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:	JEFFREY	Ross	4	
Address:				

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.^(f)
- 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.

- 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)

- (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.
- (5) NSW Department of Planning, Industry and Environment 2019, "NSW population projections", Sydney, viewed 03 August 2020, <a href="https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Project
- (6) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (7) Watson R., Tumer 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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _		Date:	6/0	1/20	20
	S. E. Danner, A.	A			-	

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

95.5	PO Box 230, Lismore NSW 2480	
From:	JIM > SUN	ALLEX
Addres	ss: _	
	42	

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:

General Manager, Rous County Council

To:

- 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.

- 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.
- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _		Date:	6/9/20
		Date	6/1/20

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:	Amy Modell
Addre	ss:

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.

- 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.
- 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)

- (1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898og6kocrph/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-aroa/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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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>

			1	19	/20
Kind regards, Signature:	- 4	Date:_	0/	_//	10
				/	

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:

ALEX MCLEOD

Address:

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.

- 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)

- (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?di=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/Ragional-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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.ng/
- (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).
- (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	ə :_	Date: 6/09/20

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

10:	General Manager, Rous County Council	
	PO Box 230, Lismore NSW 2480	
From:	Cassie Bornett	
Addre		

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-Dungon 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.

- 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.
- 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⁾

- (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-Goast/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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (11) Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, https://www.yourhonie.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-impagts-of-groundwater-drawdown

Kind regards	, Signature:		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: Jacob Concell

Address:

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.

- 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.
- 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)

- (1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898og6kocrph/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-vour-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.qov.au/Research-and-Demography/Population-projections/Projections Scroll down to "Local Government Factsheets".
- (6) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _		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:	Kitana S	aunders -	Tinney	
Address:				

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-Duncon 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.

- 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.
- 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⁾

- (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.gcv.au/Research-and-Demography/Population-projections/Projections Scroll down to "Local Government Factsheets".
- (6) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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>

	20/0/2
Kind regards, Signature: _	Date: <u>20/8/20</u>

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

botanist)

From:	Patrick Carter	
Address:		4.
Date:	09/08/20	

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.
- 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,
- 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.

- 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
- 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".
- 3. The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- 4. Watson R., Turner A and Fane S 2018, *Water Efficiency and Demand Management Opportunities for Hunter Water*, Institute for Sustainable Futures, Sydney.
- 5. Kahn, Stuart and Branch, Amos 2019, *Potable water reuse: What can Australia learn from global experience?*, Water Research Australia Limited, Adelaide.
- 6. Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- 7. \$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 the 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

Feed	back Submission Re: Proposed Dunoon Dam within the Future Water Project 2060
То:	General Manager, Rous County Council PO Box 230, Lismore NSW 2480
From:	Ruby Osbone

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.

- Water re-use in various ways, including Purified Recycled Potable water. A wealth of global
 research and experience exists regarding potable reuse of water. (B) Eg: The city of Windhoek in
 Namibia has been using purified recycled water for 30 years using advanced technology. (P)
- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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: _	Date: 28/08/20
, and , against, and and	

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:	POT	MOLLER	
Address:			
	_		ģ

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.^(f)
- 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." 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.

- 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.
- 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⁾

- (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/Nonh-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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3
 August 2020, https://www.wingoc.com.na/
- (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).
- (11) Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, https://www.vourhome.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>

				1 1
Kind regards,	Signature:		Date: 6	19/2020
			/	

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

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

From:	GLEN	Monhisk	
Address:	-		

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.^(f)
- 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.

- 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.
- 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)

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (11) Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, https://www.vourhome.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:		Date	6-9-20

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

To:	General Manager, Rou	s County Council	
	PO Box 230, Lismore N	ISW 2480	
	17		

From:	KEMAL	OSMANHODZIC	
Address:			
	4		· · · · · · · · · · · · · · · · ·

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.^(f)
- 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." 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.

- Water re-use in various ways, including Purified Recycled Potable water. A wealth of global research and experience exists regarding potable reuse of water. (a) Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.
- 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⁾

- (1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898eq6kocrph/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-piarr, 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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _		Date:_	6/8/20

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:	-	
Addres	ss: _	

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.

- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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,

 | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | August 2020, | Aug

Kind regards, Signature: _	Date:_	6-09.20

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

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." 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.

- 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)

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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		Da	ite: 16.8	20

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

From: Hannah Paune

Address:

Date:

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/

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.

- 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
- 2. 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".
- 3. The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- 4. Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.
- 5. Kahn, Stuart and Branch, Amos 2019, Potable water reuse: What can Australia learn from global experience?, Water Research Australia Limited, Adelaide.
- 6. Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- 7. \$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 the 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

Kind	Regards,

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

From:	Monica Lamote	
Address:		
Date:	09/08/20	 Α -

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.

- 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
- 2. 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".
- 3. The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- 4. Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.
- 5. Kahn, Stuart and Branch, Amos 2019, Potable water reuse: What can Australia learn from global experience?, Water Research Australia Limited, Adelaide.
- 6. Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- 7. \$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 the 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

Kind	Regards
i tii id	regardo

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

10.	PO Box 230, Lismore NSW 2480
From:	Timofy Michell
Addre	ss:

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:

Canaral Managar Davis County Council

- 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.

- 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⁾

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
- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).

(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 Agric
| Department of Agric
| https://www.enviror

mpacts of groundwater drawdown? 020.

f-groundwater-drawdown>

Kind regards, Signature:

Data:

	O Box 230, Lism Melinda	Turnbull	
From: Address:			
- dui coo			

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:

General Manager, Rous County Council

- 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:

To:

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.

- Water re-use in various ways, including Purified Recycled Potable water. A wealth of global research and experience exists regarding potable reuse of water. (a) Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology. (a)
- 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.
- 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)

- (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-vour-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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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>

	0.000	L
Kind regards, Signature: _	Date: 6/9	20

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

P	O Box 230, Lismore N	SW 2480		
From:	Jeanti StC	lair		
Address:	3"			

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:

General Manager, Rous County Council

- 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:

To:

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.

- 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⁾

- (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.
- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy : preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolla Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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:	Date: 6/9/	20
	3-1	

To:	Manager, Rous Cour 230, Lismore NSW 2			
From:	 Lachlan	Cooper	,	
Addie				

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⁽⁶⁾ 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.

- 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⁾

- (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-vour-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, <a href="https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Project
- (6) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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:	Date: 16/08/20

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: Addre		
	And the second s	

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.

- 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.
- 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⁾

- (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?di=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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _			Date:_	15-8-2

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:

Address:



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.

- 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.
- 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)

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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 20	
Department of Agriculture, Water and the Environment 20	18, What are the ecological impacts of groundwater drawdown?
https://www.envirgeriche.com/	
-nups://www.envir	impacts-of-groundwater-drawdown>
	10/01/0
and the second s	15/8/2020
Cind regards, Signature	Date: 0/2020
tina rogardo, orginaturo	Date.

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

To:

From:	iAUSHIM! h	GRA
Address:		
Date:	16/2/2020	

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
- 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)

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.

- 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-
- 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".
- 3. 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.
- 5. 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/
- 7. \$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 the 194L/person/day average water use (Rous).
- 8. 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>

Kind	Regards,
	3 -1, -10,

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

From:

Address:

SANDY THOMPSON

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.

- Water re-use in various ways, including Purified Recycled Potable water. A wealth of global research and experience exists regarding potable reuse of water. Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.
- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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:		Date: 16-08-	2028

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

PC) Box 230, Lismore NSW 2480	
From:	TULLY-MORGAN MCNEL	
Address:		

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:

General Manager, Rous County Council

To:

- 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⁽⁶⁾
 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.

- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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:	

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

From:	Med	& liebson		
Address:	4			

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.

- 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⁾

- 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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _	1		_ Date:_	16/6/20
				, ,

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

From: Sexon Van Ben
Address:

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." 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.

- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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:	Date:	16.0.20

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

PC	D Box 230, Li	smore NSW 2480		
From:	_	SANDRAH	BURTON	
Address:		,		-
	2			

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-Duncon Dam for these reasons:

General Manager, Rous County Council

- 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.
- 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:

To:

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.

- 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⁾

- (1) Metropolitan Water Pian 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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (11) Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, https://www.vourhome.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:		Date: 3	9/2/	0

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

From:	Kate	green	
Address:			

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⁽⁶⁾
 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.

- 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)

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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:	Date:

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:	JULIE	GERRISH	
Address:	-		
	-		

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-Duncon 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.

- 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.
- 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)

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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:		<u></u>	Date: 5/9/20

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

To:	General Manager, Re PO Box 230, Lismore		4
From:	-	whitefeather	- T
Addio			

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.

- 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)

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _		Date:_	28/8	120
			1	

To:	General Manager, Rous County Council PO Box 230, Lismore NSW 2480				
From:		VANESSA	TALLON		
Address:	ss:				

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.
- 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⁾

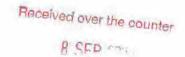
I SUPPORT these alternatives:

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.

- 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.
- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _	Date: 23/8/2.e
	1 /



O' Callacho

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

From: Josephen

Address:

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.

- 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.
- 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⁾

- 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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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

			- 1 - 1
Kind regards, Signature:	-	Date:	23/8/20
			/

To:	General Manager, Rous County Council	
	PO Box 230, Lismore NSW 2480	
From:	MickHomnen	
Addre	ess:	

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.

- 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.
- 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)

- (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>">https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>">https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>">https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>">https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>">https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections
- (6) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (11) Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, https://www.vourhome.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:		Date: 6/9/20
		-7

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

PO	Box 230, List	more NSW 2480	
From:	Kim	Hamalton	
Address:			

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-Dungon Dam for these reasons:

General Manager, Rous County Council

- 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:

To:

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.

- 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.
- 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⁾

- (1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898eq6kocrph/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/Nonh-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.qov.au/Research-and-Demography/Population-projections/Projections Scroll down to "Local Government Factsheets".
- (6) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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:		Date: 6/1/20
5		Date. 17 17

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:	Bernadène.	Swad	ii ba

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. (a) Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.
- 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⁾

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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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, Si

Date: 16 18 20

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

From:	Natasha Livett	
Address:		
Date:	9/8/20	

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.
- 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/

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-ofgroundwater-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

- 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
- 2. 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".
- 3. The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- 4. Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.
- 5. Kahn, Stuart and Branch, Amos 2019, Potable water reuse: What can Australia learn from global experience?, Water Research Australia Limited, Adelaide.
- 6. Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- 7. \$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 the 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

Kind Regards,

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

From:

Address:

Date:

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

- 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
- 2. 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".
- 3. The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- 4. Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.
- 5. Kahn, Stuart and Branch, Amos 2019, *Potable water reuse: What can Australia learn from global experience?*, Water Research Australia Limited, Adelaide.
- 6. Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- 7. \$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 the 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

Kind Regards,

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

From:	DAVID S	SPEECHLEY	
Address:			
	_	=======================================	
Date:	9.8.20		

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.
- 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.

- 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
- 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".
- 3. The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- 4. Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.
- 5. Kahn, Stuart and Branch, Amos 2019, *Potable water reuse: What can Australia learn from global experience?*, Water Research Australia Limited, Adelaide.
- 6. Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- 7. \$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 the 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>
- 9. 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/publication	ns/what-are-the-ecological-impacts-of-
groundwater-drawdol	

Kind Regards,			
Tima riogaido,			

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

ine 1	1 //	
NET (E)	Stella	

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:

General Manager, Rous County Council

- 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.
- 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:

To:

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.
- 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⁾

- (1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898og6kocrph/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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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:	Date: 2 9 20

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

P	O Box 230, Lismore N	ISW 2480	
From:	LYN	RIDDLE	
Address:			

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:

General Manager, Rous County Council

- 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.^(f)
- 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.
- 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:

To:

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⁾

- (1) Metropolitan Water Plan 2006, NSW Government. Exec Summary section of the doc https://www.dropbox.com/s/pu9898cq6kocrph/NSW%20Gov%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.risw.gov.au/Plans-for-your-area/Ragional-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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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, Signa	ture		Date: 6-9-20
	\		

To:

General Manager

Rous County Council

PO Box 230

Lismore NSW 2480

From:

Address:

Date: 8/8/20

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.
- 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."
 - 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. (4) (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=1806/9 Example: The city of Windhoek has been using Purified Recycled Water for 30yrs using advanced technology. https://www.wingoc.com.na/our-history(9)

- 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. (6) 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-plans
- (2) NSW Department of Planning, Industry and Environment 2019, 'NSW population projections', Sydney, viewed 03 August 2020,
 - https://www.plenning.nsw.gov.au/Research-and-Demography/Population-protections/Projections
- scroll down to "Local Government Factsheets".
 The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand
- Management Strategy: preferred options, Rous County Council, Lismore.
 (4) Watson R., Turner A and Fane S 2018, Water Efficiency and Demand Management Opportunities for Hunter Water, Institute for Sustainable Futures, Sydney.
- (5) Kahn, Stuart and Branch, Amos 2019, Potable water reuse: What can Australia learn from global experience?, Water Research Australia Limited, Adelaide.
- (6) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (7) \$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 the 194L/person/day average water use (Rous).
- (8) 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
- (9) 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,
 - dw.au/water/publications/what-are-the-ecological-Impacts-of-groundwater-drawdown

Extra notes/Comments:

Kind regards,			
Signature:			

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:	Annie	Leishman	
Address:			

Firstly, the community appreciates the submission extension. The also deline the ecomplexity of the work Rous does to provide water for our region.

DO NOT support the proposed The Channon-Duncon 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. 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." 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⁾

- (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, <a href="https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projection
- (6) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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,

 | August 2020, | Canberra | Control | Canberra | Canb

						i	,
Kind regards, Signature:	-		_	Date:_	3	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				
	1				

From:	Gabe	CH1-6901	/ 9	
Address:				

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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, vlewed 3 August 2020, https://www.wingoc.com.na/
- (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 resillence 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).
- (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:	Date: 30-8-20

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:	Tunia Harris	
Address:		

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.
- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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: _	Date: 1,9,2020

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

PO E	3ox 230, Lismore NSW 2480		
From:	Samantla	Miller	
Address:			

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:

General Manager, Rous County Council

To:

- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (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

4.00004.4.0000	-	454.0	1-9-2020
Kind regards, Signature: _		Date:_/	1020

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

PC	Box 230, Lismore NSW 2480	
From:	Tona Han Atherta	
Address:	- 	

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:

General Manager, Rous County Council

- 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:

To:

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. (a) Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology. (b)
- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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, Poteble water reuse: What can Australia learn from global experience?, Water Research Australia Limited, Adelaide.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (11) Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, https://www.vourhome.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, Signatu	ı.		_	Date:_	1-09-202	>

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

	O Box 230, Lismore NSW 2480
From:	Sonry Athran
Address	

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:

General Manager, Rous County Council

To:

- 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.⁽⁷⁾
- 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. (a) Eg: The city of Windhook in Namibia has been using purified recycled water for 30 years using advanced technology. (b)
- 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⁾

- 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) The Rous Regional Water Efficiency Program 1997, Final report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/>
- (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).
- (11) Australian Government Department of Industry 2013, Science, Energy and Resources, Rainwater | Your home, Canberra, viewed 3 August 2020, https://www.vourhome.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

			i-	
Kind regards, Signature:		 Date: 4	9	20
		1	/	

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:

Address:



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-Duncon 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.^(a) Eg: The city of Windhoek in Namibia has been using purified recycled water for 30 years using advanced technology.^(a)
- 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.
- 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⁾

- (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) The Rous Regional Water Efficiency Program 1997, Finel report of the Rous Regional Demand Management Strategy: preferred options, Rous County Council, Lismore.
- (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.
- (9) Windhoek Goreangab Operating Company (Pty) Ltd 2020, Our history | Wingoc, Veolia Environment, Windhoek, viewed 3 August 2020, https://www.wingoc.com.na/
- (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).
- (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:	Date: 05/09/20