme bushfire season has shown up.*
  The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs.
  Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[8] https://www.yourhome.gov.au/water/rainwater
- **Groundwater, where this is environmentally safe**
  The Australian government provides a lot of information on ecological impacts and groundwater usage.[9]
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With scalable alternatives in place for supply, the existing Rocky Ck Dam supply component will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized dam.

References and Notes

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Extra notes/Comments:

Kind re[redacted]

Signatu[redacted]

Received over the counter

8 SEP 2020

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: L. Acfield

Address: [redacted]

Date: 16/8/20

Re: the proposed Channon/Dunoon Dam within the Future Water Project 2060.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Destruction of important Indigenous Cultural Heritage,** including burial sites (Cultural Heritage Impact Assessment, 2011). Ongoing disregard for First Nations sacred sites and culture.
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I SUPPORT these alternatives:

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The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too. This is 21st century thinking.

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Kind Regards, [redacted]

Received over the counter

8 SEP 2020

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Trevor Acfield

Address: [redacted]

Date: 16.8.20

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Kind Regards, [redacted]

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

Received over the counter
8 SEP 2020

From: LAUREN MEIKLEJOHN

Address: [redacted]

Date: 15/8/20

Re: the proposed Channon/Dunoon Dam within the Future Water Project 2060.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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Kind Regards, [redacted]

Received over the counter

8 SEP 2020

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

Madalyn Bradelen

From: [redacted]

Address: [redacted]

Date: 16/8/20

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I believe we need to take action on a suite of smart water options and proven alternatives.
The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too. This is 21st century thinking.

- **Strong Demand Management**

Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.[3] [4]

- **Purified Recycled Water**
  A wealth of global research and experience already exists regarding potable reuse of water as set out in the Australian report, *Potable Water Reuse: What can Australia learn from global experience?* https://www.waterra.com.au/publications/document-search/?download=1806 [5]

  Example: The city of Windhoek has been using Purified Recycled Water for 30yrs using advanced technology. https://www.wingoc.com.na/our-history [6]
- **Water Tanks on all new (and existing) developments**[7] *) This builds community resilience - much needed as the example of the extreme bushfire season has shown up.*
  The Australian government advises that:
  Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help:
  * reduce the need for new dams or desalination plants
  * protect remaining environmental flows in rivers
  * reduce infrastructure operating costs.
  Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[8] https://www.yourhome.gov.au/water/rainwater
- **Groundwater, where this is environmentally safe**
  The Australian government provides a lot of information on ecological impacts and groundwater usage.[9]
  https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-drawdown

With scalable alternatives in place for supply, the existing Rocky Ck Dam supply component will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized dam.

References and Notes

1. NSW Department of Planning, Industry and Environment 2019, '*Delivering the plan*', Sydney, viewed 03 August 2020, <https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan>
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Kind Regards,

[redacted]

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: KRISTIN TOWNSEND-CAILER

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage**, including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest**, threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

(1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898oq6kocrph/NSW%20Govt%202006%20MWP%20summary.pdf?dl=0

(2) Ainsworth Heritage, Cultural Heritage Impact Assessment, 2011

(3) SMEC Australia, Terrestrial Ecology Impact Assessment, 2011

(4) NSW Department of Planning, Industry and Environment 2019, 'Delivering the plan', Sydney, viewed 03 August 2020 < https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan > , Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments.

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Kind regards, Signature: [redacted] Date: 16-8-20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: BRAD DONNELLY

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest,** threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[6] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

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(4) NSW Department of Planning, Industry and Environment 2019, 'Delivering the plan', Sydney, viewed 03 August 2020 < https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan > , Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments.

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Kind regards, Signature [redacted] Date: 16/8/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Joseph Pol

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
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- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

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- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 16/8/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Paul Walker

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
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I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

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Kind regards, Signature [redacted] Date: 16-8-20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: JILLIAN LIVINGSTON

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
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- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

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- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 16-8-20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: LOUISE SOMERVILLE

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency.** This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest,** threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
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- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

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Kind regards, Signature: [redacted] Date: 16/8/20

Received over the counter

8 SEP 2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: MICHAEL FLECK

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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Kind regards, Signature: [redacted] Date: 16/8/20

Received over the counter

8 SEP 2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Ruth Perry

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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Kind regards, Signature: [redacted] Date: 16-8-20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Jeannette Tyler

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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Kind regards, Signature: [redacted] Date: 16/8/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Susan St John

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest**, threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
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  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

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(12) Department of Agriculture, W[redacted]*cological impacts of groundwater drawdown? | Department of Agriculture,* [redacted] August 2020, <https://www.environment.g[redacted]-impacts-of-groundwater-drawdown>

Kind regards, Signature: [redacted] Date: 6/9/2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

Received over the counter
8 SEP 2020

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: LUCY MCCLYMONT

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
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- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

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With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 6/9/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

Received over the counter
8 SEP 2020

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Alison Stephen

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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Kind regards, Signature: [redacted] Date: 6.9.2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

Received over the counter
8 SEP 2020

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Kate Lennon

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.[1]
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
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Kind regards, Signature: [redacted] Date: 6/9/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

Received over the counter
8 SEP 2020

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Tom Giles

Address: [redacted]

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Kind regards, Signatur[redacted] Date: 6.9.20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Despina Hatzimanolis

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency.** This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest,** threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

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Kind regards, Signatu[redacted] Date: 16-8-20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: DAMIAN BUTLER

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
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- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

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- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 16/08/2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Camile Peters-Ouwerkerk

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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Kind regards, Signature: [redacted] Date: 16.8.20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Luw Drummond

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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Kind regards, Signature: [redacted] Date: 6.9.20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

Received over the counter

8 SEP 2020

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Bec Massey

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 6/8/2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Daniel De-Milford

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest**, threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
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- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 6/9/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Thomas Schuf

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.[1]
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.[2]
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest**, threatened flora and fauna species.[3] Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."[4] Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720[5] between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.[5]

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.[6] [7]

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- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Sig[redacted] Date: 6/9/20.

Received over the counter

8 SEP 2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: HELEN BADGER

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

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Kind regards, Signature: [redacted] Date: 5-9-20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Jarad Antonovich [redacted]

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.[1]
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Kind regards, Signature: [redacted] Date: 6.9.20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: ROBERT ROWLANDSON

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.[1]
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
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- **Destruction of important Indigenous cultural heritage,** including burial sites.[2]
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest**, threatened flora and fauna species.[3] Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."[4] Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720[5] between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.[5]

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.[6] [7]

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

(1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898cq6kocrph/NSW%20Govt%202006%20MWP%20summary.pdf?dl=0

(2) Ainsworth Heritage, Cultural Heritage Impact Assessment, 2011

(3) SMEC Australia, Terrestrial Ecology Impact Assessment, 2011

(4) NSW Department of Planning, Industry and Environment 2019, 'Delivering the plan', Sydney, viewed 03 August 2020 < https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan > , Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments

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(10) $220 million dollars - the estimated cost of the new dam - could provide more than 73,000 rainwater tanks (22,700L) at $3,000 each including installation. That is 1.66GL storage with no evaporation and much increased community resilience for future climate risks. This more than covers the 0.9GL extra water needed by the 12,720 new people predicted to come to our area based on 194L/person/day average water use (Rous).

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Kind regards, Signature [redacted] Date: 6.9.2020

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Eleanor Cash

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest**, threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date:_____

To: General Manager
Rous County Council
PO Box 230
Lismore NSW 2480

From: Tanya Santin

Address: [redacted]

Date: 9/8/2020.

Re: the proposed Channon/Dunoon Dam within the Future Water Project 2060.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Destruction of important Indigenous Cultural Heritage,** including burial sites (Cultural Heritage Impact Assessment, 2011). Ongoing disregard for First Nations sacred sites and culture.
- **Destruction of The Channon Gorge and its Endangered Ecological Community of Lowland Rainforest** (including the regionally rare warm temperate rainforest on sandstone), and its threatened species of flora and fauna. (Terrestrial Ecology Impact Assessment, 2011).
  Rous is planning to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone. Offsetting is a worthless exercise because the type of vegetation offered as recompense is never equivalent. This is worse than most. (Nan Nicholson, botanist)
- **Industrial/construction zone** for years for The Channon/Dunoon community; noise pollution; large trucks/machinery on our roads; visual impact. Ongoing sound impact from pump house etc.
- **Water prices will increase by 4x** current cost (or higher if dam budget blows out) (Rous)
- **Promotes accelerated population growth** in the Northern Rivers. I'm concerned the Dam is being framed as 'water security' to the local population, yet to further afield it is being framed as a development plan for acceleration of growth. I'm concerned the model that predicted the population did not take into account the actual dam's effect on growth.
  This framing is concerning to me: "Everyone needs to understand this Regional development plan which is "focused on ***unlocking the potential*** of one of Australia's most beautiful places. The North Coast will become the best region in Australia to live, work and play". From planning document:
  https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan (1)
- **Continued focus on old strategies** to solve water security & economic needs.

- **The entire modelling and the strategy recommendations were made pre-COVID19**, and are no longer economically or demographically valid. COVID has also shown us we need to be able to pivot quickly and flexibly - something this massive 'single solution' won't do.
- **The tiny population increase** for the four Rous supplied councils of only 12,720[2] people between 2020-2060 **does not justify** such a large and destructive dam. It risks being **an expensive white elephant**, diverting money away from more needed and effective solutions.
- **It is likely to create division and conflict** within our communities after suffering flood, drought and an extreme fire season. What we need are resilience and community building solutions.

I SUPPORT these alternatives:

I believe we need to take action on a suite of smart water options and proven alternatives.

The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too. This is 21st century thinking.

- **Strong Demand Management**

  Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.[3] [4]

- **Purified Recycled Water**

  A wealth of global research and experience already exists regarding potable reuse of water as set out in the Australian report, *Potable Water Reuse: What can Australia learn from global experience?*

  https://www.waterra.com.au/publications/document-search/?download=1806 [5]

  Example: The city of Windhoek has been using Purified Recycled Water for 30yrs using advanced technology.

  https://www.wingoc.com.na/our-history [6]

- **Water tanks on all new (and existing) developments**[7]*) This builds community resilience - much needed as the example of the extreme bushfire season has shown up.*

  The Australian government advises that:

  Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help:

  * reduce the need for new dams or desalination plants

  * protect remaining environmental flows in rivers

  * reduce infrastructure operating costs.

  Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[8] https://www.yourhome.gov.au/water/rainwater

- **Groundwater, where this is environmentally safe**

The Australian government provides a lot of information on ecological impacts and groundwater usage.[9]

https://www.environment.gov.au/water/publications/what-are-the-ecological-impacts-of-groundwater-drawdown

With scalable alternatives in place for supply, the existing Rocky Ck Dam supply component will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized dam.

References and Notes

1. NSW Department of Planning, Industry and Environment 2019, '*Delivering the plan*', Sydney, viewed 03 August 2020, <https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan>
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Kind Regards,

[redacted]

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Kate Nagy

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest,** threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

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Kind regards, Signature: [redacted] Date: 16/8/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Jacob Mclonald

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency.** This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
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- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

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Kind regards, Signature: [redacted] Date: 4/8/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Stephen Worstall

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
- **Destruction of The Channon Gorge and its endangered ecological community of lowland rainforest**, threatened flora and fauna species.(3) Rous's plan to offset the loss of rainforest on sandstone with regeneration of degraded land in the buffer zone is problematic as the type of vegetation offered as recompense is not equivalent.(Nan Nicholson, botanist) Councils are required under State planning regulations to: "Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value."(4) Rous is required to ***avoid*** this destruction because there are economically viable and more effective solutions.
- **Industrial/construction zone** for The Channon/Dunoon community; noise, machinery, trucks, visual impact. Ongoing sound impact from pump house etc.
- **Higher prices for consumers due to a 4x increase in the cost of water.** Rous general manager, in response to a question from councillor Vanessa Ekins, said he expected a fourfold increase in the cost of supplying water if the dam is built.
- **The small population increase** predicted for the four Rous-supplied councils of 12,720(5) between 2020-2060 **does not justify** such a large and destructive dam. The dam risks diverting expenditure away from more sustainable, flexible and effective solutions.(5)

I SUPPORT these alternatives:

We need a suite of smart water options and proven alternatives, not a huge new dam. The tide is turning on renewable and sustainable power. It is time for the tide to turn on how we meet our water needs too.

- **An investment in system-wide water efficiency and strong demand management.** Analysed, costed and deployed, creating jobs. *(We understand Rous has not costed this in creating their future water plan)* Existing research over the past decade consistently finds that the best 'bang-for-buck' investment in water supply comes from demand management and identifying savings within the existing supply.(6) (7)

- **Water re-use in various ways, including Purified Recycled Potable water.** A wealth of global research and experience exists regarding potable reuse of water.[8] Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.[9]
- **Water harvesting** (urban runoff; rain tanks):
  Water tanks on all new (and existing) developments.The Australian government advises that: "Depending on tank size and climate, mains water use can be reduced by up to 100%. This in turn can help: reduce the need for new dams or desalination plants; protect remaining environmental flows in rivers; reduce infrastructure operating costs."[10] Rainwater harvesting also decreases stormwater runoff, thereby helping to reduce local flooding and scouring of creeks.[11]
- **Contingency planning** would enable Rous to be ready to rapidly implement supply measures if it becomes necessary in times of drought.
- **Groundwater, where this is environmentally safe.** The Australian government provides a lot of information on the ecological impacts and groundwater usage.[12]

With scalable supply alternatives in place, the existing supply from Rocky Ck Dam will be made resilient to anticipated times of drought and projected population growth, without the environmental destruction, social costs, and the over-capitalisation risk of an outsized and unnecessary dam.

References and Notes

(1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898oq6kocrph/NSW%20Govt%202006%20MWP%20summary.pdf?dl=0

(2) Ainsworth Heritage, Cultural Heritage Impact Assessment, 2011

(3) SMEC Australia, Terrestrial Ecology Impact Assessment, 2011

(4) NSW Department of Planning, Industry and Environment 2019, 'Delivering the plan', Sydney, viewed 03 August 2020 < https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/North-Coast/Delivering-the-plan > , Direction 2: Enhance biodiversity coastal and aquatic habitats and water catchments.

(5) NSW Department of Planning, Industry and Environment 2019, *'NSW population projections* ', Sydney, viewed 03 August 2020, <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>
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(7) Watson R., Turner A and Fane S 2018, *Water Efficiency and Demand Management Opportunities for Hunter Water*, Institute for Sustainable Futures, Sydney.

(8) Kahn,Stuart and Branch, Amos 2019, *Potable water reuse: What can Australia learn from global experience?*, Water Research Australia Limited, Adelaide.

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Kind regards, Signature: [redacted] Date: 10/8/20

Feedback Submission Re: Proposed Dunoon Dam within the Future Water Project 2060

To: General Manager, Rous County Council
PO Box 230, Lismore NSW 2480

From: Rebecca Malone

Address: [redacted]

Firstly, the community appreciates the submission extension. We also acknowledge the complexity of the work Rous does to provide water for our region.

I DO NOT support the proposed The Channon-Dunoon Dam for these reasons:

- **Lost opportunity to invest in system-wide water efficiency**. This is the cheapest & fastest way to ensure supply-demand balance. By focussing on system efficiency, Sydney added an additional 950,000 people without a rise in consumption.(1)
- **The 21st century is about a suite of smart water options.** This dam would be a lost opportunity to make our system fit for the 21st century by swallowing all resources in one big expensive 'white dinosaur' project.
- **The dam would encourage continued inefficient and wasteful water management by local governments.** They would have no incentive to do things differently.
- **Destruction of important Indigenous cultural heritage,** including burial sites.(2)
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Kind regards, Signature: [redacted] Date: 6-9-20