Better Baaka program

Questions and answers

May 2021

Better Baaka program: questions and answers

Answers to the questions asked by stakeholders during the Better Baaka program webinar series, meetings and other interactions in April 2021

A recording of one of the webinars can be found at on the program webpage.

About the Better Baaka program

What is the Better Baaka program?

The NSW Government is investigating a range of initiatives for the Darling-Baaka River system, as part of rescoping the Menindee Lakes Project. These measures are part of a new Better Baaka program.

Following the Murray-Darling Basin Ministerial Council meeting in April 2021, Water Infrastructure NSW has rescoped the Menindee Lakes Sustainable Diversion Limits Adjustment Mechanism (SDLAM) Project and is investigating options that could be supported by the community.

We have launched our consultation and engagement program, which will enable us to work side-by-side with communities to investigate solutions to create a Better Baaka. This is a shift towards beneficial outcomes for communities and the environment.

Will these initiatives go ahead?

We are proposing a range of initiatives to deliver outcomes broadly supported by our communities. Infrastructure improvements alongside changes to policy and operating rules are all being considered to make the Darling-Baaka system more flexible, so its rivers and floodplains can be protected, and enhanced, and sustainable local communities, agriculture and industries supported.

We are committed to developing the initiatives in collaboration with the community and stakeholders.

Stakeholder engagement

How will Water Infrastructure NSW consult with the community?

Water Infrastructure NSW will work closely with local communities and stakeholders on the design, development and delivery phase of any projects. The engagement builds on the years of feedback we have received through various other water programs.

Water Infrastructure NSW welcomes additional ideas on initiatives that would help achieve better cultural, social economic and environmental outcomes to improve the Darling-Baaka river system. Please email better.baaka@dpie.nsw.gov.au with any suggestions.

NSW GOVERNMENT

Future engagement and partnering opportunities will be listed on the Better Baaka webpage, as well as our stakeholder engagement page.

How much input will community and stakeholders have into the development of the Better Baaka program's proposed initiatives?

Water Infrastructure NSW will work closely with the community on the proposed initiatives to ensure they deliver a Better Baaka. We want the initiatives to align with the community's expectations and values and to understand any potential impacts.

We are committed to delivering projects that have broad community support.

Environmental and planning approvals

How will the program's proposed initiatives be assessed and approved?

Once Water Infrastructure NSW has worked with stakeholders and community to develop and design the initiatives within the Better Baaka program, NSW will seek approval for funding from the Australian Government and endorsement for the suite of measures from the other Basin States. Once projects have funding approval, planning approvals will be obtained. Throughout this process, we are committed to engaging with the community on the development of each initiative.

Will there be any overall environmental assessment of the initiative as a whole or the separate individual sub projects?

The environmental assessment process is critical for all infrastructure projects. Once we are further progressed on developing the initiatives and understand what the projects will be progressed, we will investigate the most appropriate environmental planning approval pathway for each project within the program, which may be project specific or on a program level. The scope of the assessments will largely depend on the size and scale of the initiatives to be progressed. We will keep the community informed on the assessment and approval pathway we get more information.

First Nations

Are Aboriginal community members attending these webinars?

Yes. The webinars were promoted on the Better Baaka program webpage, through direct e-mails to more than 4000 subscribers, including First Nations peak bodies, and via the department's Water News e-newsletter. The webinars were also announced at the program launch attended by First Nations representatives.

Have you fully recruited your Aboriginal engagement team to do the important on ground consultation work?

Water Infrastructure NSW has a dedicated First Nations engagement team, including employees based in and around Broken Hill. We have a keen focus on First Nations engagement as part of the Better Baaka program.

Who are the First Nations engagement team in Broken Hill and can we have their contact details?

The Water Infrastructure NSW First Nations engagement team can be contacted at winsw.engagement@dpie.nsw.gov.au

We look forward to working with all our First Nations communities and are committed to building trusted relationships to help inform the design of program initiatives.

Ecology and environment

Are you assessing the cumulative environmental impacts of all the initiatives rather than simply doing individual assessments?

We will be looking at all the proposed program initiatives and how they relate with each other, including any cumulative environmental impacts. Once the initiatives are further progressed, we will have a clearer picture of the type of assessment that will be carried out and whether this will be done for specific initiatives or across a larger program or sub-program of works. Any environmental assessment undertaken, either through a Review of Environmental Factors or an Environmental Impact Statement, must assess cumulative impacts.

Are you surveying the natural rock bars in the local area and getting Fisheries input to see if removal would be a good option?

We are working closely with the Department of Primary Industries (DPI) Fisheries division, and representatives from Fisheries are part of our core project team DPI – Fisheries have already undertaken substantial work on the Fish Passage Strategy, which includes reviewing long-term options for non-town weirs, reinstating rock bar habitat and improving fish passage. We will also work closely with the community on these initiatives.

What long-term monitoring will be done to establish the environmental, social, economic and cultural outcomes for the program?

Developing a monitoring and evaluation framework is a core component of all Water Infrastructure NSW projects, and one will be put in place for the final Better Baaka program initiatives once we have broad community support for the outcomes being sought and the package of initiatives to achieve those outcomes. There may also be opportunities to consolidate monitoring of the Better Baaka options with existing monitoring programs to inform Water Sharing Plans.

Is modelling on the rainfall and inflow from the years of droughts and major fish deaths being considered as part of these proposed initiatives?

Paleo stochastic modelling and 130 years of observed historical data, along with climate change scenarios, will be taken into consideration when assessing the proposed initiatives in the Better Baaka program.

This data goes beyond the most recent drought and can help provide information on a greater level of climate variability and future climate conditions.

What are the aims for ecological improvements if there is less water made available due to climate change and upstream extraction?

The Regional Water Strategies are exploring long-term risks that may arise from a more variable or changing climate. These strategies will also identify options and actions that may help prepare communities for these risks and potentially mitigate some risks.

The proposed Better Baaka initiatives will be tested sets to understand how they would be expected to perform under different climate scenarios.

The Department of Planning, Industry and Environment's Water group has undertaken initial analysis on low flows and cease to flow periods in the Barwon-Darling.

This data suggests:

- there have always been periods of no flow in the Barwon-Darling, even before there was significant irrigation development upstream
- periods of low flow and short periods of no flow are driven by development as well as climate
- long periods of no flow are primarily driven by the climate.

This analysis and the raw data is available on our website.

Flooding

Are you doing any scientific research to work out what effects high flows and floods have on water stored in riverbanks and alluvial groundwater and how this later affects flows back into the Barwon or Baaka?

The modelling team within the Department of Planning, Industry and Environment is working on updated models to understand the impacts of climate change and the long-term changes to river flows. This research will help inform our understanding of flows into the Barwon and Baaka.https://dpie.nsw.gov.au/water/plans-and-programs/nsw-water-strategy

What are your policies on flood plain harvesting?

The NSW Floodplain Harvesting Policy establishes a regulatory regime ceasing current unconstrained floodplain harvesting. In cases where floodplain harvesting has caused extraction to exceed the legal limits set out in NSW Water Sharing Plans and the Basin Plan, this policy will ensure it is reduced to those legal limits. Depending on the valley and the scale of the reduction, significant environmental improvements are expected as well as increased river flows in the northern Basin.

By the time the reforms are complete, the NSW Government will have spent approximately $17 million in improved data collection and modelling. This work is leading-edge. No other jurisdiction is attempting to achieve this challenging reform. The NSW Government is taking a significant step

forward in terms of the accuracy of our modelling and measurement to support the effective regulation of floodplain harvesting.

Floodplains need water to survive. On the Darling-Baaka, there is chatter around protection of assets. What can we do to provide water for our floodplain?

Once implemented, the NSW Floodplain Harvesting Policy will allow current floodplain diversions to be reduced in areas where growth has led to an exceedance of the legal limits. This will increase the amount of water to those floodplains. It is expected the policy will be fully implemented by the end of 2022.

Floodplain management plans (FMPs) are also in place across the northern Basin, including the Barwon-Darling valley. FMPs set the rules for the construction and modification of flood works with a core objective, among others, of protecting cultural assets.

The NSW Government is in the early stages of the Improving Floodplain Connections (IFC) program. It is expected to commence in January 2022 and conclude in June 2024. The IFC program will remediate or remove unapproved flood works in 110 priority areas across the northern Basin where it has been determined these works have the potential to impede flood flows. The 110 priority areas were selected after assessing a range of hydraulic, ecological and cultural impacts.

What is being done to address connectivity in all northern tributaries and to ensure healthy system flows in the Darling-Baaka and Macquarie River systems?

The NSW Government has recently implemented several actions to improve connectivity, including:

- protecting the first flush of water after the worst drought in recorded history in 2020. This allowed for a significant amount of water to reach Menindee Lakes, secured water for towns from Boggabilla to Pooncarie and restarted the river flowing without fish deaths. As a result, thousands of kilometres of river flowed for the first time in months.
- changing Water Sharing Plan rules that will lead to increased flows in the Barwon-Darling River. This includes:
    - The Water Sharing Plan for the Barwon-Darling River was changed to raise the thresholds for when A-class licence holders can access water. This helps protect low flows.
    - introducing the resumption of flow rule preventing water from being taken out of the river after an extended dry period. This was introduced in 2019 and was first implemented in early 2021.
        - More information.
    - introducing **individual daily extraction components** to limit the rate of extraction during low flows.
        - More information

- active management through **protecting licensed environmental water** as it moves through the Macquarie, Gwydir and Barwon-Darling unregulated river systems.
    - More information

Together these rule changes are likely to reduce the number of low and no-flow periods over a long-term basis. Explanations of modelled data showing the number of low-flow and cease-to-flow events both before and after the recent changes to the Barwon–Darling Water Sharing Plan were implemented can be found here.

We are also exploring a range of long-term options that could help improve connectivity through transparent, community driven processes.

These include, alongside the Better Baaka program:

- establishing a Connectivity Stakeholder Reference Group to discuss future connectivity options. The group includes representatives from local government, First Nations people, water users, conservation groups and community representatives from the northern valleys, Barwon-Darling, Lower Darling and southern valleys.
    - View the reference group papers
- driving innovative thinking through Regional Water Strategies, putting all options on the table for discussion and analysis, and preparing for a drier future. These options include reviewing the North West Unregulated Flow Plan. Public consultation on the Draft Western Regional Water Strategy regional water strategy will occur in 2022.
- implementing the NSW Floodplain Harvesting Policy in the NSW Border Rivers and Gwydir valleys, returning an additional 58.4 gigalitres to floodplains, rivers and creeks on average.
- publishing temporary water restrictions to provide transparency on when we will restrict water being taken after an extended drought. Draft triggers have been published on our website.

We are seeking feedback on these from the Connectivity Stakeholder Reference Group.

However, we need to be realistic about what we can achieve. The Barwon-Darling River has stopped flowing for extended periods of time in the past, even before development upstream.

For example, before 1940 the river stopped flowing at:

- Walgett for 272 days in 1902
- Brewarrina for 296 days in 1902
- Wilcannia for 130 days in 1927
- Weir 32 for 235 days in 1919-1920.

In addition, climate change may result in more extended dry periods. And we know extended droughts have significant social, environmental and economic consequences.

What strategies will there be to deliver water to the Darling-Baaka from its tributary the Warrigo River? Will the Warrigo River mouth be returned to its natural state to allow uninhibited passage to the Darling-Baaka?

The intersecting streams need to be considered as part of the connectivity discussion. One of the options in the Better Baaka program considers the intersecting streams and would involve a strategic water purchase to help support native fish population, tourism, and recreation, as well as cultural values.

Industry

How much influence will industries such as agriculture and mining have on decision-making for the Better Baaka program?

Water Infrastructure NSW is consulting broadly with a wide variety of stakeholders on the Better Baaka program initiatives and will take all viewpoints into consideration.

Funding

Is the Better Baaka program being funded by the Australian Government or NSW Government?

The Australian Government is providing development funding for the Better Baaka program, given it was developed in response to the request from the Ministerial Council for NSW to rescope the Menindee Lakes Water Saving SDLAM project. If projects within the program are to proceed to construction additional funding will be required.

Water Sharing Plans

Can you provide a clear summary of the Water Sharing Plan rule changes for the Barwon-Darling?

The main changes undertaken in the Barwon-Darling Water Sharing Plan in mid-2020 were:

- introducing active management
- including resumption of flow rules
- introducing individual daily extraction components
- changing A-class commence and cease to pump triggers.

More information:

- Barwon-Darling rule summary sheet

- Active management rules
- Individual daily extraction components
- Resumption of flow rules

How is this project going to guarantee flows to Menindee? What changes are going to be made to the Water Sharing Plan to ensure connectivity?

The proposed initiatives forming the Better Baaka program have the potential to support connectivity.

For instance:

- strategic purchases of licences may result in additional water in the river that can flow downstream
- modifying weirs and removing weirs may help flows of water pass more easily down the river
- improving fish passage would open long stretches of the river to fish.

Water inflow and storage

Have you looked at the inflows from Queensland? Have inflows decreased into NSW?

The Murray Darling Basin Authority (MDBA) has conducted analysis on the contribution of different tributaries and their inflows into the Barwon-Darling, taking into account pre-development and development stages.

Inflows from Queensland will need to be considered in the broader connectivity framework. Work has already commenced on this. Improving connectivity will require to a multi-jurisdictional approach involving Queensland and the Murray Darling Basin Authority.

The Murray Darling Basin Plan indicates the 60.5 GL recovered through the Sustainable Diversion Limit Adjustment Mechanism decreases the water recovery target. If this project does not recover from Menindee, will this water be recovered from consumptive use?

If the package of 36 notified projects delivers their anticipated water savings, there will be 605 gigalitres of additional water available for communities through the adjustment mechanism and the package of supply projects. The Basin states are working together to understand how any difference between what projects were expected to be delivered in 2017 and what is in place in 2024 will be addressed. The Australian Government's Water Minister has repeatedly stated no further water buybacks will be pursued to achieve Murray Darling Basin Plan targets.

Are you looking at use of off stream storages for towns like the one built at Nyngan and using floating evaporation uses to maintain uses and water quality? This would enable fish habitat instead of raising weirs which reduces flow in habitats.

Part of the Better Baaka program has been built off the work carried out as part of the Western Weirs Program's Strategic Business Case, which has considered a broad range of options including off-stream storages as well as other non-infrastructure options.

Is Water Infrastructure NSW considering protecting more flows into and through the Baaka?

As part of the operational rule changes for the Menindee Lakes Project, it was anticipated once we could clearly identify additional environmental water inflows into the Lakes, we could establish an account allowing for this additional water to be used for local or more far-reaching environmental outcomes. This will require a good understanding of environmental water demands, an agreed measurement of inflows to design the account rules and engagement with other jurisdictions to alter the operational arrangements. Current pre-requisite policy measures allow environmental flows from the Lakes to the River Murray to be accounted for whilst the Lakes are in Murray Darling Basin Authority control.

Downstream targets and volume

Will downstream targets supply to Toorale?

The Australian Government's purchase of 25,498 megalitres (ML) of Toorale water entitlements, as transferred to the Commonwealth Environmental Water Holder, comprised:

- 17,826 ML in the Warrego River
- 7,672 ML in the Darling River.

The available amount of water that can be used under licence varies from year-to-year according to rainfall, inflows and catchment conditions.

More information

What volumes of water are expected from changes at Toorale?

The purchase of Toorale included 25,000 ML of water entitlements transferred to the Commonwealth Environmental Water Office.

Buy backs

Is the NSW Government considering buy backs?

The NSW Government's long held position is that only selective or strategic water purchases with a willing seller could be supported. The impacts of any proposed option included as part of the rescoped projects will need to be worked through as part of the detailed scoping.

Local businesses and jobs

Will the Better Baaka program create local jobs?

Water Infrastructure NSW is committed to creating local jobs and working with local communities on what the Better Baaka program's initiatives will look like. This program presents an opportunity for local jobs to be created.

We will work in partnership with local and First Nations businesses to ensure our projects provide local economic and employment opportunities. Businesses are invited to register their interest in Water Infrastructure NSW projects via the online business registry.

Tourism and recreation

What tourism and recreation opportunities will the Better Baaka program provide?

The proposed Menindee Local Community Benefits initiative would develop and improve facilities to increase tourism and employment in the region. The proposal could include:

- building a Cultural Environment Educational Centre at Menindee to kickstart tourism in the local area
- improving access and safety to camping areas by sealing 13 kilometres of the Main Weir Road
- developing and improving recreational visitor amenities at Copi Hollow
- completely removing the Menindee Old Town Weir (noting this work has already commenced)
- improving recreational fishing access.

Will the department consider end of system flow targets to ensure low flows are protected in the Barwon and Darling/Baaka Rivers in dry times?

All options are on the table and a long list of options will be considered in the Regional Water Strategies.

Town water supply

Which three town water supplies could be upgraded and in what way?

The proposed initiative to improve town water security has identified up to three existing weirs at Pooncarie, Bourke and Collarenebri.

At Pooncarie, Water Infrastructure NSW is considering options, including raising the weir, modifying the existing fishway and installing gates to provide operational flexibility.

At Bourke, there is potential to replace or renew the weir, construct a new fishway and install a low-level outlet for more flexible operations. These initiatives will require environmental and engineer assessments and consideration of their current conditions.

We are also considering a new weir for the town of Collarenebri with a fishway to improve fish passage and gates to provide greater flexibility to move water through the weir.

All these projects would require environmental and engineering assessments and will need to go through the standard business case and planning approval processes.

Fish passage

What sort of fish passage is being anticipated?

Most of the sites considered are low level weirs and a range of fishway designs would be considered. One design is the vertical slot fishway, used in Australia for more than 25 years. It is a mature design that is proven to effectively allow fish passage. We would also consider a rock ramp fishway design. This design allows fish to get safely upstream and downstream. The actual final designs will vary by location.

Who will pay for the introduction of these fishways?

The Australian Government is providing development funding for the Better Baaka program, given it was developed in response to the request from the Ministerial Council for NSW to rescope the Menindee Lakes Water Saving SDLAM project. If projects within the program are to proceed to construction additional funding will be required and the source of that funding is to be agreed with the Australian Government and other Basin states.

Is Water Infrastructure NSW looking at how to meet the needs of fish and fish lovers for flowing water, not just still water?

The Better Baaka program is looking to reinstate significant stretches of river for fish passage as well as ways to improve fish habitat and refuge sites. The presence of flowing water through fishways is a key component of supporting fish passage for native fish and ultimately improving the health of the Darling-Baaka River system.

River health

How can these rivers be kept healthy?

The NSW Government's Regional Water Strategies are investigating a range of options to:

- deliver and manage water for local communities
- enable economic prosperity
- recognise and protect First Nation cultural values and rights
- protect and enhance the environment
- deliver affordable policy and infrastructure options.

These strategies are being developed using the best available information on climate variability and other key water security risks to identify solutions to improve the resilience of water resources. This includes options to help support river health. These options include

investments in infrastructure, changes in how we manage and operate river and groundwater system, and changes to our regulatory and policy frameworks.

We will consider all relevant options that can help keep the river healthy and improve water resilience, and pursue those which are technically, economically and environmentally viable.

Other

How will Water Infrastructure NSW monitor the data to inform which initiatives move ahead?

Water Infrastructure NSW will create and monitor an evaluation plan to measure achievable outcomes.

How does the Western Weirs project, the Western Regional Water Strategy and the Connectivity Stakeholders Reference Group connect with the Better Baaka program?

The Regional Water Strategies set the long-term direction for the region by planning for water needs and to support environmental, social and economic outcomes. The strategies consider how much water a region needs to meet future demand and recommends effective ways to manage the risk to water security, reliability and resilience.

As such, the analysis and stakeholder feedback from the Better Baaka, Western Weirs and Connectivity stakeholder panel will all feed in to and shape the Western Regional Water Strategy.

How will the Better Baaka program's planning fit within the community strategic plans?

Water Infrastructure NSW will be working in partnership with the relevant councils on the Better Baaka program and will ensure that any projects that are progressed are consistent with the community strategic plans.

How might these Better Baaka initiatives fit into the NSW's Government's Sustainable Diversion Limit Adjustment Mechanism (SDLAM) commitments? What are the water savings in the Basin Plan?

Water Infrastructure NSW acknowledges many of the proposed Better Baaka initiatives do not fit within NSW's existing SDLAM commitments in the southern Basin. We have established the Better Baaka program to look at a broader range of options along the length of the river. One of the key elements is the need to consult and collaborate with communities the different solutions and answers to what is needed to make the river healthier.

Once the program has been developed, in collaboration with the communities, the joint basin governments (Ministerial Council and Basin Officials Committee) will need to agree to the rescoped sustainable diversion limit elements of the Better Baaka program. Modelling to understand the potential sustainable diversion limit offset for the rescoped project will commence once we have a clearer idea of viable options.

As the Murray Darling Basin Authority (MDBA) modelled the package of 36 project nominated by South Australia, Victoria and NSW to determine the 605 gigalitres sustainable diversion limit L adjustment, exact numbers on any sustainable diversion limit contribution from the Better Baaka program, or the individual projects, cannot be provided at this time, and for completed projects it will only be known in 2024 when the MDBA undertakes the reconciliation of anticipated project outcomes and those in place by 30 June 2024.

Contrary to the Murray Darling Basin Plan, does NSW think all water should stay in the state?

The NSW Government is committed to delivering the economic, social, cultural and environmental outcomes intended by the Murray Darling Basin Plan.

NSW has a significantly heavier workload to implement the Basin Plan when compared to other Basin states given the large area of the Basin being found within NSW. NSW is responsible for delivering 20 out of 33 water resource plans, 21 of the 36 SDLAM projects and has 1,276 gigalitres of water recovery target out of a total of 2,075 gigalitres under the plan.

The Murray-Darling Basin Agreement sets out how water is shared in the southern Basin and is a core element of water management in this area of NSW. Under the agreement, all of the water cannot stay in NSW - with South Australia receiving water from both NSW and Victoria.

Would you consider broadening the Murray Darling Basin Agreement to achieve better overall system outcomes?

The NSW Government is committed to adaptive management and the ongoing review of how historical arrangements can be improved. Amending the Murray Darling Basin Agreement will require agreement by the Murray-Darling Basin Ministerial Council.

Removal of weirs is significant in our area, considering water users below the main Bourke will be greatly affected.

We are committed to talking to the community and users about the future of weirs. We will work to understand the impacts on weirs ahead of any activity. Assessments will inform the level of work to be carried out, and no progress will be made until broad community support is achieved.

More information