



COMMONWEALTH OF AUSTRALIA

# Proof Committee Hansard

## SENATE

RURAL AND REGIONAL AFFAIRS AND TRANSPORT  
LEGISLATION COMMITTEE

(Public)

FRIDAY, 18 FEBRUARY 2022

CANBERRA

**CONDITIONS OF DISTRIBUTION**

This is an uncorrected proof of evidence taken before the committee.  
It is made available under the condition that it is recognised as such.

BY AUTHORITY OF THE SENATE

[PROOF COPY]

## **RURAL AND REGIONAL AFFAIRS AND TRANSPORT LEGISLATION COMMITTEE**

**Friday, 18 February 2022**

**Members in attendance:** Senators Antic [by video link], Davey, Grogan, Lines [by video link], McAllister, McDonald, McLachlan [by video link], Mirabella, O'Neill, Patrick and Roberts

**CROSS-PORTFOLIO MURRAY-DARLING BASIN PLAN MATTERS****In Attendance**

Senator Ruston, Minister for Families and Social Services and Minister for Women's Safety

Senator Duniam, Assistant Minister for Forestry and Fisheries and Assistant Minister for Industry Development

**Department of Agriculture, Water and the Environment****Executive**

Mr Andrew Metcalfe AO, Secretary

Ms Cindy Briscoe, Deputy Secretary, Enabling Services Group

Dr Chris Locke, Deputy Secretary, Environment and Heritage Group

Mr James Tregurtha, Acting Deputy Secretary, Major Environment Reforms Group

Ms Rachel Connell, Acting Deputy Secretary, Water, Climate Adaptation, Natural Disaster and Antarctic Group

Mr David Hazlehurst, Deputy Secretary, Agricultural Trade Group

Ms Rosemary Deininger, Deputy Secretary, Agriculture Policy, Research and Portfolio Strategy Group

Mr Andrew Tongue, Deputy Secretary, Biosecurity and Compliance Group

**Australian Bureau of Agricultural Resource Economics and Sciences**

Mr David Galeano, Assistant Secretary, Natural Resources Branch

**Commonwealth Environmental Water Office**

Mr Hilton Taylor, Acting Commonwealth Environmental Water Holder/First Assistant Secretary

Mr Michael Wrathall, Assistant Secretary, Wetlands, Policy and Northern Water Use Branch

Mr Hilary Johnson, Assistant Secretary, Southern Water Use, Aquatic Science and Community Engagement Branch

**Compliance and Enforcement Division**

Mr Peter Timson, First Assistant Secretary

**Corporate and Business Services Division**

Mr Troy Czabania, Assistant Secretary, Governance and Parliamentary Business Branch

**Finance Division**

Mr Paul Pak Poy, Chief Finance Officer

**Legal Division**

Ms Alice Linacre, Chief Counsel

Ms Cassandra Ireland, General Counsel, Legislation Practice Branch

Mr Jadd Sanson-Fisher, General Counsel, Biosecurity, Exports and Compliance Legal Practice Branch

Ms Amy Nichol, General Counsel, Commercial, Information and Agriculture Legal Practice Branch

Ms Jane Temby, General Counsel, Environment, Employment and Litigation Legal Practice Branch

**Inspector General of Water Compliance**

The Hon. Troy Grant, Inspector-General of Water Compliance [by video link]

Mr Daniel Blacker, Deputy Inspector-General of Water Compliance [by video link]

Ms Bridgett Leopold, Deputy Inspector-General of Water Compliance [by video link]

**Murray-Darling Basin Authority**

Mr Andrew Reynolds, Acting Chief Executive

Mr Tim Goodes, Executive Director, Basin Plan Portfolio

Mr Andrew Kremor, Acting Executive Director, River Management Portfolio

Ms Annette Blyton, Chief Operating Officer, Business Services Portfolio

Mr Gregory Manning, Acting Executive Director, Basin Strategy and Knowledge Portfolio

Ms Kelly Casey, General Manager, Legal and Government Relations Branch

Ms Megan Winter, General Manager, Basin Plan Implementation, Water Resource Plan, Accounting Branch  
Dr Matthew Coleman, General Manager, Applied Science Branch

#### **Water Division**

Mr Matthew Dadswell, Acting First Assistant Secretary  
Ms Kirsty Bunfield, Assistant Secretary, National Water Policy Branch  
Ms Susan Buckle, Acting Assistant Secretary, Murray-Darling Basin Policy Branch  
Dr Peta Derham, Assistant Secretary, Regional Program Delivery Branch  
Mr Chris Golding, Acting Assistant Secretary, Strategic Water Policy and Engagement Branch

#### **Department of Infrastructure, Transport, Regional Development and Communications**

##### **Executive**

Ms Marisa Purvis-Smith, Deputy Secretary

##### **Water Infrastructure and Northern Australia**

Mr Malcolm Southwell, Assistant Secretary, Science, Policy and Engagement  
Mr Mark Darrough, Assistant Secretary, Infrastructure Framework and Delivery

#### **Committee met at 09:01**

**CHAIR (Senator McDonald):** I declare open this public hearing of the Senate Rural and Regional Affairs and Transport Legislation Committee. The Senate has referred to the committee the particulars of proposed expenditure for 2021-22 and related documents for cross-portfolio Murray-Darling Basin Plan matters. The committee has before it a program listing agencies and divisions relating to matters for which senators have given notice.

The committee has fixed Friday 25 March 2022 as the date for the return of answers to questions taken on notice prior to Friday 25 February 2022. For questions received after that date, the date for the return of answers will be Friday 22 April 2022. Senators are encouraged to provide any written questions on notice to the committee secretariat as soon as possible following the hearings. Under standing order 26 the committee must take all evidence in public session. This includes answers to questions on notice.

I remind all witnesses that in giving evidence to the committee they are protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee, and such action may be treated by the Senate as a contempt. It is also a contempt to give false or misleading evidence to a committee.

The Senate by resolution in 1999 endorsed the following test of relevance of questions at estimates hearings. Any questions going to the operations or financial positions of the department and agencies which are seeking funds in the estimates are relevant questions for the purposes of estimates hearings. I remind officers that the Senate has resolved that there are no areas in connection with the expenditure of public funds where any person has a discretion to withhold details or explanations from the parliament or its committees unless the parliament has expressly provided otherwise. The Senate has resolved also that an officer of a department of the Commonwealth shall not be asked to give opinions on matters of policy, shall be given reasonable opportunity to refer questions asked of the officer to superior officers or to a minister. This resolution prohibits only questions asking for opinions on matters of policy and does not preclude questions asking for explanations of policies or factual questions about when and how policies were adopted.

I particularly draw the attention of witnesses to an order of the Senate of 13 May 2009 specifying the process by which a claim of public interest immunity should be raised, which will be incorporated in the *Hansard*:

*The extract read as follows—*

##### **Public interest immunity claims**

That the Senate—

(a) notes that ministers and officers have continued to refuse to provide information to Senate committees without properly raising claims of public interest immunity as required by past resolutions of the Senate;

(b) reaffirms the principles of past resolutions of the Senate by this order, to provide ministers and officers with guidance as to the proper process for raising public interest immunity claims and to consolidate those past resolutions of the Senate;

(c) orders that the following operate as an order of continuing effect:

(1) If:

(a) a Senate committee, or a senator in the course of proceedings of a committee, requests information or a document from a Commonwealth department or agency; and

(b) an officer of the department or agency to whom the request is directed believes that it may not be in the public interest to disclose the information or document to the committee, the officer shall state to the committee the ground on which the officer believes that it may not be in the public interest to disclose the information or document to the committee, and specify the harm to the public interest that could result from the disclosure of the information or document.

(2) If, after receiving the officer's statement under paragraph (1), the committee or the senator requests the officer to refer the question of the disclosure of the information or document to a responsible minister, the officer shall refer that question to the minister.

(3) If a minister, on a reference by an officer under paragraph (2), concludes that it would not be in the public interest to disclose the information or document to the committee, the minister shall provide to the committee a statement of the ground for that conclusion, specifying the harm to the public interest that could result from the disclosure of the information or document.

(4) A minister, in a statement under paragraph (3), shall indicate whether the harm to the public interest that could result from the disclosure of the information or document to the committee could result only from the publication of the information or document by the committee, or could result, equally or in part, from the disclosure of the information or document to the committee as in camera evidence.

(5) If, after considering a statement by a minister provided under paragraph (3), the committee concludes that the statement does not sufficiently justify the withholding of the information or document from the committee, the committee shall report the matter to the Senate.

(6) A decision by a committee not to report a matter to the Senate under paragraph (5) does not prevent a senator from raising the matter in the Senate in accordance with other procedures of the Senate.

(7) A statement that information or a document is not published, or is confidential, or consists of advice to, or internal deliberations of, government, in the absence of specification of the harm to the public interest that could result from the disclosure of the information or document, is not a statement that meets the requirements of paragraph (1) or (4).

(8) If a minister concludes that a statement under paragraph (3) should more appropriately be made by the head of an agency, by reason of the independence of that agency from ministerial direction or control, the minister shall inform the committee of that conclusion and the reason for that conclusion, and shall refer the matter to the head of the agency, who shall then be required to provide a statement in accordance with paragraph (3).

(d) requires the Procedure Committee to review the operation of this order and report to the Senate by 20 August 2009.

*(13 May 2009 J.1941)*

(Extract, Senate Standing Orders)

**CHAIR:** Witnesses are specifically reminded that a statement that information or a document is confidential or consists of advice to government is not a statement that meets the requirements of the 2009 order. Instead, witnesses are required to provide some specific indication of the harm to public interest that could result from the disclosure of the information or the document.

Senators, departments and agencies have been provided with advice on the arrangements in place to ensure the budget estimates 2021-22 hearings are conducted in a safe environment. This guidance is also available from the secretariat. The committee appreciates the cooperation of all attendees in adhering to these arrangements.

#### **Department of Agriculture, Water and the Environment**

#### **Department of Infrastructure, Transport, Regional Development and Communications**

#### **Murray-Darling Basin Authority**

[09:04]

I now welcome Senator the Hon. Anne Ruston, Minister for Families and Social Services and Minister for Women's Safety; Mr Andrew Metcalfe AO, secretary of the Department of Agriculture, Water and the Environment; Mr Andrew Reynolds, acting chief executive officer of the Murray-Darling Basin Authority; and all the officers of the department. Minister Ruston, do you, Mr Metcalfe or Mr Reynolds wish to make an opening statement?

**Senator Ruston:** No, I don't wish to make a statement, but I believe Mr Metcalfe would like to put some information on the record.

**CHAIR:** Please go ahead.

**Mr Metcalfe:** Thanks for opportunity to make a short opening statement this morning. Conditions have greatly improved across much of the Murray-Darling Basin over recent months, acknowledging some areas have experienced significant flooding. While some parts of the basin have experienced dryer-than-average conditions,

overall basin water storage is now at 92 per cent. This time last year basin water storage was at 51 per cent capacity. It's anticipated that the winter cropping season will be off to a strong start because soil moisture levels are so high and water availability will be at its best. As you know, ABARES has forecast that Australia's agriculture production will set a record this year, topping \$78 billion. Farmers in the basin grow about 40 per cent of our food and fibre, making a significant contribution to our food security and to our exports. Basin communities also continue to benefit from the implementation of the Murray-Darling Communities Investment Package measures.

The wet seasons we've experienced, combined with water held and used to benefit the environment, have seen a revival of many but not all of the wetlands in the basin. While there are some water quality issues, waterbirds and fish are breeding across the basin, a sure sign of good health. Environmental water, which sustained wetlands during the drought, is now providing a helping hand in places to maintain water levels so birds don't abandon their nests. Menindee Lakes are full and teeming with golden perch. Managed flows out of the lakes are helping fish disperse into the southern basin.

I would also like to acknowledge Phillip Glyde's recent retirement as chief executive officer of the Murray-Darling Basin Authority and put on the record my thanks for his lifetime of contribution to the authority, our portfolio and the wider Australian Public Service. Phil's calm leadership and deep expertise have been invaluable in a range of roles, from the merger of ABARES and the Bureau of Rural Sciences; to leading negotiations for the Murray-Darling Basin agreement; to managing trade matters, particularly in relation to live animal exports; to, most recently, serving as the chief executive officer of the Murray-Darling Basin Authority. His achievements over his 42-year career are many. It is fitting today to acknowledge his leadership in helping to implement the basin plan and working so hard to bring the authority closer to its communities and stakeholders. On behalf of all of my colleagues, I would like to thank him for his dedicated service and wish him and his family well in his retirement. A selection process to identify his permanent successor as chief executive officer is currently underway.

**CHAIR:** Thank you, Mr Metcalfe. I'm sure the committee joins me in thanking Mr Glyde for his work. In the couple of years that I have been here, I've always appreciated his frank and direct advice. We join with you in thanking him for his service. Senator Grogan.

**Senator GROGAN:** Let us begin—again! Take a deep breath and let's go. It's no secret that the National Party have tried to undermine the basin plan—

**Senator DAVEY:** Amend.

**Senator GROGAN:** amend—and are looking to scrap the 450 gigalitres, which is so important to South Australia, my home state and yours, Minister. Some of the commentary from Barnaby Joyce tells South Australians to move to where the water is and says we didn't have a hope in Hades of getting the water promised through the Murray-Darling Basin. Obviously, that puts us at a point of extreme concern. When we look to the overarching decision-making that shapes where things go within the Murray-Darling Basin Plan, we are looking at a government that is partly supportive and partly not supportive. The coalition, which is two parties, is coming together, making decisions and shaping how all of the officials in this room undertake their work. It puts us in the position of paralysis that I believe we are in with the Murray Darling.

My first question is: how does that decision-making work, Minister, given that all of the officials in this room and all of the structures that run the Murray-Darling Basin system—all of the support services, all of the things that the people in this room do. How does that decision-making work when you have a coalition that is totally divided on the river?

**Senator Ruston:** First and foremost, decision-making works by a policy position being taken by the government. I add that the Murray-Darling Basin Plan was a policy that was adopted by both previous governments and current government, so the policy decision is taken and, unless somebody makes a change to that policy decision, that policy decision remains. We sit here today with exactly the same policy position, policy intent and policy commitment as we always have had. Now, I'm sure many people across the entire parliament would have different views about how best to achieve the kind of environmental outcomes and economic and social protections that we all want to put in place, but, at the end of the day, the policy of this government is and always has been for the delivery of the Murray-Darling Basin Plan in full.

**Senator GROGAN:** It is the Morrison-Joyce government. You have a Prime Minister from your party and a Deputy Prime Minister from the National Party. Is it the position of the Morrison-Joyce government that you are committed to the delivery of the basin plan in full and on time?

**Senator Ruston:** I have just said that. There is absolutely nothing that has changed in relation to the delivery of the basin plan in full. But I think everybody has to acknowledge that there are some real challenges in some of the constraints in the legislation about how we go about the delivery of the basin plan in full, and I think officials will probably provide some more details about the various aspects that make up this very complex matter. And it is complex; it was a once-in-a-lifetime opportunity for everybody to come together and support the delivery of a sustainable river system for everybody. So nobody's pretending that it's going to be easy—

**Senator GROGAN:** I totally agree with you. At the time that it was set, there was agreement to move forward with it. The concern we have, as I laid out previously, is that a significant element of your coalition, part of the current government, the Morrison-Joyce government, is not committed and has tried to unpick the plan. Therefore, in my opinion and in the opinion of many other people, the ability to deliver that plan is seriously hindered by the influence of the Nationals.

**Senator Ruston:** I wouldn't agree with you that anybody's trying to unpick the plan. I think that is a turn of phrase that doesn't—

**Senator Patrick:** [Inaudible]

**Senator DAVEY:** We were trying to amend one component. We were not trying to unpick the whole plan.

**CHAIR:** Order! We have a lot to get through today. It will work best if we don't talk across the table.

**Senator Ruston:** I was wondering whether it would be possible for me to answer your question.

**CHAIR:** That would be terrific.

**Senator Ruston:** As I was saying before I was interrupted, I think what we have before us at the moment is a group of people trying to deliver the plan within the constraints of the legislation and the legislative commitments that we've made to it. I'm sure you've read all the legislation, Senator Grogan, and the rules that apply to different parts of the delivery of the plan are contained in different sections of the legislation. One of the great challenges that we have before us is the fact that, whilst we are absolutely committed to the delivery of the plan in full, there are requirements that certain parts of the plan be delivered under certain conditions. It has been challenging for the agency, the Murray-Darling Basin Authority and the Commonwealth Environmental Water Holder to make sure that they comply with the legislation but at the same time continue to pursue the requirements of the legislation. I'm not sure whether you're aware about delivering the 450 gigalitres and the environmental outcomes that go with that, at the same time, not having any social and economic detrimental impact on our river communities. I would suggest, Senator Patrick and Senator Grogan, coming from my state in South Australia, you wouldn't want to see my home town of Renmark, my home community of the Riverland, significantly negatively impacted by a decision that didn't take any regard for their social and economic prosperity.

We need to be very careful that we don't decide that we're just going to go hell-bent on this divisive type of behaviour, when I think we are genuinely all trying to work together to try and deliver the Murray-Darling Basin Plan in full but recognising that it's not just one component and one stakeholder that we're satisfying here. We're trying to satisfy a myriad of stakeholders and we need to do it in a sensitive way.

I'm sorry it has started out this morning that we're just going for this big wedge combative attack on things. I can give you an absolute commitment—that this government is absolutely committed to the delivery of this plan, in full, but we also aren't blind to the challenges of doing it.

**Senator PATRICK:** Part of that's trying to—

**CHAIR:** Senator Patrick, you'll get the call shortly.

**Senator GROGAN:** I will put on the record the amendments that were placed in the house last year, which we believe were a move to undermine the Murray-Darling Basin Plan, noting that that is not your position, Senator Ruston, but it certainly is ours. The amendments—this is factual, not anyone making anything up—placed were to scrap the 450 gigalitre target—

**Senator DAVEY:** Point or order.

**CHAIR:** Yes, Senator Davey?

**Senator DAVEY:** If Senator Grogan wants to put on record the amendments that were introduced to the chamber, she should use the terminology from the amendments and not the terminology from the press release. They are quite different. It did not read—

**Senator GROGAN:** The outcome's the same though.

**CHAIR:** No, I think that's reasonable, let's—

**Senator DAVEY:** No, the outcome is quite different. I would just appreciate that, if you're going to put on record the amendments, you put on record the amendments not the press release.

**CHAIR:** I'm keen not to get into a debate about—

**Senator McALLISTER:** Point of order, Chair.

**CHAIR:** Yes, Senator McAllister?

**Senator McALLISTER:** On the point of order raised by Senator Davey, I'm not really sure what the point of order is. Senator Grogan is a participating member of this committee. She is perfectly entitled to ask her questions in whatever manner she wishes to. It is not the role of Senator Davey to correct or police the way that Senator Grogan approaches her questioning, except if it happens to be outside of the standing orders. Senator Davey has made no argument that anything Senator Grogan has said is outside of the standing orders.

**Senator DAVEY:** With all due respect, Senator McAllister, she alleged she was quoting from an amendment and she actually wasn't quoting from an amendment.

**CHAIR:** Please, Senator Davey.

**Senator McALLISTER:** As you know, this is not a forum for debate. The chamber is for debate, and Senator Grogan is entitled to ask the question in any way she chooses.

**CHAIR:** Let's pull that up there, then. Senator Grogan, I would encourage you to be accurate in your comments. That would be useful to this hearing today.

**Senator GROGAN:** Sure. If we'd like to be pedantic all day, we can certainly do that, Senator Davey. I will have the amendments brought down.

**CHAIR:** Please address through the chair, thank you.

**Senator GROGAN:** Sure.

**CHAIR:** Senator Grogan, back to your question.

**Senator GROGAN:** Can I ask who requested the drafting of those three amendments?

**Senator Ruston:** My understanding is they came from backbench members of the Senate. I would have no idea.

**Senator PATRICK:** [inaudible]

**CHAIR:** Senator Patrick, this will go faster if you don't interject.

**Senator PATRICK:** Sorry, I'm just trying to be helpful with accuracy.

**CHAIR:** Terrific.

**Senator GROGAN:** Was it Senator McKenzie?

**Senator Ruston:** As I said, I would have absolutely no idea. They would have come from the backbench because no member of the executive government is able to move amendments in that manner. They have to go through a different process, so it was clearly from a backbencher but who that backbencher was I am not aware.

**Senator GROGAN:** I asked that because Senator McKenzie tabled the amendments, and she said she was going by the latest science. I'd like to put that science to the Commonwealth Environmental Water Holder.

**Mr Metcalfe:** I'll just ask Mr Taylor to come forward.

**Senator GROGAN:** I'm going to use some quotes here, so if they're a little inflamed, the quotes are from the Nationals deputy whip, Damian Drum. I'm just using his words. One of those quotes is, 'The science no longer supports South Australia needing fresh water.' Does the science support that comment?

**Mr Taylor:** I'm not aware of any science that would say that South Australia does not require fresh water.

**Senator GROGAN:** Can I also ask—again, I'm quoting, so it's not my language—'Rising sea levels will mean the SA Lower Lakes system will not need environmental water.'

**Mr Taylor:** Again, the situation with rising sea levels in South Australia and linking that to requiring fresh water—they are two quite separate issues in my mind, and I'm not aware of any science that indicates that rising sea levels will mean that you don't need environmental water to South Australia.

**Senator GROGAN:** Minister, do those statements from Mr Drum represent the views of the Morrison-Joyce government?

**Senator Ruston:** Backbenchers in our party are absolutely at liberty to make whatever comments they wish. The government relies very heavily on the expert advice that's backed by people such as Mr Taylor and others



who provide advice to government in relation to the science that sits behind decision-making. We take our advice from those people.

**Senator GROGAN:** We're both South Australians. The 450 gigalitres are very important to South Australia and to South Australians, and I believe they're very important to you too. Would that be right?

**Senator RUSTON:** The delivery of the plan is extremely important for the entire Murray-Darling Basin, because, at the end of the day, the whole driving purpose behind the Murray-Darling Basin Plan was to make sure we achieved the environmental outcomes that would mean that we would have a healthy river system for future generations. It was trying to strike a balance between making sure we had enough water to ensure sustainability within all of the targets that were modelled into the plan and, at the same time, making sure that we still remain the food bowl of Australia. The productivity—the level of production and gross domestic product—that comes out of the Murray-Darling Basin in total is so terribly important. That was the intent of the plan. The ability for us to achieve those targets and to achieve a sustainable river system is absolutely at the heart of this.

The reason why I'm so committed to the delivery of this plan is that we must continue to strive to achieve the outcomes that we set for ourselves when we first put this plan in place. The Labor Party and the coalition came together—not so much the Greens; I think they wanted more—and we are absolutely committed to these outcomes: a healthy river system for future generations in a way that did the least amount of damage to our communities, so that we had a balanced approach to the social, economic and environmental outcomes.

**Senator GROGAN:** Do you have any concerns about the lack of support for the plan by parts of your coalition government?

**Senator RUSTON:** There are obviously many robust debates within parties and within coalitions. Hopefully you don't end up finding out what it's like to be in coalition with the Greens sometime in the future, because that wouldn't be good—

**Senator GROGAN:** We have no intention of finding that out, thank you!

**Senator RUSTON:** We can only hope! The government—and the government is made up of all the members of the government—is committed to a policy that is the delivery of the Murray-Darling Basin Plan in full. That is our policy. People may have different views around how parts of it are achieved, but we have a piece of legislation—we have multiple pieces of legislation—through which we are required to deliver the various components of the plan. That remains the mechanism by which we will deliver the plan, and that remains our policy position. Unless we change it, that is our policy position, and our position is to deliver the plan in full.

**CHAIR:** Thanks, Senator Grogan. Senator McLachlan.

**Senator McLACHLAN:** I have some questions regarding flood-plain harvesting to the authority. The New South Wales government has introduced new regulations, which I think are coming into effect on Monday. Has the authority had any involvement with or input in those regulations?

**Mr Reynolds:** The authority has consulted with New South Wales government, through their officials, on how flood-plain harvesting might be incorporated into water resource plans, but the development of the regulations is a matter that the New South Wales government has progressed. We haven't been part of the preparation of those at all.

**Senator McLACHLAN:** Have you modelled the impact of those regulations on water flows?

**Mr Reynolds:** The modelling of flood-plain harvesting regulations and how they would operate in New South Wales is something the New South Wales government has undertaken and has been consulting on as well.

**Senator McLACHLAN:** As a South Australian, do I know whether these regulations, if they remain and are not disallowed, are going to impact water flows to South Australia?

**Mr Reynolds:** Modelling that the New South Wales government has undertaken, as we understand it, shows that the impact of flood-plain harvesting on flows to the Murray at the end of the Barwon-Darling system is very minimal. The volume of flow from the northern basin to the Murray is around 14 per cent, and flood-plain harvesting is a much smaller component of that. Changes to flood-plain harvesting have a minimal impact on the Murray system.

**Senator PATRICK:** Fourteen per cent of what?

**Mr Reynolds:** Average flows to the Murray from the northern basin is about 14 per cent.

**Senator McLACHLAN:** I take it from your answer that you accept the veracity of your modelling?

**Mr Reynolds:** When the water—

**Senator McLACHLAN:** Do you test it?

**Mr Reynolds:** When water resource plans come forward that incorporate the flood-plain harvesting regulations, the modelling will be provided as part of that, and MDBA will undertake an assessment of that modelling at that point in time. That hasn't been brought forward to us at this point.

**Senator McLACHLAN:** What are our anticipated timings for when the authority will be forming a view on the modelling of New South Wales?

**Mr Reynolds:** We are continuing to work with New South Wales on the submission of water resource plans. We actually had the first water resource plan submitted to us yesterday. That one does not include flood-plain harvesting. We're anticipating that successive water resource plans will be brought forward in tranches over the next six months or so.

**Senator McLACHLAN:** There have been various stakeholders suggesting that the regulations may allow for the flood-plain harvesting to be taken out of water-sharing plans entirely. Do you have a view on that?

**Mr Reynolds:** We understand that the floodplain harvesting regulations will be incorporated in water-sharing plans and, importantly, from the perspective of the MDBA and Basin Plan, will have to be reflected in water resource plans in due course.

**Senator McLACHLAN:** Which means that there will still be valley limits operating?

**Mr Reynolds:** Absolutely. There will be valley limits under the Basin Plan and water resource plans. The limit is the sustainable diversion limit. That does not determine the various forms of take and does not put individual limits on each form of take. It's a limit at a whole-of-resource unit. So floodplain harvesting is a form of take that needs to be within the SDL, as does every other form of take.

**Senator McLACHLAN:** I want to go back to one of my earlier questions. When will I as a South Australian get the opportunity to have comfort that floodplain harvesting under the new regulations won't affect my community?

**Mr Reynolds:** The New South Wales government has been consulting quite widely on the floodplain harvesting regulations in the modelling. It has made information available. When that information comes forward to the MDBA as part of water resource plan submissions, we will publish that on our website as well. We're anticipating seeing that in the next six months or so.

**Senator McLACHLAN:** I know the Legislative Council of the New South Wales parliament released a report late last year. Has the authority formed a view on the recommendations in that report?

**Senator McLACHLAN:** Responding to those recommendations and taking action is a matter for the New South Wales government, and they have not yet responded to that inquiry. We're certainly following what New South Wales is doing with the floodplain harvesting, but we haven't necessarily formed a view on individual recommendations of that inquiry.

**Senator McLACHLAN:** Are they consulting with you in relation to their response?

**Mr Reynolds:** No, that's a matter for the New South Wales government.

**Senator O'NEILL:** With regard to New South Wales, we know how critical that relationship is and we know the paucity of information that's been available and the contested nature of what information is available and the political will of the current Liberal and National parties in government in New South Wales. When do you expect to have any clarity about what's going on?

**Mr Reynolds:** As I said, we are anticipating that information around those matters will come forward in the submission of water resource plans. We understand that they will be coming forward in the next six months. I think the plans that incorporate floodplain harvesting are more likely to be towards the end of that period than early, as they work through some of the issues that they have now.

**Senator O'NEILL:** So August?

**Mr Reynolds:** In that order of time, yes.

**Senator PATRICK:** Going back to the 450 gigalitres, I'm wondering how much of that has been realised. I think it was something like two or three gigalitres at the last hearing.

**Ms Connell:** In terms of the entitlements that the Commonwealth Environmental Water Holder now holds, there are two gigalitres. But, as we advised the committee last time, we've contracted with Victoria to deliver another 15.9 gigalitres. Minister Pitt has also approved a project with New South Wales for Murrumbidgee Irrigation to undertake a project that will deliver about six gigalitres. We're in active discussions with South Australia and Victoria on a range of other projects.

**Senator PATRICK:** That is 23 gigalitres, if we accept that the plans will be implemented properly.

**Ms Connell:** That's right. There's a process for states to put forward applications, which need to be assessed against the requirements of the Water Act and the overall program and, of course, as to whether they provide value for money under the PGPA Act.

**Senator PATRICK:** Minister, we're eight or nine years into the plan. There's an entitlement in the plan for the 450. We've got two so far, with a further 21 contracted. How are you going to meet the target? What's the plan?

**Senator Ruston:** I'd be keen for the officials to maybe provide a more detailed explanation in relation to the mechanisms that are available for us to be able to achieve the 450. As you're aware, Senator, in the interests of protecting our very important agriculture sector, a decision was taken not to pursue on-farm water savings beyond those that had already been achieved in South Australia last year. We have, in the first instance, pursued off farm. I understand that on the books at the moment there are somewhere between 70 and 100 gigalitres of water that have been identified through off-farm water efficiency projects. I'd be keen for the department to be able to run through those.

There is a third element of water recovery that I would also be very keen for the department to give you some information about, which is actually around urban and industrial water. Once again, this is water that can be secured for the Murray-Darling Basin's sustainability which doesn't have a social and economic impact on our river communities that so heavily rely on it. My understanding is there are some quite significant opportunities to gain water through that. I'd be very keen for the department to outline the plan that they have around the off-farm projects that they have identified, the mechanism by which they will be identifying further off-farm projects and what they're doing about urban and industrial water.

**Ms Connell:** I'll get Dr Derham to provide a bit more detail in a moment. To provide some context, the two gigalitres was a product of the previous water efficiency program, off the back of the first independent review of the Water for the Environment Special Account, which looked at the 450-gigalitre program. The advice of that independent review was that that program wasn't working effectively and was taking too long. These are demand driven programs, and we weren't getting the applications coming forward.

Minister Pitt, at the beginning of last year, announced the closure of that program in response to the WESA review and the establishment of a new program—the Off-farm Efficiency Program. The government's plan for delivering that is on the website. There's a program overview. The government is making funding available across all potential opportunities. There's a significant amount of funding available for off-farm projects led by states. At the end of last year, we also opened a grant program for proponents to come forward directly. There's still a component for state led on-farm proposals.

**Senator PATRICK:** That might total up to 70 gigalitres, if I heard the minister correctly?

**Ms Connell:** We've been working actively over the last 18 months with states and potential proponents to identify prospective projects. At the moment, that's focused on about 70 to 100 gigalitres of prospective projects, but we are looking at additional areas.

**Senator PATRICK:** Is that available on the website—the details of how you are intending to get those 70 to 100 gigalitres?

**Ms Connell:** It is a demand driven program, so the key role of the Commonwealth is to provide funding under the Water for the Environment Special Account. There are two state led funding streams, off farm and on farm, and we've also got grant opportunities available.

**Senator PATRICK:** Sorry, I'm mindful of time. I know you're trying to be helpful. Are the details of how you intend to get the 70 to 100 gigalitres available for public scrutiny?

**Ms Connell:** The details of the ultimate target, the 450, are on our website set out in the program overview. We can provide you with a copy of that.

**Senator PATRICK:** You're saying there's a plan that's laid out for 70 to 100 gigalitres. I think people would be entitled, because this is a commitment of government, to look at what that plan is in relative detail and be able to scrutinise it and say: 'Actually, I don't think that one's going to deliver, because of these reasons.' That would enable us to ask questions about that. We might look at another one and say: 'That looks fantastic; why aren't you doing that quicker?' It's that sort of detail. Is that available?

**Ms Connell:** I'll ask Dr Derham to provide more information.

**Dr Derham:** At the moment, the level of detail on our website is not what you're looking for, but what we do have in place—following the stocktake and the work that Ms Connell has outlined—is a suite of prospective projects that our state colleagues are currently working to develop projects for. As part of that work, we have supported them with additional funding, particularly New South Wales—we put \$5 million on the table for them

to do feasibility work. As those jurisdictions go out on these prospective projects, they're working with their communities. It's a very important element that the community scrutiny that you referred to is coming forward as part of those feasibility considerations.

**Senator PATRICK:** I'm also interested to hear about the other program that the minister said was a possibility.

**Dr Derham:** Yes, the urban and—

**Senator PATRICK:** Can the department please provide the committee with a summary of the planning—and I accept you're suggesting it might not be advanced to a point where you can hang your hat on it—such that we can have a look at the grounds on which the 70 to 100 claim is being made? I accept that it might be a draft or preliminary at this point in time. Can someone prepare that and provide that to the committee?

**Dr Derham:** I think we'll take that on notice, because we have the list and we should probably check with our state counterparts on the sensitivity of some of those sites, because some of them—as you can appreciate—are very conceptual still in terms of the negotiations they've been able to commence with communities.

**Senator PATRICK:** Sure. But even if they've started the negotiations, it won't be sensitive to the point that you can't at least put it on paper and mark it as 'conceptual'. That's fine.

**Dr Derham:** That's correct.

**Senator PATRICK:** What about the other program?

**Ms Connell:** We provided the list that you're requesting, I think, at the last hearing. We can provide an updated version.

**Senator PATRICK:** That's the list, yes?

**Ms Connell:** Yes. We can provide an update in terms of our discussions with states and proponents.

**Senator PATRICK:** That would be appreciated. This new urban—

**Dr Derham:** Urban and industrial. It's not that new. We've been negotiating with the basin jurisdictions for 18 months or so on prospective projects. I think it was the original work that Ernst & Young identified as a category of potential projects. What I can say is that we do have some really prospective projects here in the ACT, potentially in the order of 15 to 18 gegalitres of water recovery. These are urban wetland, reuse/recycle type projects that see a return of entitlement. We're also working very closely with the South Australian government. They probably have seven local councils that are developing stormwater renewal projects as well. We've got one of those seven proposals with us at the moment that we're currently assessing; we're just working through some issues with that proposal. That will be a bit of a pilot for the remaining six councils in South Australia. So, again, it's quite prospective.

**Senator PATRICK:** What's the quantum of water?

**Dr Derham:** It will depend on local council to local council, but anywhere in the order of up to around 10 gegalitres, roughly. Again, we're seeing some really significant opportunities. We've also been working with the New South Wales government in terms of what they might be able to do with their urban water sector. There are some prospective projects there.

The note of caution, of course, when you're working with urban utilities is that it's high-value water, and, coming off the back of the drought that we've seen, there's a lot of concern about future-proofing our urban water supplies. The notion of handing over any entitlement at the moment is a little bit fraught for some of those communities and community leaders. There are some really terrific prospective projects. We have a few that are quite well advanced and a few that are a little bit more reserved in their willingness to bring them further forward.

**Senator PATRICK:** Is that program detailed anywhere?

**Dr Derham:** We will need to update our site to provide more of that detail.

**Senator PATRICK:** And update the committee as to the general concept, and what you think you can get from it. I'm still only adding up—if I'm generous—a sum of 150, so there are still 300 gegalitres missing.

**Dr Derham:** I haven't touched on any of the industrial projects. That is another area where there could be prospective water recovery coming from, and quite significant too in terms of treatment of wastewater, recycling and reuse of the water. It has its own challenges, obviously; it's wastewater that's being treated for reuse. At this stage, that's still an area where we will need to do a fair bit more work over coming months to draw out those prospective projects.

**Senator PATRICK:** Again, is there a quantum for that? Do you have any idea?

**Dr Derham:** It could be in the tens of gigalitres.

**Senator PATRICK:** So we're still not there; we're still 300 gigalitres short.

**Ms Connell:** I point out that there's been a serious amount of activity and progress since the water efficiency program was shut in response to the first statutory review of the WESA. We await the second statutory review.

**Senator PATRICK:** I'm not being critical of what you've put to the table; that's all good news. But you would understand my role is to make sure that the commitment made to South Australia—it was a commitment—in order for us to get South Australia across the line in signing up to the plan is met. So I'm not being critical at all but I am entitled to ask the question: Where are the other 300 coming from, particularly when we're eight to nine years in? I don't think that's unreasonable.

**Senator Ruston:** I understand what you are asking for in the plan and the pathway that the government through the agency is seeking to achieve—the delivery of the plan. What has been put on the table here is there are myriad different ways that we are pursuing that outcome. I wonder whether it may not be a useful exercise for the agency to try and scope out for you—admittedly some of it may not necessarily be fully developed—

**Senator PATRICK:** I get it.

**Senator Ruston:** a potential pathway to the 450, using the off-farm efficiency programs that are currently being pursued, maybe being a little more ambitious about how we're pushing some of those programs. I know it's difficult when you're dealing with states and territories that push back, but being a bit more ambitious about where we go to with that. Looking at some of those urban water projects, I know they have not been advanced as much as they should have been. Up until we made the changes last year in relation to the on-farm water recovery, there was a lot of focus on on-farm water recovery. The change away from that means we have to focus on other things. So if we can do a plan around off-farm and what we can achieve there, a plan around urban and around industrial, and come back to you to show you there genuinely is a pathway towards recovering this water. I'm not pretending it's going to be easy, not pretending that.

**Senator PATRICK:** You will recall I put a question on notice two estimates ago asking for what that plan was. I got a very, very thin response, so I would welcome that.

**Senator Ruston:** I hear you loud and clear, and the department hears you loud and clear that you want the confidence that they have a plan and a pathway towards delivery.

**Senator PATRICK:** The entire constituency of South Australia wants that.

**Senator Ruston:** The entire constituency of the Murray-Darling Basin—

**Senator Patrick:** I am not sure about that.

**Senator Ruston:** Let me finish. The entire constituency of the Murray-Darling Basin want to know that there is a plan for the sustainable operation of our river system for the triple-bottom-line benefits. Part of that is making sure we meet those environmental outcomes and that we meet these flow outcomes. I, like you, would be very keen and I'm sure the department will be more than happy to develop that plan for you to show how we're intending to get to our targets.

**Senator O'NEILL:** The legislated amount on buy-backs was capped at 1,500 gigalitres. Is that correct?

**Senator Ruston:** Yes.

**Senator O'NEILL:** And how much has been recovered?

**Senator Ruston:** To be exact, I might get the agency to answer that question.

**Ms Connell:** My understanding is the statutory cap is about 1,200 gigalitres. I will get the precise figure for you. It is about 1,250 gigalitres of the statutory cap.

**Senator O'NEILL:** So the government has not met its own statutory cap? Is that correct?

**Ms Connell:** It was up to 1,500.

**Senator O'NEILL:** So you built in a get-out-of-jail free card—'up to'. I'd be careful with you guys.

**Senator Ruston:** I'd be keen to get on the record the cap was put in place to make sure that we did not go above that amount of water that was taken out of the consumptive use for our communities along the river. Obviously, if there was a mechanism by which that water could be achieved with not everyone getting to that cap, that would be a good outcome, because I live in a river community that relies on the river for its existence. I don't want one more litre of water taken out of my community than is absolutely necessary, so I want the department to be pursuing projects and actions that will enable those outcomes to be delivered without my community being negatively impacted. The comment you made about the 1,500 gigalitre cap is a misrepresentation of the reason

why the cap was put in place. It was there to protect our river communities, and I hope that we don't have to take one more gigalitre than we've taken out of the consumptive use, because I know what it does to communities like mine, like Senator Davey's.

**Senator O'NEILL:** I've been along the river a bit and seen it. I know what it means in Deniliquin and the Menindee Lakes with the fish kills. We all know the management of the river is a critical issue and we also know that the government can be pretty tricky with how it announces what it's doing and then what it actually does.

**Ms Connell:** I have the correct figure now. The water recovered under the statutory cap is 1,228 gigalitres. To put that in context, the overall recovery target is 2,075 gigalitres. To date, we have recovered 2,106 gigalitres, which is now with the Commonwealth Environmental Water Holder. As the minister pointed out, that water has come from a range of sources—via direct purchase, via infrastructure and via some water was gifted to the Commonwealth Environmental Water Holder. The overall target has been exceeded. The full recovery target is 98 per cent, because there are some additional small recovery targets that still need to be met in some catchments. Overall, 98 per cent of the water recovery target has been met.

**Senator O'NEILL:** Can I indicate some people have been in contact with my office who would have appreciated the opportunity to take up a buy-back for their business model. Is the government open to that at all?

**Ms Connell:** Minister Pitt, as part of the community investment package, confirmed that buy-backs wouldn't be part of the program going forward given the negative socioeconomic impacts that direct water purchase had had in the Basin in the previous 10 years.

**Senator O'NEILL:** I'm aware of the policy statement, but there are still people for whom with their business model that is an option that they were holding out. There might be flexibility. Is it absolutely over and done with? Is there is no chance for that?

**Ms Connell:** The government's approach in terms of meeting that remaining gap-bridging target is through off-farm infrastructure projects.

**Senator Ruston:** Anybody who's approaching you who would be seeking to sell their water can sell it in the open market.

**Senator O'NEILL:** Yes, there's a few issues with the market, though. There are not that many buyers, as I understand it.

**Senator Ruston:** I'm not sure that's necessarily true.

**Senator O'NEILL:** I don't want to spend my time on an individual case at this point.

**Senator Ruston:** We're happy to be of assistance.

**Senator O'NEILL:** There are concerns about how much flexibility there is for a fair price in a market which is controlled by so few. Could I go to the 605 gigalitres in supply projects? What is the current progress on the projects across the basin?

**Dr Derham:** The status has been updated on our website for the last quarter of last year. You'll find that update of the dashboard that we've been publishing. It remains that 30 of the 36 projects are highly prospective in terms of delivery as notified by the legislative time frame, and that secures—

**Senator O'NEILL:** The time frame, to be clear, is for achievement by June 2024?

**Dr Derham:** Yes, and those 30 projects secure approximately 75 per cent of the 605. In rough figures, they're about 445 of the 605 gigalitres offset. Fifteen of those 36 projects are already delivered, which I think is worthy of recognition, and that in itself secures about 280 gigalitres of that 605. They're already completed. The remaining projects of the 30—the other 15—are mainly infrastructure projects. They're all progressing quite well. We have funding schedules in place for the majority of those now that will see them getting to 30 June 2024 with surety, barring risks and acts of God that we can't control in terms of construction.

**Ms Connell:** For further context, when we commenced implementation of the Murray-Darling Communities Investment Package in 2020, states were significantly behind schedule in terms of implementing and delivering their projects. One of the key measures of that package was to work with states to accelerate their performance and delivery. In the course of the last 18 months the government has entered into funding arrangements with South Australia, New South Wales and Victoria to deliver constraints projects, and additional funding arrangements with New South Wales to accelerate five of their supply measure projects.

**Senator O'NEILL:** Coming to New South Wales, it seems to me we're in a similar position to where we were the last time we discussed this. There's still 25 per cent missing, and it is predominantly in New South Wales where we have issues. What is happening with the current progress on the Menindee Lakes project?

**Ms Connell:** The issue with the 25 per cent missing is that there were some significant project challenges and risks. We've been working with the relevant states to combat those risks. Dr Derham can give a more fulsome update of the progress on the Menindee project.

**Senator O'NEILL:** Recalling the last time I was here, the government were trying to push the date out for some of the projects to 2026; is that correct?

**Senator DAVEY:** The state governments were—not the federal government.

**Senator O'NEILL:** We've got that little problem lurking in the background, and I'm mindful of that as I ask questions about Menindee. Could you update me and give me a good sense of the consultation with the federal department on your intentions about substantially changing the project at this point?

**Dr Derham:** At the moment, the New South Wales government is out consulting with communities on two projects—Menindee Lakes and Yanco Creek. It is looking at what can be done to rescope those projects for delivery by 30 June 2024. At this stage we haven't received written or formal updates from New South Wales. We were hopeful we might receive some over the last few weeks but, as you might be aware, there's a new minister in the New South Wales cabinet who is also coming up to speed with the community issues associated with those projects. I would say that at this point we are eminently awaiting an update from New South Wales on the outcomes of the consultation on the potential rescope of both the Menindee Lakes and the Yanco Creek projects.

**Senator O'NEILL:** In common parlance, we're still flying blind on these two big projects because of the tardiness of the New South Wales government?

**Ms Connell:** No, the Australian government has funded New South Wales to undertake community engagement and further develop the proposals. As you'd be aware from your trips out to the area, it's critical that they bring stakeholders along and engage them in potential options for the rescope of the Menindee project. I understand New South Wales is doing that in the context of a broader suite of projects which will potentially have some significant environmental benefits in the western division. I think it's known as the—

**Dr Derham:** Better Baaka.

**Senator O'NEILL:** I'll come to that in a minute if I can. I would like to have, perhaps on notice from you, an understanding of what that consultation actually looks like. I've heard plenty of talk about community engagement. I'm not always sure that it's accessible to everybody or that it's done in a way that is timely or is not already seeking to achieve what it's already set up for itself rather than listening to the community. I'd be keen to know, if could you provide on notice, where that consultation is occurring; and how it's occurring. Are you aware of that from the New South Wales government, or are you a part of it?

**Ms Connell:** It's obviously an issue for the New South Wales government to provide that information and detail, but the department, the Murray-Darling Basin Authority and the Commonwealth Environmental Water Holder receive regular updates. We're involved in working committees to progress those projects, and I think New South Wales probably has information available on their website. However, in terms of the actual detail of the consultation, that's a matter for New South Wales.

**Senator O'NEILL:** Any information you could provide on these regular updates that you're getting would be much appreciated. Has the New South Wales government informed the department of how many gigalitres the new iteration of the Menindee Lakes project will recover?

**Ms Connell:** No, not at this stage.

**Senator O'NEILL:** Has the department been informed by the New South Wales government on how it will bridge any gap in the 106 gigalitre it originally intended to recover from Menindee and what it will actually recover?

**Ms Connell:** No.

**Senator O'NEILL:** So, there's no detail? You're still in discussions and awaiting information from a government that said they wanted to push it out to 2026—that's the last we have really heard that's official.

**Ms Connell:** I think there's been some significant detailed option development looking at specific components of the Menindee Lakes project. It's a quite complex project, as you'd appreciate, with a number of components in relation to upgrading infrastructure, looking at rules and a range of other measures. Did you want to add anything further?

**Dr Derham:** It also has community and First Nations interests at the heart of it. As you would appreciate, any works on ground out around those lakes is going to more than likely disturb cultural heritage. It's really important that that engagement is done in an appropriate manner.

**Senator O'NEILL:** The Better Baaka and Better Bidgee initiatives were announced at the end of last year. Those two programs, I'm advised, are reportedly going to recover 20 to 30 gigalitres. Is that your understanding?

**Ms Connell:** We've not received a proposal in terms of the rescoped Menindee project at this point in time. Our understanding is it's unlikely to reach—I think originally it was proposed to reach about 100 to 105 gigalitres.

**Senator O'NEILL:** Are you sure that's the number, because I'm advised that the original commitment for recovery was 130 gigalitres?

**Dr Derham:** It's 106 and that was associated with the evaporative saving that was to be transferred to entitlement which the New South Wales and Victorian governments were committed to.

**Senator O'NEILL:** So we're all agreed that it's 106 gigalitres that was intended to be recovered.

**Dr Derham:** I would note obviously one of the other significant challenges that state governments have had over the last 18 months is dealing with the impacts of COVID-19 and the ability to get out on the ground. I think the Wilcannia community in particular was quite negatively impacted recently, which hampered stakeholder engagement with Indigenous communities in particular.

**Senator O'NEILL:** Nonetheless, they made the announcement about the Barker and Better Bidgee initiatives. The community feedback I have is it's about 20 to 30 gigalitres, instead of 106 gigalitres, that is being discussed. Is that your understanding of what's being discussed out there?

**Ms Connell:** Our understanding is it's a project that is unlikely to deliver the 405 gigalitres, but we're yet to receive a proposal for a rescoped project.

**Senator O'NEILL:** I accept that, because it's not formalised yet. But these discussions are live in the community and I'm sure you're very aware of them—where they are able to occur.

**Ms Connell:** Absolutely.

**Senator O'NEILL:** It's been advised to me that it is 20 to 30 gigalitres that is being considered. Is that your understanding too?

**Ms Connell:** Our understanding is it's unlikely to be in the ballpark of 105 gigalitres. There was discussion around 30 gigalitres, but New South Wales is looking at a whole suite of projects. One of the things they're looking at is whether there are any other aspects of the Better Bidgee program that might contribute to the 105-gigalitre target. At this point in time we are encouraging them to continue with stakeholder engagement but lodge a proposal as soon as possible, for us to look at funding.

**Senator O'NEILL:** We know from New South Wales's behaviour so far that they've dismissed their water minister and they've put in a new water minister who's on training wheels, and there's project delay because they're getting up to speed. We know they said they were going to make 24 and they wanted to push it out to 26. We know that, instead of the 106 gigalitres that was supposed to be recovered, the community is now talking about a figure of 30 gigalitres. We also know from a question I asked a little earlier that we're not going to get a real idea about what is going on until possibly August. Is that correct?

**Ms Connell:** I think you're referring to Mr Reynolds's statement about water resource plans, which is a separate matter.

**Senator O'NEILL:** When do you expect we will find out what's going on?

**Ms Connell:** As Dr Derham said, we're anticipating a proposal from New South Wales very shortly. I will point out that this is one of 36 projects designed to—

**Senator O'NEILL:** I think I said last time that I acknowledge you've got 75 per cent of the job done, but often getting home is the hardest part. This is problematic, and that's why we discuss it all the time. What's going on in Menindee matters, because it was a pretty big chunk—106 gigalitres. It's now being actively considered and discussed in the community that that will only recover 20 to 30 gigalitres.

**Ms Connell:** New South Wales is actively looking at whether there are additional elements of the Better Bidgee that could contribute as well. I note that, on the other side of the ledger, we're anticipating that some of the other 36 supply and constraint measures will deliver more than initially proposed—unders and overs. We're working with states to accelerate projects where we can.

**Senator O'NEILL:** For the purposes of this committee: if you have information about how you think you can stitch up the process to meet the declared amounts, I'd be really interested to see where you are with where you're going to find this water.



**Ms Connell:** As Dr Derham said, we provide a progress report that's published on our website. In terms of achieving the 605 gigalitres, that's a process the Murray-Darling Basin Authority goes through, known as the reconciliation process, in 2024.

**Senator O'NEILL:** I don't doubt for a minute your efforts in this area, and I understand the scale of the problem you're trying to confront. But I'm not heartened by words like 'we might' and 'we hope'. What we are confronting now is, essentially, projects that are considered quite independent. Two of the largest projects are essentially falling over. What's the impact for the remaining projects—

**Senator Ruston:** We need to be a little careful with our language. 'Falling over' is a very provocative term and completely does not describe the work that has been done around the projects that you are discussing at the moment, Senator O'Neill.

**Senator O'NEILL:** I understand why you want to be careful, because this is a real thing that impacts people all along the river, all the economies along the river, all the social health and wellbeing and all the Indigenous heritage and understandings of the river; it matters. It also matters that we get the truth. New South Wales have been playing ducks and drakes with the federal government, and the federal government doesn't seem to be able to answer questions about what's going on. We need to be reassured that the 2024 date is actually plausible—not that we might get there or that we hope that it will happen. Ms Connell is not responsible for the New South Wales government, but I am trying to get the facts on the record. With the failure of the Menindee plan, where's the gap going to be made up?

**Ms Connell:** As I said earlier, when we embarked on the implementation of the Murray Darling community investment project, states were significantly delayed. But we now have arrangements in place across quite a few fronts, in terms of delivering on the 605 gigalitres. I will get Dr Derham to walk you through that progress.

**Senator O'NEILL:** That would be really helpful. When one falls, it doesn't mean nothing else can occur. I want to see an overview of: 'Is this possible? What is the path to possible delivery?'

**Ms Connell:** Dr Derham can provide an update on constraints and the accelerated projects.

**Dr Derham:** We focused a little bit on one of the six projects that are at risk; as we discussed, they're currently being rescoped. The constraint projects are the other five of the 36 that we are needing to make sure can be progressed and delivered on time. There was the announcement last year of \$330 million, part of which was contributing towards fast-tracking elements of the New South Wales Yarrawonga to Wakool constraint project in the Mid-Murray anabranch, and the Koondrook-Perricoota reaches of that project. They are on ground, working with the riparian landholders and delivering constraints measures on those properties as we speak. That will set New South Wales up in terms of how they roll their project for reconnecting their flood plains with all their other riparian landholders as part of the constraints program. I believe New South Wales is on a very good trajectory to towards moving towards delivery of their full suite of constraints projects.

We have recently worked with South Australia to finalise the fast-tracking phase of the next step of the South Australian constraint project. I think there's an announcement imminent on that and the next funding stage associated with that. That leaves us with the Victorian constraints program. There have been more delays on the Victorian side of the constraints project. We have been actively working with the Victorian officials to identify opportunities that will help facilitate their community consultation, which is paramount for the Victorian government in terms of the way they're delivering their constraints program. We continue to seek and participate in updated project delivery governance briefings. They've just stood up a specific project team who are now working to fast-track and identify opportunities to expediate the Victorian constraints program. I think there's still a fair level of risk associated with the Victorian constraints program at this stage but we are continuing to work with officials to identify how we get that one back on track as well.

**Ms Connell:** You requested some other detail about New South Wales's progress. The government has entered into a funding agreement to accelerate five of the New South Wales projects. To give more specific context about what they involve: we have provided funding for New South Wales for the Koondrook-Perricoota project, which will deliver six kilometres of levee bank removal—

**Senator O'NEILL:** Sorry, Ms Connell; I appreciate the information, but I am having trouble hearing you.

**Ms Connell:** Apologies; I will sit closer to the microphone. One of our areas of focus has been trying to accelerate work in New South Wales, so the government entered into a funding agreement with the New South Wales government in October last year, I think, to accelerate five of the sustainable diversion limit adjustments—

**Senator O'NEILL:** What is the quantum of that?

**Ms Connell:** That's \$330 million. There are five programs of work under that funding agreement. One is the Koondrook-Perricoota project, which will remove and replace bridges, remove and replace and widen banks, and upgrade three regulators in that important forest area. New South Wales, I saw a couple of weeks ago, is out on the ground, seeking local engineers and landscape people and other project managers in that community. So that one is kicked off and underway.

**Senator O'NEILL:** Before we move off that, what's expected in terms of gigalitre recovery?

**Ms Connell:** I don't have that number off the top of my head.

**Senator O'NEILL:** That's kind of the critical—

**Senator DAVEY:** It's a constraints project; it's not a water recovery project.

**Senator O'NEILL:** No, but the whole thing is interconnected.

**Dr Derham:** For the five associated with the \$330 million, we're anticipating that the collective benefit is in the order of 45 gigalitres of the 605, but that is a very rough estimate.

**Senator O'NEILL:** Thank you very much. If we could get the last four of those, that wraps this up.

**Ms Connell:** The Mid-Murray Anabranches Project will deliver 44 low-level crossings that will be removed and 31 farm machinery bridges that will be constructed. There will be, I think, eight low-level rock crossings constructed, 112 fence crossings, 117 kilometres of access tracks and the removal of some regulators and block banks.

The third program of works is in the Locks 8 and 9 region, which will see the installation of three fishways, four regulators and three bridges, as well as the upgrading of access tracks.

The fourth project is the Murray and Murrumbidgee National Park Project, which will see the installation of 17 new regulators, and two existing ones will be refurbished. There will be new fishways installed and there will be upgrading of access tracks, pipelines and a range of other earthworks to improve the ability to get water through that area for significant environmental benefits.

The fifth project that was funded under that agreement is the Yanco Creek Modernisation Project, which will see the installation of four reregulation weirs, seven hydrographic stations, 20 gates and flow structures, and 10 fishways. It will also improve access for a range of landholders in that region.

**CHAIR:** Thank you, Ms Connell, and thanks, Senator O'Neill.

**Senator DAVEY:** I have questions for the authority. Mr Reynolds, we heard earlier in questioning from Senator McLachlan concerns about the floodplain harvesting and where that's at with regard to the water resource plans. We know any changes of rules that occur in the Basin need to be reassessed by the MDBA. Can I just firstly clarify my understanding that New South Wales got their water resource plans in, and they were assessed in a first round and now—it's not that New South Wales have not ever submitted anything; it's that it's still going through the assessment process and in the back and forward stage. Is that correct?

**Mr Reynolds:** That's correct. New South Wales submitted all 20 of their water resource plans, and then subsequently withdrew them because, in the MDBA's assessment, there were a range of issues that meant they weren't consistent with the Basin Plan. New South Wales has now withdrawn them to address those issues and will progressively resubmit them.

**Senator DAVEY:** Some of those issues were as minor as drafting errors, and some other issues were questions about—

**Mr Reynolds:** That's correct. There were some minor issues of referencing and those sorts of things. There were also some policy and technical issues that are more substantial that need to be addressed.

**Senator DAVEY:** Yesterday an article came out via the ABC about South Australia proposing to change their carryover rules. It said:

The proposed changes to the River Murray water allocation plan will mean there will be no forfeiture of water and no automatic rollover of allocations for the next year if they are above 50 per cent.

And one irrigator was quoted as saying:

But when we had wet winters, we hit full allocations, so irrigators were no longer able to access the water that they had carried over.

Have those changes been put to the MDBA for assessment?

**Mr Reynolds:** Not that I'm aware of. I could check with my colleagues, but I don't believe they've been brought forward.

**Senator DAVEY:** It is fair to say that changes to carryover rules lead, potentially, to a change in irrigator behaviour and timing of water access and also have an implication for water storage.

**Mr Reynolds:** Potentially that's correct, yes.

**Senator DAVEY:** So, would you expect to see such a change put before you before it's actually implemented?

**Mr Reynolds:** In terms of water resource plans, there is a process whereby the states can bring forward water resource plans for amendment and re-accreditation. I expect that changes like that would be brought forward in that way. We're not aware of those proposed changes in detail at all. I haven't seen the article you're quoting from there.

**Senator DAVEY:** I'm happy to table it. I'll send the link through to the secretariat. I'll table the article so that everyone can have a read of it. And I must say, it's also news to me. It's the first that I saw of it. But it did raise concerns, because my understanding of South Australia's access to storage space is that when South Australia retains water in the storages it is then the first to spill. So, it does not impact on New South Wales or Victoria storages and water rules. Just from what I've read, I am concerned about the implications, and I would very much encourage the MDBA to have a thorough look at and review of that.

Moving on to my next line of questioning, in June 2020 the Murray-Darling Basin Ministerial Council agreed to commission a feasibility study to explore the options to optimise the capacity of the Barmah Choke—not increase but optimise the management of water around there. Can you give us an update as to where that study is at?

**Mr Reynolds:** We continue to work on that in conjunction with state agencies that have a role in that as well. The focus of our efforts has been mainly around assessing the sand slug—the deposition of sand in the choke—because that really sets the context for the problem we're trying to solve here. We need to understand whether or not we'll continue to lose capacity through the choke. So, certainly that has been a key element of the work we've been doing. We've also been looking at changes in water use patterns and trends to examine how we might need to move water through the system in the future. Equally, that's a really important context for understanding what any options of reconfiguring infrastructure around the choke might need to accommodate. So, we've been working through those issues. We've had a range of community and stakeholder engagement activities—some virtual and some in person, where we've been able to do that face to face. That's been happening over several months. So, that work continues. We anticipate being able to report on that feasibility study at the end of this calendar year, and we continue with that work.

**Senator DAVEY:** At the end of this calendar year?

**Mr Reynolds:** Yes, when we will report on the outcomes of the feasibility—

**Senator DAVEY:** If my memory serves me correctly, back in 2010—I think it was delivered in 2012—there was a massive Barmah Choke study that looked at about seven different options for that area. And 2020 was the first time a report was released outlining the sand slug. So, this is not new stuff; this is not starting from a blank page. But we're now two years down the track and we still haven't got an options paper or an overview of what options might be considered I'm getting a lot of pushback from people in my community who are saying that we're not doing anything about their very legitimate concerns about the degradation of the choke, and you're saying that we still have to wait for another six to eight months.

**Mr Reynolds:** I think it's fair to say that it's a particularly complex part of the world. The work done back in 2010 was really looking at very different problems, at how managing bulk transfers and alleviating unseasonal flooding of the Barmah forest could be managed. We're now looking at different issues, really: managing shortfall risks through the summer period. While a lot of the work that was done then is informative to the current study, it's not directly relatable to it.

As I said, understanding the movement and deposition of sand through the choke is really critical to understanding what interventions might be required for that. We have explored some of the options that might be available in terms of the basic concepts, including looking at modifications to the Murray irrigation system. We've commenced dialogue with Murray Irrigation about how they might contribute to that study as well, given their knowledge of their own system. Importantly, we need to understand the impacts on the receiving waterways—the natural waterways downstream of the Murray irrigation system. We've commenced work looking at that. We're engaging with the Victorian agencies, particularly Goulburn-Murray Water, on options for how water might be bypassed around the choke on the Victorian side. That would appear to be a much larger and more complicated project so that option, on face value, it might be more difficult to progress, but we're certainly examining that.

So we have work underway to explore the range of options that could be available to us and we've commenced consultation with the key stakeholders to shape those. Ultimately, that will come out as a broader options paper

for discussion with border communities. We've also had conversations with First Nations people—obviously, that part of the world, culturally, is very sensitive. So I think there's information available to a breadth of people in the community about the work that we've been doing.

**Senator Ruston:** Senator Davey, it's probably good to mention that my understanding is that the agreement at the ministerial council was a separate project to the sand—I don't think they're the same.

**Mr Reynolds:** That's correct, it's a separate project, but understanding the sand is, in effect, a key input into the study about what the solution may be.

**Senator DAVEY:** I'll cede the rest of my time to Senator Mirabella.

**Senator MIRABELLA:** A voice from Victoria!

**CHAIR:** Yes, welcome to the Federation, Victoria!

**Senator MIRABELLA:** Thank you.

**Senator PATRICK:** As you said: generally, it's good to be Victorians—

**Senator MIRABELLA:** We are, aren't we?

**Senator PATRICK:** with water generally.

**Senator MIRABELLA:** Yes, considering how much of it we send downstream! These questions are in no particular order. You just mentioned looking at some work around the Barmah Choke. Are you referring to having a look at the 'Big Buffalo proposal'? Is that one of them?

**Mr Reynolds:** No, the big Buffalo proposal is about expanding the existing Buffalo dam.

**Senator MIRABELLA:** Yes, it is, but I know that part of that proposal—one of the ones I've seen—is to put a pipeline through the broken system into the Goulburn system. Are you across that one?

**Mr Reynolds:** I know that was part of the original proposal when—

**Senator MIRABELLA:** You haven't looked at it?

**Mr Reynolds:** No, not as part of this work.

**Senator MIRABELLA:** Just on the subject of the choke, and I understand that this question might be one on notice: can you give me a number on the total volume of overbank transfers at the choke in, say, the last year?

**Mr Reynolds:** Yes, we'll have to take that on notice. I'll get that to you.

**Senator MIRABELLA:** How much loss in that exercise would be considered a conveyance loss? And I'd also be interested in you providing the last three years of conveyance and transmission losses across the basin.

**Mr Reynolds:** I wouldn't say 'across the basin'; do you mean the Murray system?

**Senator MIRABELLA:** We'll say the Murray system. If it's the case that there's a new focus on urban and industrial usage then a couple of questions spring to mind. I would presume that the largest urban user of water out of the basin is Adelaide. Is that right?

**Mr Reynolds:** I would imagine that would be the largest diversion from the Murray system, yes. I think that would be correct.

**Senator MIRABELLA:** When you say the Murray system—

**Mr Reynolds:** In all of the northern basin rivers, the use of water from those rivers is not something the MDBA directly manages. The Murray system is the component that we operate, I guess. When we talk about conveyance losses and those sorts of things, typically we discuss that in terms of the Murray system. If you're interested in those details from the northern basin, then I'd have to get information from the state authorities around that.

**Ms Connell:** Senator, [inaudible] significant urban area.

**Senator MIRABELLA:** Alright. But it's still the case that Adelaide would be the largest urban user of the system below Wentworth?

**Mr Reynolds:** Yes.

**Senator MIRABELLA:** But Adelaide's not in the basin, is it?

**Mr Reynolds:** No. Adelaide diverts its water from the Murray. South Australia has an entitlement to a share of the Murray resource—

**Senator MIRABELLA:** Yes, I understand all of that. My recollection is that about 85 per cent of Adelaide's water is pumped out of the Murray system. Are there projections of what Adelaide's usage will be over coming years and whether there are savings to be had? Is that something that's been looked at?

**Mr Reynolds:** I'm sure the South Australian government would be water-security planning for Adelaide. I think some of the efficiency measures—and I might defer to my departmental colleague—have examined water-savings projects in the urban setting in South Australia as well.

**Ms Connell:** Yes, that's right. We're talking to the South Australian government about a number of potential urban projects. But, in terms of water security for Adelaide, that would be the focus of the main utility in that state responsible for management and delivery of water and waste-water services.

**Senator MIRABELLA:** It's just that an interesting question arises: if in future there are water-saving projects or measures occurring in Adelaide—

**Ms Connell:** They would have to return basin entitlements that the Commonwealth Environmental Water Holder could utilise.

**Senator MIRABELLA:** Okay. The largest industrial user, I'm guessing, is also South Australia, which would be Whyalla. Is that right?

**Mr Reynolds:** I would have to take that on notice.

**Senator MIRABELLA:** I followed with interest a couple of years ago the opening of the desalination plant at Whyalla. At the time, I found it very hard to get any hard data. No? You're shaking your head?

**Senator Ruston:** I'm not sure there is a desalination plant at Whyalla.

**Senator MIRABELLA:** No? What am I thinking of?

**Senator GROGAN:** There is a proposal.

**Senator MIRABELLA:** It's a proposal? Sorry. Okay.

**Senator PATRICK:** There's a water treatment plant in Whyalla, but there's no desal plant. But there has been talk about supplying water to the Eyre Peninsula. In fact, I wrote to the government asking them to contribute to that, because it could save water from the Murray.

**Senator MIRABELLA:** Okay; I stand corrected. But I also recall finding it very hard to get any information about how much water the Whyalla steelworks plant actually uses. Is that publicly available?

**Ms Connell:** We'd have to take that on notice.

**Senator MIRABELLA:** Okay. I'll leave that one with you. Thank you.

**Mr Reynolds:** Senator, you inquired about the conveyance losses. I have those numbers here. For the 2018-19 year, the conveyance loss in the Murray River system, upstream of the South Australian border, was 930 gegalitres. In 2019-20 it was 800 gegalitres, and in 2020-21 it was 706 gegalitres. We're now regularly reporting those numbers in the summary of river operations that we produce at the end of each water year.

**Senator PATRICK:** Chair, I'm not sure where Senator Mirabella was going there, but can I withdraw the comment I made about Victoria at the start?

**Senator GROGAN:** I was getting very worried!

**CHAIR:** Alright; thank you. Senator Roberts, over to you.

**Senator ROBERTS:** Mr Taylor, I'd like to reference an exchange we had at a previous estimates regarding Menindee Lakes. I'll quote from *Hansard*. I said:

So, Menindee Lakes is a vital component of the Murray-Darling Basin Plan?

You said:

It's a vital component of our environmental management of the system.

Then I said:

And it'll stay there.

You said:

And we're actually getting those golden perch out of that system, connected through the Great Darling Anabranch, down into the Murray and distributing those fish. They become callop, as they're called in South Australia, and they travel thousands of kilometres over their life. So, this is a critical part of what we're doing.

That was not an answer to my question. You dodged my question, so let me try again. Will the Murray-Darling Basin Authority keep the Menindee Lakes as an environmentally important wetland having the same area as it

currently has, including water storage with the current capacity, with the level, of course, decided by basin inflows? This is Queensland water, and we'd like to see it used properly.

**Mr Taylor:** Not sure I'm in a position to answer on behalf of the Murray-Darling Basin Authority in terms of feature plans and management. I think the other thing is that the Menindee system is a jointly managed lake and water resource, jointly managed between New South Wales, the Commonwealth, South Australia and Victoria. So I'm not in a position to talk about—

**Senator ROBERTS:** Is anyone from the Murray-Darling Basin Authority who could answer that question here?

**Ms Connell:** Mr Reynolds.

**Senator ROBERTS:** Will Menindee stay as it is, a vital part of the environment?

**Mr Reynolds:** As discussed earlier, New South Wales is scoping, or rescoping, the Menindee project, now called the Better Baaka project. That anticipates changes to the Menindee infrastructure and the operating rules for it. As departmental colleagues explained earlier, we're yet to have a scope of that project brought forward by the New South Wales government. I can't give you the assurance that you've asked for because that rescope project will inevitably change arrangements at Menindee Lakes. I think the proposal for the project is to look at how things can be done differently. If the project proceeds, then I think the circumstance at Menindee will be different to what they've been in the past.

**Senator ROBERTS:** So you can't give me—

**Ms Connell:** It will continue to be subject to water resource plans and water sharing plans which will contain requirements in relation to environmental measures and environmental outcomes.

**Mr Reynolds:** Absolutely. The project in terms of its development will have to consider environmental impacts and benefits that can be achieved ultimately, but, until we see the scope of the works, I can't advise on what the changes on the Menindee arrangements would be.

**Senator ROBERTS:** Setting aside the sustainable diversion limit acquisitions currently underway, how much water is still required to complete the sustainable diversion limit acquisitions? I'd like a figure. Secondly, how much is required to complete water acquisition, the baseline diversion limits?

**Ms Connell:** We addressed some of those questions this morning. The 605 sustainable diversion limit adjustment measure program is made up of about 36 projects for which a gigalitre component was identified when those projects were conceived. The Murray-Darling Basin Authority will go through a process we refer to as reconciliation in the lead-up to 1 July 2024, and I'll let Mr Reynolds talk you through that.

**Senator ROBERTS:** Okay.

**Ms Connell:** Earlier this morning we provided an update on progress towards the 450 in terms of current entitlement holdings that are with the Commonwealth Environmental Water Holder, projects that are contracted and projects we are in discussions with states over.

**Mr Reynolds:** In terms of the sustainable diversion limit adjustment mechanism reconciliation process, the authority is required to take a decision in December 2023 as to whether or not a reconciliation is required. That decision can't be taken earlier than that, because states are able to advise notifications to modifications of projects up until that point in time. So we won't have clarity about what the package of works looks like until that point in time. If, on the basis of our understanding of the projects, their progress and the condition they're likely to be in in June 2024, the authority determines that the adjustment amount is likely to be different than what was determined in the original decision, we will undertake a reconciliation. We will assess the projects as they are notified at the end of December 2023 and make an assessment of the volume of water, or the offset that they will achieve at that point in time.

**Senator ROBERTS:** You have a document on the website of the Murray-Darling Basin Authority entitled 'Progress on Water Recovery'. Under the heading 'Summary of surface water recovery progress' it states:

- Following the amendments to the Basin Plan, the overall target for water recovery is 2,075 GL/y plus 450 GL/y of efficiency measures by 2024.

That's 2,525 in total. And then, on the third page, under the heading 'Total water recovery still required' it is just 46 gigalitres.

**Ms Connell:** We addressed those figures earlier this morning as well. The gap bridging target under the Basin Plan is 2,075 gigalitres—2,100, and I think five gigalitres have been recovered and are held by way of entitlements with the Commonwealth Environmental Water Holder. So 98 per cent of the target has been reached,

but there remain about 46 gigalitres across the basin that need to be recovered from different water resource plan areas.

**Senator ROBERTS:** The other comment Mr Reynolds has already covered, so thank you for that. Before I move on, how much water is required to complete the baseline diversion limits, the up-water?

**Ms Connell:** I guess there are three overall programs. There's the water recovery target of 2,075 gigalitres, so there's 46 gigalitres still to go there. Then there is the 450 up-water program, as it is known, which I referred to earlier in terms of what's being delivered, what's contracted and discussions we're having with states. Then the third program is the 605 sustainable diversion limit adjustment mechanism program, which Mr Reynolds was discussing in terms of the reconciliation process that happens in 2024. There are 36 projects which go to make up that program of work that South Australia, Victoria and New South Wales have to deliver, and the authority will look at that program of works at the end of next year to determine whether reconciliation needs to happen to identify whether the 605 will be met or what component of it will be met.

**Senator ROBERTS:** As I've discussed before with Mr Glyde and Mr Reynolds and also the previous water commissioner, it's a very complex issue, isn't it? The whole thing is very complex, with many variables and a lot of variation.

**Ms Connell:** There are some key, major complex areas of work. The Basin Plan is a significant water reform, and there are some complex components, as you would expect in a system, I think, where there are 20 surface water areas and about 13 groundwater systems.

**Senator ROBERTS:** Then we have a naturally variable climate. The north varies considerably, in a different way from the south. So I would raise that for the future. Turning to the south-east drains SDL acquisition, Mr Reynolds, a reminder of your answer at the last estimates:

The water from the south-east drains has been put forward by the South Australian government as an SDL adjustment mechanism project. So the water that comes from the south-east drains into the southern lagoon will be accounted for through that process.

That means it will be counted as SDL. How much water is the Murray-Darling Basin Authority counting against the remaining SDL target for the south-east drains restoration flow?

**Mr Reynolds:** As we've explained previously, the assignment of individual volumes to projects in terms of the adjustment mechanism can only be an estimate, because the whole package of projects is modelled as a whole, and they interact with one another. We have made a range of estimates against individual projects. I will see if I can get the number for that particular project. I don't think I have it in my papers here. I will have to get someone to provide that to me, but I will provide it this morning.

**Senator ROBERTS:** I would be very interested to see that number. I'm wondering if we've just found some more water.

**Mr Reynolds:** Well, the south-east drains project is part of the adjustment mechanism, so it's been accounted for.

**Senator ROBERTS:** It is my view that this is a significant unaccountable flow—it hasn't been to date—and may provide a substantial part of the remaining SDL acquisition that can both take the pressure off farmers elsewhere in the basin while restoring the amazing Coorong wetland and moderating extreme salination in Lake Albert by flushing from the south-east, not from the north-west; from the north-west is not really flushing. Have you the south-east inflows? I think the answer was 'no' in the last Senate estimates in October. Have you modelled the south-east inflows, both aquifer and surface flow? How much water is available? How much can be redirected—and this is really important—without interfering with agricultural production?

**Mr Reynolds:** We haven't modelled that directly. The South Australian government manages that part of the system. We have consulted with them about the volumes. There's not a direct estimate available of the total flow from the south-east drains, including through the groundwater systems into the Coorong. The operation of the south-east drains does provide water back to the southern lagoon in the Coorong, and that scheme has been developed and the operating rules have been developed to achieve that. There are requirements to manage the flows through the south-east drains. It is drainage from agricultural land. It does carry a nutrient load. There are particular management challenges with that water. So part of the south-east drainage scheme passes water through wetlands and the like to remove nutrient loads from that water before it enters the Coorong. If that's not done, there are undesirable ecological impacts in the Coorong itself. That limits somewhat the volume of water that comes from the south-east drains. The South Australian government is continuing to work through those issues.

**Senator ROBERTS:** As I understand it, the drains are made by humans? They're not natural and they take up a significant quantity of water, straight to the ocean.

**Mr Reynolds:** The area that's been drained naturally was a low-lying marshy area, and water tended to lie in that area. Some of it would have seeped through groundwater systems to the sea. Some of it would have made its way to the Coorong. The drains are man-made structures that have taken water from that area and dried it out and made it more productive as an agricultural area.

**Senator ROBERTS:** I've been there and seen those drains. They're definitely man-made. There is a belief that there's a significant amount of water to be recaptured and sent to the Coorong.

**Mr Reynolds:** And water is being captured through that system and does flow to the Coorong. I think from memory it's in the order of 26 gegalitres, on average. Obviously it would change with seasonal conditions. In wet years it will be more; in drier years it would be less. But it's of that order.

**Senator ROBERTS:** My understanding is there's a lot more water to be captured than that.

**Mr Reynolds:** I think the South Australian government clearly has an interest in trying to improve the health of the Coorong. They've undertaken an enormous amount of work in that region to do that. I'm sure they're examining whether or not it would be beneficial to take more water from that region if it's possible to do so, for that purpose.

**Senator ROBERTS:** So the Coorong problem has been man-made, not by the rest of the basin, but by diversion of water that used to go through the Coorong straight to the ocean? I'm not being critical, because in those days they were trying to look after their narrow scope. That's something that, to return the environment to its natural state, would require a lot of water to go back to the Coorong and keep it clean.

**Mr Reynolds:** There are obviously significant volumes of water diverted from the basin, which has reduced the volume of water that reaches the end of the system, particularly coming down the Murray. Part of the challenge is to address some of those issues. To get back to the natural balance of what happened in the Coorong before river regulation would require all of the water that's subsequently been diverted to be returned to the environment. No-one is proposing to do that. We're looking for alternative solutions and alternative balances.

**Senator ROBERTS:** Shouldn't that south-east portion be counted as part of the basin? You just said water is diverted from the basin, but it's not included in the basin yet?

**Mr Reynolds:** I'm sorry; when I said that I meant water is diverted from upstream right across the basin. Very significant volumes are diverted.

**Senator ROBERTS:** This water's going straight to the ocean, and doing damage by not going through the Coorong.

**Mr Reynolds:** I think the benefits that can be provided to the Coorong, by diverting some water from the south-east drains, are being realised through the project that's been implemented. I'm sure the South Australian government and others will continue to examine where additional benefits might be able to be accrued. Significant money from the Commonwealth government has gone to the Goyder Institute. I think \$8 million has been committed to examine options and other interventions that might be possible around the Coorong, Lower Lakes and the Murray Mouth. That could include activities within the south-east drain system, although that has been explored fairly extensively already.

**Senator ROBERTS:** It's very complex, and it's made even more complicated by the politics involved at the state and federal levels. We will end it there for now.

**CHAIR:** Senator Roberts, I'm sorry to interrupt you, but could you make this your last question? Sorry, Senator Roberts! We knew what was going on.

**Senator Ruston:** They don't look anything alike.

**CHAIR:** They don't.

**Senator ROBERTS:** I don't know who you're insulting the most. That was my last question.

**CHAIR:** Make this your last question, Senator Roberts.

**Senator ROBERTS:** Concerning Lock Zero, in the last estimates, you spoke about engineering challenges and other issues, and you said, 'Lock Zero was examined in some detail.' If salt water is used in the Lower Lakes to protect against sulphur emissions—and that would be a one-in-100-year type drought; it's an absolute last resort—then suddenly we will be wishing we'd built Lock Zero, won't we? Doesn't the Murray-Darling Basin Authority or the department have documentation on Lock Zero? Your comment 'examined in some detail' suggests such documentation exists. It seems like too significant a project not to have some formal process underway.



**Mr Reynolds:** During the millennium drought, Lock Zero was considered as to whether or not it would be an arrangement that would help protect the Lower Lakes. Part of that was looking at what flow would be required past Lock Zero to ensure that the Lower Lakes retained their ecological character. There is significant concern that if the flow of fresh water to the Lower Lakes was terminated, and if just sea water was allowed in, that would progressively concentrate through evaporation and become hypersaline, and so the Lower Lakes would not be a natural estuary.

**Senator ROBERTS:** It's not natural at the moment, with the barrage, is it?

**Mr Reynolds:** No, but the Lower Lakes naturally would have had a much larger volume of fresh water flowing to the Lower Lakes, to the end of the system. We take a lot of water out upstream for irrigation and other productive purposes, and so the natural balance of mixing of fresh and salt water at the Lower Lakes cannot be reinstated unless there's a lot more water coming down the river system. Building Lock Zero does not alleviate that issue.

**Senator ROBERTS:** We'll leave it there for now.

**CHAIR:** While we're having a break in proceedings, can I request approval from the committee that we table the news article Senator Davey spoke about? Thank you. Senator McAllister.

**Senator McALLISTER:** The Water Act, at 86AJ, requires two independent reviews into the Water for the Environment Special Account Obviously we've had the first review, and the act required that the second review be provided to the minister by 30 September 2021. Did that happen?

**Ms Connell:** As we advised the committee, I think, at the last hearing in October, there was a delay with the commencement of that review in part to ensure that the independent panel could look at the most recent and quite significant change to the program to deliver the 450—the Off-farm Efficiency Program. The report you refer to was provided by the independent panel to the minister at the end of last year.

**Senator McALLISTER:** What date was it provided?

**Ms Connell:** It was on 20 December.

**Senator McALLISTER:** Has it been tabled?

**Ms Connell:** I think further down in the provision you refer to the act requires the minister to table the report within 15 sitting days of receiving the report. So it hasn't yet been tabled.

**Senator McALLISTER:** Had the government been in compliance with their legislative obligations, as set out in the act, the minister would have had to table that report on 1 December. That's correct, isn't it? You're in breach of the legislation at this point.

**Ms Connell:** I'd have to take on notice how the 15 sitting days run from that date.

**Senator McALLISTER:** But, Minister, you're in breach of the act at the moment, are you not?

**Senator Ruston:** I don't have the act in front of me, but I do understand that there was a delay in the commencement of the WESA review. I understand that, subsequent to that, the review has been completed. In terms of the statutory requirements, I will need to have a look at the act, but I think the officials conceded the review started and was delivered late.

**Senator McALLISTER:** Had you complied with the initial obligation, which was to commence a review with sufficient time for the report to be provided to the minister on 30 September, 15 days would have elapsed a long time ago and the report would be in the public domain? That's correct?

**Senator Ruston:** I don't know how many sitting days there were last year post 30 September, but the officials have acknowledged that it was late starting and it was late being received, and the minister's requirement to table it within 15 days of receipt of that report he will obviously comply with. I'm afraid I don't have any more details in relation to the timing and the issues that related to the delay.

**Senator McALLISTER:** Your government has scheduled an extraordinarily small number of sitting days in 2022, something that's been widely remarked upon. Why can't the minister simply table the report? Why do you have to run the clock out on the 15 days, given that you are already in breach of the obligations under the act?

**Senator Ruston:** I don't agree with the inference and the statements that you've made in relation to what has been happening. The minister clearly has an obligation to provide the report within 15 days of receipt of the report. My understanding is that there is no reason why he will not comply with that and that the report will be made public after he has had the opportunity to review it. As you would know—

**Senator McALLISTER:** He's had several months at this point.

**Senator Ruston:** I don't know whether you read the last WESA report.

**Senator McALLISTER:** I did.

**Senator Ruston:** It was pretty extensive.

**Senator McALLISTER:** Unlike many members of your government, I actually often take the time to read the reports that are provided by officials.

**Senator Ruston:** As a point of clarification, how on earth, Senator McAllister, would you know how many members of the government I am a member of have read reports?

**Senator McALLISTER:** Because I so frequently ask members of your government questions about reports that have been provided to you and they can't answer basic questions about what's in them. I've drawn my own conclusions, Minister.

**Senator Ruston:** Yes, you do draw your own conclusions. You probably shouldn't put those conclusions that are a matter of your opinion on the record as some form of fact. As I said, the minister will comply. I'm absolutely sure of that. I'm happy to get his confirmation. Unfortunately I believe he's away because he's unwell. But there is no intention or attempt here to try to avoid providing this information. It is simply a process that needs to be gone through to make sure that it's absolutely thorough and that everybody who needs to have access and consider the information contained in that report is able to do so.

**Senator McALLISTER:** Minister, the act also requires that the minister, once tabling the review, ensures that the government's response to the report is tabled by the time the Treasurer presents the budget to the parliament for the 2022-23 financial year. Can we expect that the response to the report will be tabled by the time the Treasurer presents the budget?

**Senator Ruston:** The one thing I can commit to is that the minister will comply with those requirements.

**Senator McALLISTER:** He hasn't complied with section 86AJ(6). He hasn't complied with section 86AJ(7). So I'm wondering whether he's going to comply with the third obligation, which is to table a response by the time the budget is presented.

**Senator Ruston:** I think it's probably worth putting on the record who was in control of the certain actions that you're referring to.

**Senator McALLISTER:** That is a very good question. Who is in control?

**Senator Ruston:** Maybe if you let me finish and not interject you might learn something. The officials have advised why the report commenced late and hence the reason the report was delivered late. I am not quite sure what you expected the minister to do in relation to forcing an independent review to be undertaken. The minister was not in control of that process. He obviously required that he got the fulsome report and review that he needed from that particular statutory requirement to undertake that review. The minister became in control of the time lines and requirements of the act when he received the report. My understanding is that his absolute intention has always been, in everything he's done, to comply with those requirements, which is the tabling of the report within the time frame required and the necessary response within those statutory requirements.

**Senator McALLISTER:** So you'll commit here that the minister will provide the government's response to the report by the time of the 2022-23 budget?

**Senator Ruston:** That is my understanding.

**CHAIR:** We will break now.

#### **Proceedings suspended from 11:02 to 11:18**

**CHAIR:** Welcome back. Senator McAllister

**Senator McALLISTER:** Thank you very much, Chair. I understand that while I was out of the room this morning Senator Patrick asked some questions about the project list in relation to the 450 gegalitres and an undertaking was given to update that. When in the day should we expect that material to be provided?

**Ms Connell:** We'll endeavour to get that to you after lunch.

**Senator McALLISTER:** This is about the fourth time we have requested the same material at an estimates session. I'm going to put on notice that I would expect that, the next time we appear here, it is tabled as part of the opening statement. It is an ongoing source of interest for senators and the Senate and having an updated project list really should be a core part of your contribution to this meeting.

**Ms Connell:** Yes, Senator. As Dr Derham noted, one thing we can do in the future is make sure that the list, and the currency of it, is maintained on our website. So we undertake to do that as well.

**Senator McALLISTER:** That's a good idea. May I ask about the 605 giganlitres and, in particular, get an update about what is happening in relation to the Menindee Lakes. This is actually just to try to understand what the New South Wales government is doing. Is it your understanding that the Better Bakaa and Better Bidgee programs now displace the Menindee project? How do they relate to one another? Can someone explain it?

**Ms Connell:** It's a matter for New South Wales, in terms of the detail of the broader range of programs. But my understanding is that New South Wales are looking to integrate a range of initiatives that they're undertaking in the western division, and the name of that program is the Better Baaka. I think there is some information on their website around that program of work. They're trying to integrate a number of initiatives, which is probably a sensible thing to do in terms of efficiency of expenditure. They're looking at requirements for water-sharing plans, and infrastructure upgrades. They're reviewing fishways; I think they've got a native fish rehabilitation strategy that makes up a component of the program. It's a broad suite of projects.

**Senator McALLISTER:** Alright. I guess I'm trying to understand what their communication has been with you about that, because there's been so much uncertainty about these projects. I've seen the website and the list of matters that they have under each of the headings Better Bidgee and Better Baaka. Have they told you how many giganlitres this new iteration of the Menindee projects will recover?

**Ms Connell:** Senator O'Neill asked that question before the break. Yes. We are yet to receive a rescoped project, but we understand that the proposal they're looking at is less than the initial proposal in terms of water delivery. But, as part of the Better Baaka program, they're looking at whether there are additional measures or projects that can contribute to the 105-giganlitre target.

**Senator McALLISTER:** So how much short of—you may have provided this information to Senator O'Neill.

**Senator O'NEILL:** I wanted to clarify that, so this is a very good opportunity to just check that. We were talking about 106 and the reports coming from on the river that it's now going down to 30, which leaves us with 70. And then you indicated a 45-giganlitre recovery from the five projects that you outlined for me. That would still leave 45 giganlitres missing. Those are pretty crude figures, but is that basically where we are, Ms Connell?

**Ms Connell:** Until we receive a rescoped project, I'd be reluctant to make any conclusive statement about what the Menindee project is likely to achieve.

**Senator McALLISTER:** So your understanding is that it will fall short of the 106 giganlitres originally intended to be recovered from Menindee, but you don't have a quantitative assessment of by how much.

**Ms Connell:** No.

**Senator McALLISTER:** Do you have a time line for when you do expect to get such an assessment?

**Ms Connell:** Dr Derham advised the committee before the break that we're anticipating a rescoped project any time now.

**Senator McALLISTER:** On the off-farm efficiency financial support provided to Murrumbidgee Irrigation, will the 7.4 giganlitres associated with this project be recovered by the 2024 deadline?

**Ms Connell:** That's a requirement of the legislation. That project's funded from the Water for the Environment Special Account—to deliver those savings by 1 July 2024.

**Senator McALLISTER:** Yes, I know that's what the legislation requires, but so many things seem to be running behind time.

**Ms Connell:** We are currently developing the funding arrangements, the contract with New South Wales, and a key term of that contract will be the requirement to deliver the water entitlements by that date.

**Dr Derham:** Just to clarify: that will be a staged approach, so it won't be all at the end; it will be at key milestone delivery points of that project over subsequent years.

**Senator McALLISTER:** Beyond 2024?

**Dr Derham:** No. Sorry. We won't receive the full entitlement at the end of the project; we will start to receive entitlements handed over between now and the end of the delivery of that project by 2024.

**Senator McALLISTER:** It includes funding to upgrade 1,500 monitoring sites. Can you explain how upgrading monitoring sites recovers water for the environment?

**Dr Derham:** That's about making sure that we've got appropriate metering and measurements at those locations. It's about accuracy in the way that the water is accounted for, so it goes to improvements in accounting and how the water is moved through the system. At the moment, having those types of improvements to the infrastructure will ensure that there's better accounting of the water in the system and that there's a better handle on the water that's lost.

**Senator McALLISTER:** Is that consistent with the objective of applying these funds for recovering water for the environment, though? I fully accept that measurement and monitoring is an essential part of implementing the plan; I'm just interested in whether it recovers water for the environment.

**Dr Derham:** It is, because it goes to making sure the infrastructure is efficient in its operation, and that includes its accounting and measurements.

**Senator McALLISTER:** So what water recovery quantum have you attached to the 1,500 monitoring sites? How much water will we recover for the environment from upgrading monitoring?

**Dr Derham:** I can get you that number by lunch.

**Ms Connell:** I might just point out, Senator, that the requirements of the legislation are that projects are funded from the WESA. There are two principal components. You can only use WESA funding for projects which improve water efficiency of the infrastructure, and the other key component of funding a project of that nature is that, ultimately, water entitlements are provided for the Commonwealth Environmental Water Holder. There's not necessarily a requirement for the ultimate water recovery to come from specific elements; there are two broad aspects to the way projects are funded.

**Senator McALLISTER:** I see. Alright. It makes assessing value for money tricky, doesn't it, if you can bundle up almost anything into the project as long as there is some water recovery at the end?

**Ms Connell:** The program guidelines are set out on the website. They make it quite clear what the statutory requirements are and set out some additional criteria. As part of assessing a project, we look at whether those requirements are met and seek independent advice on the methodology used to arrive at the water savings.

**Senator McALLISTER:** That's very interesting, although it doesn't really respond to my question, which was about value for money when a range of different project components can be incorporated and bundled within an allocation, irrespective of the extent to which they contribute to water savings.

**Ms Connell:** The key thing is that they improve the water efficiency of the infrastructure. That's a key component of the assessment that we apply.

**Senator McALLISTER:** As part of this announcement, the minister announced \$5 million towards feasibility studies for additional off-farm efficiency projects across New South Wales. Are any other basin states receiving that funding?

**Dr Derham:** Not at this stage. The Victorian government has brought forward projects without seeking feasibility support, and we're actively assessing a couple of their proposals at the moment. And we continue to work collaboratively with South Australia. The \$5 million is going to be really beneficial to some potentially large projects coming in from New South Wales that need some additional financial support to get them into a state that would make them reasonable for assessment.

**Senator McALLISTER:** Yes. I can only imagine. What exact projects are going to be assessed as using this funding?

**Dr Derham:** I can tell you at this stage there is a piece of work going on in the West Corrugan, in New South Wales, on the Murray there. That's a large irrigation district. That's one of the sites, and New South Wales is looking at the prospectus of several other sites at this stage as well.

**Senator McALLISTER:** So the Commonwealth hasn't stipulated an application of this funding towards any particular projects? You've just provided it to the New South Wales government on the understanding that they'll do something?

**Dr Derham:** It's consistent with our update of prospective projects that has been tabled previously and that we're going to update you with at lunchtime. Those sites from New South Wales are likely to be picked up and further developed as part of that \$5 million feasibility. We can identify those for you from that list.

**Senator McALLISTER:** When you say 'likely to be', is it a condition of funding or could the New South Wales government hypothetically use it for anything that they wanted to?

**Dr Derham:** The intent of the funding is to be able to receive feasibility studies midyear, because, if we don't receive them midyear, the chances of being able to have these projects fully assessed and implemented by 30 June 2024 becomes very tight. So stipulated in that schedule that we're developing with New South Wales for that \$5 million are some really tight time frames in the prospective projects there.

**Senator McALLISTER:** Has the schedule been finalised? What is the instrument by which you've agreed this with the New South Wales government? Has it been concluded?

**Ms Connell:** We have an agreement in place with New South Wales which requires them to undertake feasibility projects in relation to five priority areas: the West Corugan Private Irrigation District, the Moira Private Irrigation District, a project in the Murrumbidgee Irrigation Area, the Jemalong Irrigation District and the Trangie cooperative area.

**Senator McALLISTER:** And the \$5 million may be used against any of those?

**Ms Connell:** The \$5 million is to undertake feasibility studies for those five areas.

**Senator McALLISTER:** For each of them?

**Ms Connell:** Yes.

**Senator McALLISTER:** Thanks very much. That was the answer I was looking for. You indicated, I think, Dr Derham, that you're expecting those feasibility studies to be completed—

**Dr Derham:** Midyear.

**Senator McALLISTER:** So by 30 June?

**Dr Derham:** Yes.

**Senator McALLISTER:** That's it for my line of questioning.

**Senator DAVEY:** I have some questions for the Commonwealth Environmental Water Holder. Mr Taylor, Toorale Station was probably the first large-scale buyback to occur, in the stages before the Basin Plan was even drafted. At the time, there were claims that about 30 gigalitres of water would be able to flow freely back into the Darling. I note that in 2019 we had quite a significant flow event on the Warrego River. Are you aware of how much water was able to flow down the lower Warrego and then into the Darling during that event?

**Mr Taylor:** I can talk about our entitlements and how they were managed during that 2019 flow. There are other unregulated flows in New South Wales water that I'm not able to comment on so accurately, but, for our water, in 2019-20 water year there was about 24,500 megalitres of Commonwealth environmental water that was used to enhance flows out of the Warrego into the Darling at that time. Then in 2020-21 there was a further 7½ thousand megalitres of water got out of there. In those two flows, the Commonwealth Environmental Water Holder chose to direct all of our flows out of the Warrego into the Darling.

**Senator DAVEY:** I understand the infrastructure on Toorale Station has not been removed; in fact, some of it has been upgraded. Who's in charge of operating that infrastructure?

**Mr Taylor:** My understanding is that the property is under the management of NSW National Parks and Wildlife. I think on a day-to-day management level they're involved with the hands-on management of the infrastructure.

**Senator DAVEY:** I believe there has been a look at the operation of the station infrastructure, particularly during 2019 because of the excessively dry condition of the Darling. You've just stated that you delivered all of your water to the Darling. I understand that some of the infrastructure on the station was closed so that, instead of flowing down the river, the water was captured within station infrastructure and within the dam. Do you have any indication of how much additional water may have flowed to the Darling if this infrastructure was not operated in such a way?

**Mr Taylor:** My understanding is that the infrastructure that was in place at the time was pretty old pipe infrastructure that's in the process of being replaced—there's a construction site on Toorale as we speak. I think the limitations on that old infrastructure, at the time, caused about five gigalitres—or 5,000 megalitres—of water to be held up on Toorale Station that otherwise may have been able to make it through to the Darling had that infrastructure been upgraded at that time.

**Senator DAVEY:** When you say it was held up—maybe let's not beat around the bush—if that farm was still operating as a productive farm instead of a national park, that would have been flood plain harvesting, would it not?

**Mr Taylor:** I guess it's a case of, at the time if it was being managed as an irrigation farm the entitlements that we held—or by that time also may have been held by the property owner—meant that water may have been extracted. It's a bit of a hypothetical how much may have been held in Toorale under those circumstances if it had still been an irrigation farm.

**Senator DAVEY:** This may be a question for the inspector-general later, but are you aware of whether national parks themselves have any water licences for that area?

**Mr Taylor:** I think the New South Wales government does have some licences associated with the Warrego. I'm not sure whether they're held by national parks or the New South Wales environmental water holder. That's a matter that probably needs to be clarified exactly with them. I can't answer on their behalf.

**Senator DAVEY:** I will ask a bit later. Changing topics now, because not all infrastructure is bad infrastructure—in fact, some infrastructure's very good—I understand that you have agreements with irrigation infrastructure operators to utilise their infrastructure to help with environmental water management and delivery. Can you give us an overview of what those agreements are? And, also, are you working with any of those infrastructure operators to identify ways to optimise the ability to achieve environmental outcomes in their footprints?

**Mr Taylor:** There are a few different places where we have arrangements in place with irrigation corporations to deliver environmental water using their infrastructure. In some of those cases we've actually invested additional funds to enhance that delivery of environmental water using their infrastructure. In the Renmark area in South Australia, for example, we've extended mains at the end of the irrigation pipelines and put meters and things on so that we can deliver waters directly onto flood plains there. That provides the benefit of revenue through the irrigation corp's books. We pay our fees and charges for delivery, but it's also an efficient way for us to get water onto a flood plain that we couldn't otherwise get water onto without a high river.

Similarly, in the mid-Murray area, Murray Irrigation Ltd's footprint, we're working with them to deliver water through their infrastructure. This is in a few different ways. There have been escapes upgraded so that water can be taken out of the irrigation canals and channels and put either into flowing streams or ephemeral streams. In the case of the flowing streams, we've been putting water in there this summer, for example, to mitigate the impacts of low oxygen blackwater and providing refuge for fish. In some of the ephemeral streams, we're able to deliver water out of the high irrigation infrastructure onto parts of the flood plain that we couldn't otherwise get water to. That's a fantastic outcome, and, for example, in the Murrumbidgee, we're delivering water out of Murrumbidgee Irrigation's infrastructure into Ramsar wetlands in the Leeton area. It's something that we're working with irrigation corporations on, and we're looking for further opportunities to do that sort of thing.

**Senator DAVEY:** When you work with these irrigation corporations and agree to do upgrades or work with them on infrastructure, this is not new money coming from the government. This is money that you have due to changes in the Water Act that said how you had to treat money from water trades. Is that correct?

**Mr Taylor:** There's a combination of opportunities for us to invest in this. Under the original conditions of the special account, there is some scope for us to invest in activities that enhance the delivery of environmental water or support in the deliverability of environmental water. In addition to that, there was, I think, a 2015 or 2016 amendment to the part of the act surrounding trade of water. Prior to that, the revenue from any water that we sold temporarily on the market could only be used to buy water, but, subsequent to that, that revenue can now also be used for this sort of infrastructure upgrade or other outcomes that enhance the delivery of environmental water.

**Senator DAVEY:** Can you provide a breakdown of the expenditure you've made on these infrastructure upgrades across irrigation corporations?

**Mr Taylor:** I'll take that on notice, but I'm happy to provide that.

**Senator DAVEY:** That would be good. Lastly, can you explain the outcomes that are being achieved? I believe for Renmark to get water from the river onto the wetlands is quite a significant lift and you would need a very significant river flow event. What are you achieving by using the infrastructure instead?

**Mr Taylor:** With the way the landscape is around the Renmark area, the irrigation tends to be on slightly higher ground, and between that higher ground and back to the river there are flood plain areas. We're able to take the water to the end of the irrigation infrastructure, to the end of their pipes and mains, and extend those pipes out—I guess it's downhill—onto those flood plain areas. Around Renmark, we have a few areas where we're able to get water into a wetland lagoon area that was in a very degraded state and we're seeing good revegetation occurring around the outskirts of that. We've got another outlet that's putting water into a red gum area adjacent to the edge of the town and part of the town common where people use this area. Red gum is like chalk and cheese on the side where the water's being delivered, compared to the dry side where we can't get water to. Out on another area, which has been quite a flat, dry, ephemeral wetland, we're able to get water in there. We've had swans and other waterbirds breeding on that, and a great response from wetland vegetation on those sites as well.

In the mid-Murray area, I think one of the most spectacular outcomes we've achieved has been providing refuge for fish during periods of low oxygen blackwater. Fish can congregate around the good water coming out of the irrigation system and give them a haven when low water quality ensues. In some of the creeks adjacent to

the irrigation areas, we're seeing vegetation and other things recovering in those creeks that have been high and dry on the flood plain for a long time.

**Senator DAVEY:** How do you find working with the communities? Are communities nervous about the Environmental Water Holder coming in, particularly in irrigation areas like the mid-Murray where they're largely broadacre farmers, or do they welcome working with you? Do they see the results as a benefit or a concern?

**Mr Taylor:** It's been a fascinating journey and it's interesting how the landowners who were early adopters and have been involved are starting to see their neighbours look over the fence and say, 'How can we get a bit of this?' We're seeing areas like Lake Agnes and down in the Jimaringle and Cockran Creek area, downstream or west of Deniliquin, where people are really starting to embrace this and inquire directly to us or through local engagement officers or through New South Wales Environmental Water Holders and saying, 'How can we get involved in this?' It's a great outcome. We're seeing local employment in the infrastructure upgrades, we're seeing water delivered into a local environment from where that water was recovered and we're seeing revenue go back through those irrigation corps, bringing revenue back in for water that had otherwise been recovered out of those systems.

**Senator PATRICK:** I'll go to the 605 gegalitres. I want to do a bit of a top-level muster as to which supply and constraint projects have got to the point of a determination and are underway and those that have delivered. How many SDL projects are there?

**Ms Connell:** Thirty-six.

**Senator PATRICK:** And five constraints, is that right?

**Ms Connell:** The 36 includes the five constraints.

**Senator PATRICK:** How many of those 36 have been completed?

**Ms Connell:** I will ask Dr Derham to come back.

**Senator PATRICK:** I'd like to know the number of the SDL projects that have been completed and I wonder how much water can be attributed to the completed projects.

**Dr Derham:** Of the 36 projects, 15 are regarded to have been completed. They are estimated to contribute about 46 per cent or, in gegalitres, 280 gegalitres of the 605 gegalitres.

**Senator PATRICK:** How have you verified the amount? You obviously go into the project with a certain amount in mind and you come out the other side.

**Dr Derham:** It's an estimate, and we work closely with our colleagues at the Murray-Darling Basin Authority. They've published on their website a document that attempts to attribute the volumetric contribution, as Mr Reynolds outlined before. It's very difficult to say an individual project is worth this. It's a package. The projects interact with each other.

**Senator PATRICK:** I understand that too, yes.

**Dr Derham:** It's an estimate based on advice from the Murray-Darling Basin Authority.

**Senator PATRICK:** What of the other 21 projects? You have 15 that have been completed, giving us 280 gegalitres. That leaves 21.

**Dr Derham:** We believe of the 36—of the 21, six are at risk. We're working to ensure that they can be delivered on time. That's the Menindee Lakes rescope project and the constraints projects. If we park those to the side for the moment, we—

**Senator PATRICK:** How much were those six projects worth, originally?

**Dr Derham:** The constraints and—

**Senator PATRICK:** There are 106 and—

**Dr Derham:** Yes. It's difficult to ascertain exactly, but our estimate is that there's about 160 gegalitres at risk amongst the collective package, there, of those.

**Senator PATRICK:** That's a further six. That leaves 15.

**Dr Derham:** The other 15 projects, we believe, will be delivered on time. I guess it's the balance of the math that you're doing there, so 605 less 160, less the 280.

**Senator PATRICK:** So the at-risk projects—what's the time frame? We're hearing 2026 being floated by some jurisdictions. What's the MDBA's view on this?

**Dr Derham:** The Commonwealth's position—the MDBA and the Commonwealth department—is that we are working to deliver by 30 June 2024. That's the time frame. At the ministerial council's strategic discussion on this last April, all of the basin ministers still agreed with and supported that time frame.

**Senator PATRICK:** If we don't hit the target by 2024, my understanding is that then can initiate buybacks under the current legislation.

**Dr Derham:** The first step would be the reconciliation—to know exactly what shortfall, if there were a shortfall, we were dealing with and the quantum of that. As part of that reconciliation, we'd also get a much better understanding of the environmental outcomes that had been achieved with the package. That evidence and information will need to be taken into consideration, and then what is done if there is a shortfall obviously will be a matter for the government of the day.

**Senator PATRICK:** So there's nothing in legislation that then mandates a particular pathway to ensure you get to the 2,075?

**Dr Derham:** No, there is nothing mandated, other than the fact that we have a sustainable diversion limit and there will be a recovery gap. So there's an obligation to bridge that gap, but how is up to the government of the day.

**Senator PATRICK:** I was of the view that 450 is very risky and there doesn't seem to be any remedy—there's no stick—with the 450. But you're actually saying that there's no stick for the 605?

**Ms Connell:** There would be a requirement for states to look at their SDLs. They may be required to adjust existing entitlements to deal with any shortfall in the 605.

**Senator PATRICK:** So we've got this legislated time frame but nothing really that happens after it. We do the reconciliation, and then it's a matter for government? It just seems—

**Dr Derham:** No. I think the difference between the 605 and the 450 is, as Ms Connell outlined, that the 605 has already been legislatively adjusted. It's already changed the sustainable diversion limits for the individual SDL resource units in the basin. The basin governments must be able to comply with those sustainable diversion limits, so if there's a reconciliation and the SDLs are changed further they must comply with those SDLs.

**Ms Connell:** And there's an intermediate step. If there is a shortfall, the authority has the option of providing a Basin Plan amendment to the government of the day.

**Senator PATRICK:** Could you say that last sentence again.

**Ms Connell:** I might get Mr Reynolds to speak to the process, given it's a process that the authority is responsible for. Following reconciliation, if the reconciliation process determines that there will be a shortfall and the 605 won't be met, there is provision in the act for the authority to provide a proposed amended plan to the government of the day.

**Senator PATRICK:** But let's say Clive Palmer is the Prime Minister. I use that as an example of someone that's completely unknown and wants to be the Prime Minister, who ends up being the Prime Minister and there's nothing—

**Senator Ruston:** He is reasonably well known—maybe not for the right reasons, but definitely well-known!

**Senator PATRICK:** But you see what I'm saying. I'm suspecting that the coalition and/or the Labor Party would in some sense honour the commitment to meet the plan, but what you're saying is they're not bound to.

**Mr Goodes:** That's largely correct. The authority is bound to propose a Basin Plan amendment in the event of the reconciliation showing a difference from the 605 that was originally modelled. The amendment proposed would be a pathway to adjusting the SDLs, in whatever way necessary, and then it would be a decision for government as to whether that amendment were made. Then, if it is made, it's subject to parliamentary consideration.

**Senator PATRICK:** I must admit I didn't appreciate that. I'm not sure if other senators did either. I might just very briefly go to the west of the Barmah Choke and how we're dealing with the issue of excessive take. We've talked about this before, moratoriums and so forth. Is there a settled plan now or an agreement?

**Mr Reynolds:** We're still working with the three states—Victoria, New South Wales and South Australia—on management arrangements. Victoria has limited further developments or further approvals for diversions. The other states have not taken similar action at this point. We've been working through management arrangements should we get to a shortfall situation. We have a management plan to identify the emerging circumstance to make sure that state agencies are aware of that. We've trialled that plan. We've also produced a revision to it to incorporate the circumstance where Menindee Lakes have water available to the Murray system, which is the



circumstance that's going to present this year. Although, given the wet conditions and flows, a shortfall this year would seem to be very low risk. We continue to work through that as part of the management of the Murray. Ministerial council has said that it is one of their high priority activities.

**Senator PATRICK:** I don't mean to interrupt you; it's just to keep my train of thought. This might be a good year, but my understanding is that the plantations are permanent crops, so looking at it from a short term doesn't really work. I'll throw that back at you.

**Mr Reynolds:** I recognise that. We're still working with the states on their options for how they manage that, whether it is around moratoriums on developments or not. The issue about this year is that there is some time for them to consider those arrangements.

**Senator PATRICK:** Sure. I understand you're saying that you need a long-term solution, and that might buy you time this year. How much water will make it into the Murray from the Darling this year? I think you said that, on average, it's 14 per cent.

**Mr Reynolds:** Yes. It would be a very large volume, at least a couple of thousand gigalitres I would think, given the lakes are full and there's still water through the system. That will happen over several months.

**Senator PATRICK:** I don't know where the litigation is up to in relation to the release of water from the Menindee Lakes. Where is that up to? Are we expecting a repeat of that, or is that off the table?

**Mr Reynolds:** In the coming season, it's very unlikely that we will call on any significant volume of water from the Menindee Lakes, given the volumes that are in store flows through the river and the fact that the lower Darling is spilling to the Murray and will do so for probably a couple more months at least. At this stage, all of our planning would indicate that we wouldn't be calling any significant volume from the Menindee Lakes for the current irrigation season. In subsequent years, of course, as demands emerge, it will be prudent to use water from Menindee at some point. Exactly when those circumstances arrive will depend on future weather conditions.

**Senator PATRICK:** And the court case?

**Mr Reynolds:** The litigation is still afoot. We've been working through the discovery process and preparation of expert testimony.

**Senator PATRICK:** Is a date set for a substantive hearing?

**Mr Reynolds:** I might ask our chief legal officer, who will be across the timing. But I don't think the date has been set at this point in time.

**Senator PATRICK:** I want to go to something I was just looking at in relation to Clyde, the property. Those listening might remember that that was one of the properties that was the subject of the 'watergate' scandal during the last election.

**Senator O'NEILL:** An expensive water site.

**Senator PATRICK:** Expensive, and we dealt with it here. There's no question that the price paid exceeded the valuation. What is the Narran Lakes water reimbursement project?

**Mr Taylor:** Can you repeat the question?

**Senator PATRICK:** The Narran Lakes water reimbursement project—there's a grant out. I understand that you paid \$2 million worth of water for them to not take water for a period of time. What's this new grant about?

**Mr Taylor:** This will be the third time that the Commonwealth Environmental Water Holder has attempted a grant operation in that Narran river system to enhance the water flows down into the Ramsar area of the Narran Lakes. The first time we did it we paid and the grant was taken up by some irrigators along that river section there and that allowed water to pass that they forewent the take on. The second time we offered a price they chose not to take it. This time we're just in the decision-making phase of whether or not we will actually activate that grant. The trigger for activation of a grant will be the water levels in the lakes. There's bird breeding occurring in the lakes there as we speak. It's been a fantastic recovery story. But the water levels are dropping and—

**Senator PATRICK:** Just on that, can you please provide a history of the number of birds over the last 10 years? My understanding is it's substantially down from a decade ago, even though it might be better.

**Mr Taylor:** I don't think there's been any bird breeding in the Narran over the last 10 years. It has been almost dry for a large chunk of that last 10 years. It has been in a really sad state. That's why we've invested—

**Senator PATRICK:** Can you, on notice, present a picture of the data you've got about that?

**Mr Taylor:** Yes.

**Senator PATRICK:** It might go back two decades. I don't know. Isn't it the case that whilst there's a grant opportunity, really the only property that can apply for the grant is Clyde? Is that correct?

**Mr Taylor:** No, that's not correct. They're the ones that have exercised the option. There are other properties along that section of the river. This time it would be a slightly different option if we choose to activate it. If the water levels drop we would then have water return to the river from storage. It would be a temporary—

**Senator PATRICK:** In some sense there is an irony in this because I recall when that property was offered up first up. They offered to give the Commonwealth the dams and the Commonwealth didn't take it. So you've not taken the dams. Now they're filling them up and selling the water back to the Commonwealth.

**Mr Taylor:** The critical part in this is the temporal aspect. We could have that huge capital asset, all that value, sitting on our books year in year out when we only need it in certain critical times. We're not even certain we will activate that grant this year. When we do activate the grant it will be for a very specific, very targeted, very high value [inaudible] outcome.

**Senator PATRICK:** Sure. If you had taken up Eastern Agriculture's offer in the first place where they said you can have the dam, they wouldn't be taking and storing water on the property. It seems to me we paid over tote odds for the overland flow on that property. We didn't take the dam. And now we're paying again for water from the same property if indeed we go to Clyde—

**Mr Taylor:** I think it's critical to understand that we're not paying again. This is additional water when we need it. It's not paying for water again.

**Senator PATRICK:** I know it's not for the overland flow. I appreciate that. But there had been an opportunity to actually take the dam. I know the Commonwealth's position was: 'We don't buy infrastructure,' but we now find ourselves in a position where had we taken that dam and removed it, for example, got rid of it, there wouldn't be a grant that could be taken up by the property owners.

**Mr Taylor:** I think that's a hypothetical—

**Senator PATRICK:** It's not a hypothetical, because this is what happened in the past.

**Ms Connell:** I don't think that's correct, but I will take the answer on notice and refer to the evidence we provided to this committee before.

**Senator PATRICK:** You can see where I'm coming from, that's all. I might come back to that when I get the call next. Thank you.

**CHAIR:** Thank you, Senator Patrick. Senator Grogan.

**Senator GROGAN:** I would like to talk about basin river models. In the budget there was an announcement, 'to modernise and integrate basin river modelling to provide more timely and accurate information about water availability'. Since then, \$66 million has been applied to that project. Can you just talk me through where that process is up to and what will actually form the substance of that?

**Mr Manning:** The project is at the very beginning of the process, obviously. We're working through what I would call a project initiation phase at the moment. The project's closely related to work with the basin states, so we're heavily engaged in conversations with them in relation to the project, the work that we will do, the models and the nature of the uplift that needs to be done under that project. That's, broadly speaking, where we're up to at the current point in time.

**Senator GROGAN:** Do you have a scope of work to be done here? It's very broad: 'We're going to provide more timely and accurate information about water availability.' Great. Everyone's keen on that. I think that, from the history we've seen in the last couple of years, everyone knows this is a really good thing to do. But what's the scope of that? What is that going to look like? How far have you got with the planning and what's included?

**Mr Manning:** Absolutely. I will start at the broad level. There are 24 different basin river models across the whole system at the moment. The broad situation is that they exist at a range of different levels of maturity. They run off different systems. Victoria use a REALM program, and New South Wales and Queensland use one called IQQM. So there's a range, and they all have been built within their individual river valleys for different purposes. They are fit for purpose for those, but that's the current status.

This project, in the first instance, is about lifting all of those up onto a common modelling platform. That will be the source modelling platform that we hope to use for that. In that process of lifting them up, we will also give them a common and uplifted capability to run different scenario analysis of downstream event impacts. So there will be common capabilities across that range of things. That would be the first part of the scope of the project.

The second part of it is to give it a basin-wide capacity to run in an integrated fashion, so we also need to build a framework whereby each of those 24 different river models can be stitched in so that we can run basin-wide analysis in a much more timely and efficient manner. So, at a high level, that's the nature of the actual work that will go on.

**Senator GROGAN:** That's good. You talk about lifting it up to a source-level platform. Have you selected that platform or is it going to be built specifically?

**Mr Manning:** No, the source is the program, the river modelling framework. It's been around for quite some time, developed by a company called eWater. So it exists, but it's a case of transferring some of those older systems into the new one and then, as I say, putting them together.

**Senator GROGAN:** But the system has been built? The technology is there?

**Mr Manning:** The technology's there, but, if you've got something in one of the current state models, there's a lot of work to transfer it from that into the new source system as well as to give it the additional—

**Senator GROGAN:** Yes, because my understanding is that it needs a bit of work—yes?

**Mr Manning:** It needs a lot of work, yes. There's a lot of work to be done. It's a big project.

**Senator GROGAN:** Is there any financial contribution from the states?

**Mr Manning:** Not a financial contribution at this stage. We have been working through—

**Senator GROGAN:** Cooperation, maybe?

**Mr Manning:** Yes, absolutely—cooperation, yes. We've held four program initiation workshops with them, and those have been sitting down and talking about in-kind contributions, their data and intellectual property, and establishing the governance arrangements. They're at the table. They're very cooperative with what we're doing.

**Ms Connell:** We'll make significant in-kind contributions to the program over the next three to four years.

**Senator GROGAN:** Yes. I suppose that, in terms of actually translating their systems, they would need to have some level of—

**Ms Connell:** And the existing source models have already been built. The MDBA will draw on that existing intellectual property, and some of those models have taken two to three years to build.

**Senator GROGAN:** The delivery time frame is July 2024?

**Mr Manning:** It's a four-year project to achieve the uplift that we're looking for. That's right.

**Senator GROGAN:** Do you have a project management time line for what you anticipate or what you believe you need to get done to actually achieve that date?

**Mr Manning:** Yes, we do. It's been broken down into a series of phases. The first phase will focus on the Murray River system, and the second will progressively move north, in essence bringing it in. We anticipate getting the Murray elements of it done first, over the first couple of years, and enhancing our modelling capacity in that region. Then the subsequent phase will focus on the northern basin and bringing that into scope as well.

**Senator GROGAN:** Will they come online as it goes, or will you have a total cutover date?

**Mr Manning:** I believe they will come online as we go, progressively. As you work through it model by model, you'll have access to that. I might need to check the details with the modelling guys.

**Senator GROGAN:** Can you, please? It would be really useful to know. Obviously it is easier on the system if you do it progressively, but there may well be challenges to doing that.

**Mr Manning:** I'm quite sure it is model by model, because there's always work going on to update these things. And as they get their new capability we take advantage of that. But I'll double-check, to be sure.

**Senator GROGAN:** Yes, and perhaps you could provide us with that time line. I'd be really interested to see how that's going to play out. And obviously there are always challenges with technology, but, in your risk assessment, what do you see as being the key challenges?

**Mr Manning:** Well, I think there are lots of challenges in a big project of this nature. It goes to everything from our procurement and putting in place the hardware and establishing the data and the IP sharing arrangements. We're still unpacking with the states, model by model, the nature of the things that we all have to do in some detail. That could potentially lead to delays in some. So, I guess in that sense there's the standard kinds of risks that you would expect us to work through with these projects.

**Senator GROGAN:** Also—and this may not be a fair question, but I'll ask it anyway—do the states see it as a positive project? I certainly do, and I know lots of other people do. But obviously one of the challenges in all things Murray-Darling is the commitment of all the parties, because there are a number of parties at play. We've

seen a lot of problems with data on water going through the system over the last number of years, and potentially this project has the ability to overcome a lot of those issues, which would provide a great deal more faith. But I'm in two minds about whether the states are saying, 'Yay, this is a great idea!' so that we can get there and people will stop bagging us out for flogging the water or whether they're a bit nervous about it.

**Ms Connell:** The Basin Officials Committee—the committee that oversees the Murray-Darling Basin projects—gets updates on these projects and proposals, and I can say that there's a strong level of support across the states and the ACT, working together to build this capability.

**Mr Manning:** I think that's right, and it is reflected through the conversations we've been having at a more technical level. The kinds of issues they're raising with us—if there's any area of concern, it's around the control of the model, getting the arrangements correct for that. We're working with their model, so obviously they've got an interest in how that's going to be used going forward. The high level of commitment is absolutely there. The questions have been asked in that kind of a space from the states as to how this is going to operate once the whole thing's in place.

**Ms Connell:** The practical realities.

**Mr Manning:** Yes, the practical realities—or IP: 'Who owns that?' and 'What are you going to do with that?' But those issues are very manageable, I would argue. It's part of the project to work through those. But the high-level commitment is there.

**Ms Connell:** And a key component of this project is working with the states to encourage them to make their models available online, so third-party users—academics, stakeholders, water brokers—can essentially take a version of the model out of a common platform, play around with it and stick back an improved arrangement. So, it's a pretty exciting set of arrangements that we're looking at going forward.

**Senator GROGAN:** Who's project managing it? Would it be you, Mr Manning?

**Mr Manning:** It sits within my portfolio within the authority, but we have a dedicated project manager, full time, as you would expect for something like this.

**Senator GROGAN:** Thank you.

**Senator MIRABELLA:** In my part of the world it's fair to say that there's a lot of interest in the alleged missing flows from large rain events in the northern basin. And correct me if I'm on the wrong track here. On the issue of modelling, has thought ever been given to doing some serious remote sensing and modelling of large rain events, the overland flows and how much and where all that water goes?

**Ms Connell:** I might answer that question, Senator. In the north of the basin, states are responsible for models, so they'll generally have a planning and operational model, and they also are responsible for managing first flush and managing environmental flows, and you can find information on recent events. I think the New South Wales portal is called WaterInsights, and there's an equivalent Queensland portal, and we can certainly provide you with details about those data sources.

**Senator MIRABELLA:** But I'm asking about modern remote-sensing space based sensors.

**Ms Connell:** Sorry, I should have actually noted that the Commonwealth is funding a range of remote-sensing hydrometric projects to basically improve the ability to monitor flows, and I think the MDBA is overseeing those projects as well, so I'll ask Mr Reynolds to walk you through what those projects involve and the stage that they're at.

**Mr Reynolds:** The Commonwealth has funded a project called the Hydrometric Networks and Remote Sensing Funding Program, which goes exactly to the activities you're talking about across the northern basin. It's focused on upgrading the hydrometric network to give us better measurement across the basin, so in both high and low flows we'll have better information. It's also going to look at the remote-sensing technology we might be able to use to measure flows and monitor them as they move through the landscape. That project is a \$35 million project. It's well progressed. We've been working with states around, once again, data-sharing arrangements to make sure that the data that is captured can be used by all of the parties that need it. There are two elements to it. One is making sure that we have a robust compliance framework and providing the data and information that's required for compliance. Then there's also a second component, which is around capturing information for other monitoring and evaluation purposes around outcomes in the basin and the like.

**Senator MIRABELLA:** But is it the case that at the moment all that sensing is ground based?

**Mr Reynolds:** We've done some work to improve our remote-sensing capability, and we've certainly developed some tools using satellite imagery. This project, though, is about extending that remote-sensing

capability to be able to use things like satellite imagery, aerial photography and the like to capture a better dataset for those purposes.

**Ms Connell:** And states are currently using a lot of satellite imagery. I understand the expression of the New South Wales compliance agency, the Natural Resources Access Regulator, is: 'We've got eyes in the sky.' They use that kind of information to do spot checks of compliance, in terms of take of water and also illegal, or possibly illegal, works construction.

**Senator MIRABELLA:** Does remote sensing have the ability to do multispectral sensing to actually measure water, as opposed to straight-out photographic interpretation, and is that occurring?

**Mr Reynolds:** Yes. We're certainly looking at those capabilities and—

**Senator MIRABELLA:** We don't have it currently?

**Mr Reynolds:** We have some limited capacity to analyse that sort of information, and that's certainly stuff that we are working on now to improve our capability in that area.

**CHAIR:** Mr Reynolds, you might have to talk to the Space Agency, who we had last night. They were talking about exactly that: water measurement from space. I'm sure you are speaking to them anyway. I'm sorry to interrupt, Senator Mirabella.

**Senator MIRABELLA:** That's okay, I'm finished.

**CHAIR:** Senator Roberts.

**Senator ROBERTS:** Mr Reynolds, as a senator for Queensland, I have to cover many issues and, although I've travelled the entire Murray-Darling Basin, have overflowed it and crisscrossed it many times, in listening to people I just can't keep all the acronyms and numbers at hand. I just can't keep them in my head. Fortunately, we have many farmers who watch these Senate estimates sessions in particular and they let me know when I've missed the details, and they're excellent auditors. They know, from being on the ground, when I'm getting nonanswers. They tell me, and they're blunt auditors. It seems to me that the Murray-Darling Basin Authority is now avoiding the numbers for both acquisition and total targets. The Murray-Darling Basin—and Senator Patrick knows this—is all about numbers. The plan has reduced farmers' businesses, rural communities and Australia's agricultural capacity to a set of water numbers, supposedly, for the environment. Getting those numbers is like pulling teeth, and I welcome Senator Patrick's partial success on the 605 earlier. For the rural community watching this at home to get a hint for the future, I'd like to ask again. I'm asking for three simple numbers. How much water has the government acquired so far under the Murray-Darling Basin Plan? How much is under acquisition? How much will the shortfall be against the plan in the absence of further projects, and where do you intend to get that water from? The third question was two combined.

**Senator DAVEY:** Senator Roberts, do you mind if I throw one in as well to complement yours? From the Commonwealth Environmental Water Holder, how much actual wet stuff allocation do you have this year? There's the difference between the entitlements you have, but this year the allocations may be over the 2,750 gegalitre rule. Who knows?

**Senator PATRICK:** And the costs associated with each of those [inaudible] too.

**Senator DAVEY:** We want to know everything!

**Senator ROBERTS:** We do.

**Ms Connell:** I've lost track of the question! I'll just provide the headline numbers, and then I'll ask Mr Taylor to come to the table and talk to what he has available in this water year. In terms of surface water recovery, as I said before the break, 2,106 gegalitres of surface water has been recovered and is now held in entitlements by the Commonwealth Environmental Water Holder. In relation to groundwater, 35.3 gegalitres has been recovered. In relation to the 450, two gegalitres in entitlements have been returned to the Commonwealth Environmental Water Holder. We have another 16.4 under contract, and we are discussing arrangements in relation to about another 10 to 15 gegalitres with the states. In relation to the 605 gegalitres, the concept of that program of works is to—in lieu of 605 gegalitres being recovered from the consumptive irrigation pool, there are a suite of 36 projects which deliver environmental benefits in lieu of that. The framework under the Basin Plan requires the Murray-Darling Basin Authority to have a look at the end of next year at the progress of those environmental projects and the extent to which they will contribute, from an environmental measure, towards the 605. It is quite a complex concept.

**Senator ROBERTS:** It's very complex.

**Ms Connell:** Yes. I do appreciate that. In terms of the current holdings that the Commonwealth Environmental Water Holder has to utilise this year, I'll pass to Mr Taylor.

**Mr Taylor:** This year, we have new allocations, up to 31 December, of 2,054 gigalitres. Up to the end of that same six-month period we have used 1,038. So we've used about half our water for this year at halfway through the year.

**Senator DAVEY:** How much did you carry over from the previous year?

**Mr Taylor:** The previous year's carryover was 738 gigalitres.

**Senator DAVEY:** That would have made available this year 2,7—

**Mr Taylor:** 85.

**Senator DAVEY:** Thank you.

**Ms Connell:** I will just note that the department does have a webpage that sets out these water recovery targets, so we'd be happy to provide you with that information.

**Senator ROBERTS:** We will come asking if we need more. Minister, the South Australian water storage is outside of South Australia—

**Senator Ruston:** Yes, for geological reasons.

**Senator ROBERTS:** We're not complaining about that. South Australia's a valid part of the plan. This is a national plan that includes—

**Senator Ruston:** Thank you very much, Senator Roberts. We're very delighted that you would think that.

**Senator ROBERTS:** While we're concerned about wasting our water, we're not concerned about supplying South Australia and Adelaide, in particular, with water—

**Senator PATRICK:** It's not Queensland's water [inaudible].

**Senator ROBERTS:** Well, we can argue that—

**Senator PATRICK:** It's national water.

**CHAIR:** Let's not get into that.

**Senator ROBERTS:** I'm not interested in getting into that. I'm just saying that South Australia has a right to that water. It's longstanding.

**Senator Ruston:** Everybody in the Murray-Darling Basin has a right. We can go into a discussion about 'riparian right' and the like but the plan outlines that this is a shared resource that has to be maximised to the benefit of all people in Australia.

**Senator ROBERTS:** We want to protect the South Australians but we also want to protect the environment and we want to protect all the other stakeholders. It gets messy. It's had a long history; some argue it is ingrained in our federation. South Australian water storage is outside South Australia, at Dartmouth, which South Australia partly funded, Lake Victoria and Menindee Lakes. Menindee Lakes has held water eight years out of 10. Even though government raised the natural banks a little to create a larger storage, Menindee has been a natural wetland since before Western settlement. Menindee stored South Australian water and local—

**Senator Ruston:** They're ephemeral, aren't they?

**Senator ROBERTS:** You could argue that, but they have stored water eight years out of 10. Menindee stores South Australian water and local irrigation water. While that water is there it sustains the amazing wetland around Menindee. And that has developed to counter natural climate variability. In Australia, the climate is more variable than in probably any other continent. But we wonder why a frog near a coalmine is an environmental matter of national significance yet 47,000 hectares of wetland is not. With 220,000 bird movements a year, it is a national treasure. And now the testimony in this place is that the state and federal governments are going to murder Menindee. The Murray-Darling Basin is murdering an environmental treasure to come up with water to meet environmental targets. That just doesn't make sense to me.

**Senator Ruston:** I don't think there would be anybody else in the room who would agree with your term 'murder Menindee'. That is a highly emotive way of describing how, collectively, everybody is trying to work together to engineer a solution to ensure the long-term sustainability of the river system whilst dealing with the social and economic implications of water recovery and the like that minimises any detrimental impacts. The sole purpose of the plan was to protect the amazing riverine environment, so I cannot accept your terminology around what's happening at Menindee. At the moment, we do not have the submission back from the New South Wales government in relation to the proposal for activities at Menindee. Until we can actually see that, I don't know that anyone could be making the kind of assessment you're making. I acknowledge that you accept that the plan is for all Australians, particularly all those who live in the basin, but you are picking on one particular component of it

and suggesting that it is environmental vandalism when at this stage we don't really have any clarity around what is going on there. We need to be really careful that we don't compare what happened prior to the development of the river system and what is happening now. There has been so much intervention along the river—through dams, locks, weirs and all sorts of infrastructure, including the urban build-up in towns—that it's almost impossible for us to do anything apart from assess what's before us at the moment. I would counsel against talking about what Menindee Lakes used to be like and what the Lower Lakes used to be like because so much has changed in the years since irrigation has occurred along the river. So we need to manage what is before us now.

**Senator ROBERTS:** I accept that. At the same time, a fundamental target for the Murray-Darling Basin Plan has been to restore the Coorong, and that cannot be restored while we're avoiding the science. But let's move on to something else—

**Senator Ruston:** It's really about the words that you use. We seek for the Coorong to be healthy. Does that restore it under the true definition of the word 'restore'? I would suggest that that is very difficult. I mean, the barrages are there. They weren't there.

**Senator ROBERTS:** The barrages are there. The drains are there.

**Senator Ruston:** Yes. When we talk about 'restoring', what we want to see is a healthy Coorong, a healthy Murray-Darling Basin system. We want to see environmental assets protected. But we also want to protect the river communities because they are such an important part of the economy of Australia and all the people who are supported by it. I think we need to be careful of the words we use because we don't want to give the impression that somehow we're going to turn the river system back to exactly what it looked like before there was any intervention. What we're seeking to do is make sure the environmental outcomes are good.

**Senator ROBERTS:** One thing that is very frustrating in the parliament is that so few decisions are made on data and science. They're made on emotions, whims and looking after vested interests. You said everyone wants to protect the environment. I'll get onto more of that in other questions. Minister, I have trust for you, so I'm not having a go at you. I'm having a go at several governments in the past and possibly this government. I don't have much faith in the Murray-Darling Basin Plan because it's not based on data. We don't measure much of the river system, yet we're allocating water. An ABC report was entitled 'Basin states agree to support ACCC Murray-Darling Basin water market reforms to regulate brokers and market behaviour'. Last year when I moved an amendment to force the water trading register into life, which is a requirement of the Water Act 2007—the one that the Murray-Darling Basin has been required to produce since then—the Liberals, Nationals and Labor voted against it. I was told there was no need for a water trading register. It's just speculation. There is no profiteering and no need for a register of water trading. What changed so that the states are now taking action?

**Senator Ruston:** I'm not sure that I agree with the fact that the Liberal Party, the National Party and the Labor Party last year thought there was no need for—

**Senator ROBERTS:** They voted against the amendment to bring in the water register.

**Senator Ruston:** Yes, but there were a number of other complex technicalities around what was being proposed at the time, so I don't think you can naturally jump to the conclusion that the government or the opposition didn't believe that water regulation could potentially improve the operation of the river systems and improve the operation of how water traded. I think possibly it was that the mechanism by which you were proposing to do it was not something that we were necessarily agreeing to. But I'm happy to take that on notice and get you some more information because I have to say I can't remember exactly.

**Senator O'NEILL:** Senator Ruston, just before you continue. Is there any chance that the document Senator Roberts was referring to could be tabled?

**Senator Ruston:** That's just a media story, isn't it, Senator?

**Senator ROBERTS:** Yes, this is a media story from the ABC. They're talking about a mandatory code of conduct.

**CHAIR:** Senator Roberts, would you like to have that tabled so others can refer to it?

**Senator ROBERTS:** Yes.

**CHAIR:** Thank you.

**Senator ROBERTS:** It just seems like this code of conduct is a way to smokescreen their reluctance to have a water trading register. It's a way of avoiding the issue.

**Senator Ruston:** I might speak with the secretary. In terms of the ACCC review and implementation I wonder if you could give Senator Roberts a bit of an update about where that's at. We could see if in any way you can alleviate some of the concerns he appears to have.

**Ms Connell:** Water trade and water markets are principally the responsibility of state jurisdictions at the moment, so states and the ACT are responsible for having and maintaining water registers. Each of them does have a register in place. In terms of the media release you're referring to, it was to indicate that the water market reform process had been set up. Minister Pitt announced last year that he would appoint a principal adviser. Mr Daryl Quinlivan has been appointed to work with states to take what is a very significant report by the ACCC—I think it goes to about 700 pages and makes a broad range of recommendations—

**Senator ROBERTS:** It has some serious concerns.

**Ms Connell:** That's right. Mr Quinlivan has been working with Basin states, supported by an advisory group, and consulting stakeholders more broadly to determine what should be the initial recommendations that are progressed. We can table a copy of Mr Quinlivan's December advice. The advice sets out the five principal initial reforms that he recommends be progressed, and the basin states support recommendations in principle. Critically, at the moment there's no code of practice to govern the behaviour of water market intermediaries, water brokers, so one thing the states agreed to is the development of a code that can put a compliance framework around the way that part of the market operates.

He also recommended that the Commonwealth introduce legislation to prohibit insider trading and market manipulation, so that's something the department is looking very closely at. He made recommendations around collection and publication of trade data and a number of other recommendations. He is now working with basin states and stakeholders to develop a final draft which is due to the minister in June this year. So, the terms of reference for the work that he's doing are on our website and we can provide you with a copy of that as well.

**Senator ROBERTS:** Ms Connell and Senator Ruston, can you see the public and farmers, in particular, are very concerned? I haven't discussed this with you, but apparently you had a successful business with flowers. Water is key to that, and you've developed remarkable efficiencies in the use of that water, as I understand it. I'm not a farmer, but I know listening to farmers that water is like gold. It dramatically increases the productivity of farmland, so it's worth a lot of money. But it's also worth a lot of money to traders and speculators, and we've removed the connection between water allocations and farmers' property ownership.

**Senator Ruston:** You're talking about the unbundling of water from land?

**Senator ROBERTS:** Correct; I am. What I'm saying is that, in the absence of significant measuring of water flows right across the basin, in the absence of science, the contradiction of science and the highly variable climate, which is natural—and we've got the north being different from the south, and people not understanding each other—there's a lot of suspicion that the government, and governments in the past, have simply protected water traders because we still don't have a water trading register. Whether that's a state and territory issue, it needs to be done. And now we've got the ACCC saying there are significant concerns even though they didn't identify any particular fraud. This does not build confidence in the Murray-Darling Basin Authority, nor the plan.

**Ms Connell:** I think there are three components to the question. So, under the constitution, states are principally responsible for water resource management, so the obligation is on them to establish and maintain water registers. Each of the Murray-Darling Basin jurisdictions has in place a water register at this point in time.

**Senator ROBERTS:** I'm not interested in why we can't do it; I'm interested in what we should do.

**Ms Connell:** It's being done—

**Senator ROBERTS:** It's a major impediment to you.

**Ms Connell:** and you can get access to those registers online. I think the Bureau of Meteorology now aggregates information from each of those state registers in their water information portal, so we can provide you with the link to that quite easy to use website.

**Senator ROBERTS:** Thank you.

**Ms Connell:** I would just like to get on the record that the ACCC didn't find any evidence of speculative activity.

**Senator ROBERTS:** I just said that, but they had significant concerns.

**Ms Connell:** One of their key recommendations was to get in place a code backed by enforcement and compliance powers to improve the integrity and transparency of the market, and that's what the basin states have agreed to and the principal adviser has reported on. We're now working with basin states to look at how we can develop that.

**Senator O'NEILL:** But it hasn't happened. What's the date for that to commence? Senator Roberts, I've got a whole lot of questions that I want to follow up on. When you get out there and talk to people, as Senator Roberts has said, they just tell you straight up about—



**Senator ROBERTS:** The corruption.

**Senator O'NEILL:** the corruption that's happening. Their computers aren't fast enough to compete with people who are in the space. You would've heard it as much as I've heard it. What's the timing on the response to this?

**Ms Connell:** We're currently working with basin states to look at the development of a draft code. One of the key things will be to consult with stakeholders on what that draft code will look like. When making changes that will impact on a regulated community it's important to undertake a process whereby we publish a proposed draft code, provide an opportunity for comment and also provide a period of time for that regulated community to come into compliance. We're actively working with states on progressing that proposal.

**Senator O'NEILL:** But do you have a time line?

**Ms Connell:** I can take that on notice; I don't have it in front of me.

**Senator ROBERTS:** I brought eight copies of an article from *News Weekly*, 'Murray-Darling Basin Plan ruining the Edward River'. Once again, we're talking about environmental damage of a type never before seen along the Murray system, caused in all probability by the Murray-Darling Basin Plan. The first paragraph of this article says:

The Murray-Darling Basin Plan (MDBP), which has the goal of protecting the environment—  
As Senator Ruston said—  
is instead destroying it.

And there are so many examples; it's the same type of damage that we're seeing elsewhere. We've raised this about the Murray itself. When is the Murray-Darling Basin Authority, or the department, going to convene a proper public inquiry into environmental destruction along the Murray River system? Landholders along the Edward are just flabbergasted at how much damage is being done in the name of the environment.

**Mr Reynolds:** The Edward system, in effect, runs parallel to the Murray. Part of the work we're looking at around the choke is how we manage water through that part of the system, and that includes water through the Edward River as well. Clearly, there are a lot of demands on the system to manage it for consumptive use as well as for the environment. One of the key things we're looking at as part of the Barmah Choke Feasibility Study is how to manage the system holistically, not just moving a problem from one part of the system to another. So there's a lot of activity to examine the Edward system as well.

Erosion is a natural feature within our river systems. We have a heavily regulated—

**Senator ROBERTS:** Excuse me; some people would disagree with you. They're saying the amount of water and the duration of high river flows are quite unnatural. Farmers along the Murray and people along the Edward are saying the same thing. That's what's doing the damage, according to them.

**Senator O'NEILL:** Exactly, that's what they're saying to me too, Senator Roberts.

**Mr Reynolds:** There's no doubt that we've regulated the river system to achieve a whole lot of benefits which that provides, but that has substantially changed the natural flow patterns in the river. We have higher river flows through summer because we're delivering water to meet irrigation demands which are critical to the prosperity of many communities throughout the basin. That's one of the aspects of the Basin Plan: we work through that balance between environmental outcomes and the social and economic prosperity of communities throughout the basin as well.

There are going to be impacts on a regulated system—there's no doubt about that. We're looking, through the Barmah Choke Feasibility Study work, at options we might have to alleviate some of those pressures on that part of the river system—the Edward, the Murray and, indeed, the Goulburn system as well. I can't say that there are no impacts on a regulated river system, but I guess those impacts are balanced against the other benefits that they provide to communities in a wide range of—

**Senator ROBERTS:** I'm not accusing you—and I mean this sincerely—or anyone here of anything. Government in this country—and I'm not talking about the Morrison Joyce government, I'm talking about federal governance—is quite often about wealth transfer. The more regulation we have then the more that can be hidden. It's built into this, the whole thing. There are just so many avenues for it to be loose and sloppy and the people who pay, time and time again, are the everyday Australians who pay for the mess in government.

I'm not having a go at you; I'm not looking at you in particular. I'm just saying that this is a mess. How can we sort it out so that the people and the environment stop paying the price for mistakes?

**Senator DAVEY:** I think that finishing that choke study might be a good first step.

**Mr Reynolds:** In that part of the river system, in particular, there is significant work, investigation and analysis on how we can manage some of these detrimental impacts while still achieving the good impacts that people are looking for.

Some of the impacts we've seen in terms of high river flows and the river flowing at higher flow rates, or at least at levels higher than it has in the past, are the result of lost capacity in the river system and the deposition of sand within the Choke. That means to get the same volume of water through the Choke and downstream that we had in the past, the river needs to run at a higher level for a longer period of time. That's absolutely the challenge that we're dealing with. The work that we're doing to understand that, and to understand the options we have to take the pressure off the river system, is a critical part of that intervention.

**Senator ROBERTS:** I'm saying the core problem may be something even deeper. Thank you.

**Senator ANTIC:** I want to ask a couple of questions about the Murray-Darling Communities Investment Package. It's a package that Minister Pitt announced in September 2020. Could you also give an update about the rollout of the Murray-Darling Basin Economic Development Program and perhaps some information about some of the specific types of projects that have received the funding?

**Ms Connell:** Yes, I'll ask Dr Derham to attend the table.

**Dr Derham:** You were asking about updates on the Murray-Darling Healthy Rivers Program and the economic development program grants?

**Senator ANTIC:** Yes. Could I have an update on the rollout of the economic development program and a bit of an update about some of the projects that have received some funding to date?

**Dr Derham:** Certainly. I'll ask my colleague to join; she can give more context on the economic development program. I'm happy to answer your questions in relation to the healthy rivers grants as well.

**Ms Connell:** I can start off while we're waiting for Ms Bunfield to come to the table. As part of the Murray-Darling Communities Investment Package, the government announced funding for the third round of economic development grants—\$34 million in total, from memory. Over the course of the last year, we've announced 132 successful projects. We've now got contracts in place with 129 community groups and organisations, and 67 of these projects are directed to tourism activities in local communities.

The purpose of the Murray-Darling Basin Economic Development Program is to mitigate the impacts of water recovery in a range of local government areas that we identified had been hardest hit by water recovery. We recently updated that for round 3 based on information from the Sefton report. So, 67 of the projects relate to tourism projects and 53 projects are around improving community capability. Some of these projects assist with improving healthcare facilities. In that regard, we're funding the Chaffey Aged Care facility at Merbein in northern Victoria. Under the program, we're also doing some other projects like installing a new water filtration system at the Bourke War Memorial Olympic Pool Complex. You can understand that, particularly during the seriously dry years of 2017-18, 2018-19 and 2019-20, having an operating Olympic swimming pool was important to that community.

**Senator ANTIC:** Are these across all sectors? Is it a multisector program?

**Ms Connell:** That's right. We obviously have to develop grant guidelines. We consulted on the grant guidelines for this program, and they're available on the website.

**Senator ANTIC:** I think somebody mentioned the healthy river grants before. Can we have an update about the latest round of those?

**Ms Connell:** Yes. Dr Derham will return to the table to talk about that. We've had two rounds of healthy river grants over the last 18 months. The community investment package included \$20 million, I think, for healthy river grants.

**Dr Derham:** We have \$20 million on the table for communities in relation to the healthy rivers grants. As my colleague alluded to, round 1 saw the announcement of 74 successful projects valued at \$2.86 million. They are all being contracted and implemented as we speak. Round 2 closed late last year. Minister Pitt has already announced the approval of 15 projects under our large grant round of this second round, and they're valued at \$7.8 million. They're currently being contracted. He also approved a further 57 projects of the smaller grants valued at \$3.76 million. They're also currently being contracted. So they have been announced, and Minister Pitt is currently considering some additional grant proposals under both the large and the small grant round of that second round, and we are hopeful of further announcements in the not-too-distant future.

**Senator ANTIC:** Are you able to share any of the examples of those that have been completed and actually finalised at this stage? I suppose that's probably from the first round.

**Dr Derham:** They're still being implemented. They have until later this year to have those fully implemented. I'm not aware of any that are complete at the moment. They're in the process, from that first round in particular—obviously, the second round has only just been announced.

**Ms Connell:** But we can provide some aggregated information about what those projects will deliver in terms of the contracts. In terms of round 1, we're looking at about 780 hectares of riparian country being protected with 70 kilometres of fencing. We're expecting about 85,000 native plants to go in the ground, with a view to having 330 hectares being revegetated, and 2,700 hectares treated for weeds.

**Senator ANTIC:** And also some increases in fish stock. Is there further provision being made for that?

**Dr Derham:** Some of the projects that have been successful are working to improving the habitat for native fish. There's restoration of rock banks and snags, and that critical work on in-stream habitat for native fish has definitely been successful in a number of applications in both the second and first rounds.

**Senator ANTIC:** Issues for this committee always get to run through the pros and cons of people trying to jump on various states. But the benefit of this is really the Murray-Darling Basin Plan as a whole. These grants, presumably they're helping to achieve the goals of the plan and benefit the plan as a whole? Are there examples of how that's working? It's designed to be a nationwide exercise.

**Dr Derham:** Yes, Senator. These types of projects, I think in first principles, are being implemented by our communities. It really gets the farmers and the local communities involved in looking out for the health of their wetlands and river systems. If we're making improvements to reduce sedimentation of our rivers—stabilising streambanks; stabilising paddocks; pest and weed removal—they're all complementary benefits to our environmental outcomes that the Basin Plan is striving for.

**Senator ANTIC:** Thank you. No further questions from me, Chair.

**CHAIR:** Thanks very much, Senator Antic. Senator O'Neill, would you like to take us to the break?

**Senator O'NEILL:** Thank you. I have a couple of further questions along the lines of what I was asking earlier. I want to go to the northern basin toolkit—so this is New South Wales detail in particular. How much of the \$180 million for the Northern Basin Toolkit measure has been spent?

**Dr Derham:** I'll just find my notes.

**Senator O'NEILL:** While you look, my understanding is that there are ten approved toolkit measures in New South Wales and Queensland. Can you verify that that's correct?

**Ms Connell:** The minister has announced, and we've entered into, contracts with Queensland and New South Wales in relation to ten projects, which together total \$90 million. There is information about each of those projects on our website. Just by way of example, there's the Fish Friendly Water Extraction Project, which will develop 20 self-cleaning fish exclusion screens in the Condamine-Balonne and Border rivers region of Queensland.

**Senator O'NEILL:** Could you give me the link to that on notice, so that I can have a look at the detail. How many are in New South Wales and how many in Queensland?

**Dr Derham:** I will check the facts and come back to you.

**Senator O'NEILL:** And the \$90 million—if you could do it by project and the allocation of the funding, and what we think is going to come out of that, that would be helpful, as a summary sheet. And then I can have a look at whatever you point me to. So ten are approved and are now funded to the tune of \$90 million. When do you expect them to be fully implemented?

**Dr Derham:** I might just clarify. Ten have been approved. Four of them have been funded for delivery and construction and another six are in the business-case stage. The business cases are starting to come in for formal assessment now. So, as my colleague alluded to, \$90 million of the \$180 has been apportioned. The majority of that has gone into the four projects that are being constructed. And, as—

**Senator O'NEILL:** Are they in New South Wales?

**Dr Derham:** New South Wales and Queensland.

**Senator O'NEILL:** How many of each?

**Ms Connell:** I'm just reading from our website: six in New South Wales and four from Queensland.

**Senator O'NEILL:** Great. Where are the four that have already been allocated the \$90 million?

**Dr Derham:** Ten have been allocated the \$90 million, and it's the six in New South Wales and the four in Queensland that I referred to.

**Senator O'NEILL:** Alright. How many projects in total do you think there are for the \$180 million? Is there a forecast?

**Dr Derham:** It would be the ten. But, as I was saying, a few of them are still in their business-case stage, and we're currently assessing those business cases for further funding announcements associated with the \$180 million. We didn't have sufficient information to put a funding schedule on the table to take the project from where it is now to full construction; it was just at that business case stage. We needed more due-diligence information to be able to say what the costs for those business-case stage projects would be. We're assessing those at the moment for full funding. That will take up some of the additional \$180 million.

**Senator O'NEILL:** You've still got some detail coming, but do you believe—or is the goal—that each of these projects will be implemented by 2024?

**Dr Derham:** That's correct. They will be implemented in that time frame.

**Senator O'NEILL:** If these Northern Basin Toolkit measures fail to achieve their desired outcomes, will the 70 gigalitre reduction to the 390 gigalitre target be reinstated?

**Dr Derham:** No, these projects are truly complementary projects to the Northern Basin Review. They were brought forward to enhance our ability to achieve some of those local environmental outcomes. The basis of the reduction from the Northern Basin Review stands; these are projects that provide additional localised environmental benefits.

**Senator O'NEILL:** So no reduction?

**Dr Derham:** No.

**Senator O'NEILL:** What happens if they don't occur by 2024?

**Dr Derham:** At this stage we're very confident that they will be delivered by that time frame. As I said, they're about removing barriers to fish movement and about implementing screens on pumps that try to minimise the impacts on our native juvenile fish species. It's about ensuring we're optimising environmental outcomes in the Macquarie Marshes and ensuring our floodplains are connected in the Gwydir Valley with the river system as well. These are projects that will really generate those complementary environmental benefits.

**Senator O'NEILL:** We all hope this will deliver the outcomes, but we just heard very disturbing evidence from Mr Reynolds about the erosion that is being reported on the river down around the Edward River and Barmah Choke et cetera. We all want good things to be coming out of the project, but, if the Northern Basin Toolkit fails to deliver what you expect by 2024—this is in line with a question Senator Patrick was asking—what's the response? What action will or can the Australian government take if the environmental works and projects are actually not implemented by 2024?

**Ms Connell:** One of the things that the MDBA will look at as part of the Basin Plan review in 2026 is the sustainable diversion limits for each of the water resource areas in the northern basin. That will be a key consideration as part of the Basin Plan review—whether the SDLs and the projects that have been implemented during the first 14 years of the Basin Plan contributed to improving the health of the basin.

**Senator O'NEILL:** So that's the same answer we got to the question from Senator Patrick?

**Ms Connell:** I might ask the senator to reframe the question.

**Senator O'NEILL:** That's okay. I think we'll leave it there.

**CHAIR:** We will go to a break.

**Senator PATRICK:** I just want to put on the record that One Nation is relying on ABC articles during this hearing!

**Senator DAVEY:** So did I!

**CHAIR:** We will go to the lunch break now.

#### **Proceedings suspended from 13:01 to 14:02**

**CHAIR:** Welcome back after the lunch break. Senator O'Neill, back to you.

**Senator O'NEILL:** If I could now go to efficiency projects. I've got a lot of questions and we're running out of time, so if you do need to take things on notice that's okay. I'd appreciate it if you could answer them as promptly and succinctly as possible. Since last Senate estimates the federal government approved the Murrumbidgee irrigation Off-farm Efficiency Program. The application initially sought \$124 million—is that correct?

**Ms Connell:** Yes, that's my understanding.

**Senator O'NEILL:** Why then, when the project was announced, was it approved for \$126.48 million?

**Ms Connell:** I understand that the application that the department received was for a project in the order of more than \$126 million. From recollection, and I will have to confirm this, the minister didn't agree to fund the entirety of the ask from Murrumbidgee Irrigation. I'll double-check that.

**Senator O'NEILL:** Could you tease that out and give me a sense of what the request was, what the amount was, what the rationale for the discrepancy was et cetera? That would be very helpful.

**Ms Connell:** I'll take that on notice and provide that information.

**Senator O'NEILL:** Have the cost-benefit analyses of the recent Off-farm Efficiency Program—and I'm including Murrumbidgee Irrigation and Goulburn-Murray Water there—been made publicly available?

**Ms Connell:** We have and are intending to publish on our website the independent review that we get undertaken. I think the review that we had done for the Goulburn-Murray project is already on the website. That was by GHD. We're in the process of working with the provider in terms of publishing the independent advice that we commissioned for the Murrumbidgee project—

**Senator O'NEILL:** When's that likely to go up?

**Ms Connell:** Probably in the next week or so. I think that one was provided by AECOM. We're working through with them the publication of that advice.

**Senator O'NEILL:** That report covers off the cost-benefit analysis?

**Ms Connell:** That report looks at a couple of dimensions. It assesses the costs of the project and also looks at the methodology that is used to come up with the proposed water savings. It has two key components.

**Senator O'NEILL:** Thanks. That's helpful. Has the federal government received a proposal from the Victorian government regarding the Lower Murray Water Water Efficiency Project? I think we were discussing this earlier, and the cost for that.

**Ms Connell:** We have received an application from Victoria for the Lower Murray Water Water Efficiency Project, and we're currently assessing that application. I don't have in front of me the figure, but we can provide that.

**Senator O'NEILL:** I am advised that the figures that are known in the community make an estimate of a cost of \$20,556 per megalitre

**Ms Connell:** For which project?

**Senator O'NEILL:** The Lower Murray Water Water Efficiency Project.

**Ms Connell:** I don't have the details of the actual application in front of me.

**Senator O'NEILL:** If you could take that on notice and give me the informed and accurate figures. If it did turn out to be what the community believe it will be, at \$20,556 per megalitre, would that be value for money, Ms Connell?

**Ms Connell:** It would depend on the nature of the proposal. I will point out that the program and the funding that's available under the act and the conditions on which the government can release that funding are for water efficiency infrastructure projects. To do the megalitre conversion is a bit crude because the act provides for the WESA fund to be used for water efficiency infrastructure projects.

**Senator O'NEILL:** Nonetheless, if you could do some of those crude figures as a comparison to what the community's doing. They're interpreting in a way that makes sense to them in the context that they're in and informs their decisions about what they do with their businesses and where they invest, and I think what they think is value for money is often very astute.

**Ms Connell:** I will point out, and we can use the Murrumbidgee project as an example: in terms of the factors that were taken into account in determining whether that was value for money or not, it was the fact that it was delivering high-security water entitlements rather than general security water entitlements, which are obviously worth a lot more in the marketplace but are also worth a lot more in terms of environmental value to the Commonwealth Environmental Water Holder because there is more security around those entitlements.

The other key factors in relation to off-farm projects in particular are that you're not actually removing water from the community, so there's no on-flowing negative socioeconomic impact. The program also includes looking at whether the project will provide significant economic stimulus. In the context of the Murrumbidgee project, I think it's going to create about 130 direct jobs and 92 indirect jobs. That's a pretty significant piece of economic stimulus for that community. Obviously another key consideration is how the savings that are provided to the Commonwealth Environmental Water Holder from that project contribute to the Commonwealth Environmental

Water Holder's portfolio of assets. In the case of the Murrumbidgee project, and I could probably get Hilton to come and talk to that—

**Senator O'NEILL:** I think we might need to take anything else on notice because I am going to press on.

**Ms Connell:** The water that's returned is a significant addition to Mr Taylor's portfolio of environmental water assets.

**Senator O'NEILL:** And the amount of water that's to be returned?

**Ms Connell:** I think it's about 5.4 gigalitres.

**Senator O'NEILL:** What's the cost per gigalitre at the moment?

**Ms Connell:** My understanding in the Murrumbidgee is that the most recent trades of high-security water were around the \$9,000 per megalitre mark.

**Senator O'NEILL:** Which is quite different from the \$20,000 that the community think that the Lower Murray Water Efficiency Project might deliver. Anyway, on notice would be good.

**Ms Connell:** It's an important distinction. The money's for an infrastructure project. It's not buying an entitlement directly. So it's quite a significant difference there.

**Senator O'NEILL:** Yes. I want to follow up on some ACCC matters, because, like me, you've been out in the community. Claims that people make to me that I can recite here under parliamentary privilege are absolutely that insider trading is occurring. They feel very disempowered, they feel irate that their concerns have not been taken seriously by the government and they're absolutely livid that the response is still being discussed and not provided to them in terms of transparency in the water market. I don't think that there's hostility towards extraneous players putting themselves in the water market. But people's inability to see what's going on is driving them nuts, and they consider it discriminatory. I think that's the description of the problem that's out there. You gave some detailed information to Senator Roberts earlier. I'm just going to ask a few really straight questions, but I would appreciate a more detailed brief about what's really going on, and maybe reference to a report you spoke about earlier might give me what I need.

**Ms Connell:** We'd be happy to provide a brief and also to organise a briefing for you with the principal adviser who's steering this review. Just in relation to your comment about insider trading, the ACCC's inquiry was deep and wide and went on for about two years. They collected an extraordinary amount of data, and, as a result of that inquiry, there were no findings of collusion. I understand they also used—

**Senator O'NEILL:** I do want to believe that, and that's great—

**Ms Connell:** They used their powers to obtain information from various sources. It wasn't just 'can you give us what you've got'. They actually used their powers to obtain formation from various sources as part of that review.

**Senator O'NEILL:** While the community's articulation of their lived experience doesn't match what the ACCC was able to find, despite its extensive powers, there were nonetheless a series of recommendations made by the ACCC, right? So let's get up to speed about where we are. Has the government implemented any of the ACCC's recommendations?

**Ms Connell:** As I advised the committee before lunch, the recommendations are wide ranging, starting with organisations and—

**Senator O'NEILL:** I know and I appreciate that, because I wrote down five actions that you indicated were happening. But I just want a straight answer: has the government implemented any of the ACCC's recommendations?

**Ms Connell:** The government is on time in terms of the commitments it's made to look at those recommendations. The important thing to remember here is that the basin states are largely responsible for water markets and water trades. The Inspector-General of Water Compliance, who's on next, has some powers, but predominantly it's the responsibility of states. It's critical, in terms of progressing the recommendations, to work with the states.

**Senator O'NEILL:** And we understand—more perhaps in COVID times than in other periods in recent history—federation and the challenges that that offers up. But there is nonetheless an inspector for compliance, and there is an expectation that that title is not just a marketing device and that it's actually going to create compliance in all sorts of ways. So to be clear, with all those caveats, at this point in time, as of today, 18 February, has the government implemented any of the ACCC recommendations?

**Ms Connell:** Yes. There's a range of work that's going on at the moment to implement the ACCC recommendations, both by the Commonwealth and by states.

**Senator O'NEILL:** So it's a work in progress?

**Ms Connell:** That's right.

**Senator O'NEILL:** Anything completed yet?

**Ms Connell:** The December advice from Daryl Quinlivan sets out the progress to date. It's across about seven areas. A critical element that the Commonwealth has been responsible for is the water information portal. The first iteration of that went live on 1 July last year, and the Bureau of Meteorology is responsible for that. Obviously, the other key element that has been implemented is the establishment of the Inspector-General of Water Compliance. But the states, who are principally responsible, are making significant progress in moving on the recommendations now.

**Senator O'NEILL:** The ACCC recommended ongoing surveillance of the water market. What's being done about that?

**Ms Connell:** We'll have to take what is happening in relation to that specific recommendation on notice. One of the things we're working on with states is looking at the IT systems they have in place to undertake that surveillance. We've engaged Data61—it's part of CSIRO—to do an analysis of where states are at, what the gaps are and what the uplift is that we need in order to have a more sophisticated IT surveillance framework in place.

**Senator O'NEILL:** There have been lots of concerns about the accuracy of what water is in the system, particularly data black holes in the northern basin area, in terms of proper monitoring.

**Ms Connell:** In terms of on ground—like river gauges, hydrometric systems meterings—Mr Reynolds outlined this morning some of the work that's been undertaken by Queensland and New South Wales in that space.

**Senator O'NEILL:** There's the surveillance on the ground but then there's the surveillance of the market. So these two things are separate but they have a high degree of interaction?

**Ms Connell:** Yes; what's flowing down the river and what's being traded are linked.

**Senator O'NEILL:** We need some truth and transparency. Has any work been done on advancing a water trading register?

**Ms Connell:** As I said before lunch, water registers are the responsibility of each of the states and territories. They all have registers in place.

**Senator O'NEILL:** Let me clarify: has any work been done on advancing a national water trading register?

**Ms Connell:** To be effective, my understanding is that that would require a referral of state powers. At the moment states are principally responsible for water markets. They have in place registers, which are the key point of reference.

**Senator O'NEILL:** We know that's problematic. You're describing a historical reality—

**Ms Connell:** No—the current reality. States are responsible for their registers.

**Senator O'NEILL:** Yes; it arises from a historical context. But there is a lot moving around that's creating a national response to the river. I will ask my question again: has any work been done on advancing a national water trading register?

**Ms Connell:** The ACCC didn't recommend a national water trading register.

**Senator O'NEILL:** So is there no work being done or some work being done? Is it being discussed by the Commonwealth and the states?

**Senator DAVEY:** Point of order: there are state water registers and it would require a referral of powers for a national—

**Senator O'NEILL:** I did hear that, but that's a different question.

**Ms Connell:** To your question: not to my knowledge. It's a state responsibility. They've got the registers in place. The ACCC didn't recommend a national register. They made recommendations about mechanisms to improve trade and common reference points for trading—so whether states should impose an obligation that each trade have a common identifier like an ABN or something along those lines. That's being discussed and explored with states proactively at the moment.

**Senator O'NEILL:** The committee that looked at the jurisdictional matters went to border communities to discern what was going on there. I'm sure you'd be aware how highly problematic it is if you've got a piece of

property and businesses that straddle two jurisdictions. There is huge inefficiency and there are profoundly different models of operating. That's a lag on those communities. The river flows through the arbitrary boundaries.

**Ms Connell:** I think it's fair to say that looking at harmonisation across boundaries is at the core of quite a few of the recommendations made by the ACCC.

**Senator O'NEILL:** But, in terms of harmonisation, to be clear: there is no current work underway to advance a national water trading register, despite calls for harmonisation?

**Ms Connell:** It wasn't a recommendation of the ACCC.

**Senator O'NEILL:** And therefore there's no action.

**Ms Connell:** It was a two-year detailed inquiry. No, we're not examining that at the moment.

**Senator O'NEILL:** Can I ask about the panel that's considering the ACCC's recommendations. How many times has the panel met? Did you say Mr Daryl Quinlivan was—

**Mr Metcalfe:** Yes, the former secretary of the department.

**Senator O'NEILL:** He's chairing that process, yes. Can you give me a sense of when the panel has met? Does it have a work plan?

**Ms Connell:** I think they've met about three or four times so far. I will take that on notice.

**Senator O'NEILL:** The dates for those meetings and any meeting notes, to give us a sense of what they're considering and doing, would be really helpful.

**Ms Connell:** Yes, we can provide that.

**Senator O'NEILL:** I am keen for a work plan, what sort of accountabilities are in place, who is on the board—all that sort of stuff.

**Ms Connell:** You can find the members of the advisory group on our website.

**Senator O'NEILL:** In terms of a time line, you've indicated that a couple of the recommendations are underway. I think two of them have commenced. If we were to scope that out to May, how many of the ACCC's recommendations in respect of water markets will be implemented before May?

**Ms Connell:** The terms of reference for Mr Quinlivan's scope of works are on the website. He's required to provide two reports: an initial report, which was provided in December and has been published on the internet this week; and a final report setting out a road map for the implementation of the ACCC's recommendations, which is due on 30 June.

**Senator O'NEILL:** So they are the deadlines.

**Ms Connell:** I can confirm that the advisory group has met four times to date. We will provide an update on their work plan.

**Senator O'NEILL:** Thank you; I think you know what I'm after. I have a couple of questions on the basin-wide environmental watering strategy. It was published in 2019, and the final version is due this year. Where is that up to?

**Ms Connell:** I will ask Mr Reynolds to speak to that question.

**Mr Reynolds:** The basin-wide watering strategy is a requirement under the Basin Plan, as you mentioned. We are working on an update of that. It's not completed as yet. I will just see whether Mr Manning has a little bit more detail.

**Senator O'NEILL:** It says it's due. I understand it's due in 2022; that's correct, isn't it?

**Mr Reynolds:** It is.

**Senator O'NEILL:** Is there a date you're working to?

**Mr Reynolds:** It'll be towards the end of the year. The basin-wide watering strategy—sorry, I'll have to take on notice the timing of that. I haven't got that detail with me, sorry.

**Senator O'NEILL:** You indicated you are working on an update. When was the last time this project was updated, and how much activity is happening in this space?

**Mr Reynolds:** We are continually working on annual watering priorities for environmental watering. That forms part of it; it's guided by the basin-wide watering strategy. There is a framework around the planning for environmental water. Dr Coleman, who leads that work, can probably provide a more detailed explanation.



**Senator O'NEILL:** Just an update on how it's going, if you could, in brief, and please provide further detail on notice. When do you expect it to be handed to be minister? When do you expect it to be publicly released? Will it incorporate findings from the second WESA review? And how many stakeholders will you engage to provide feedback on the draft strategy?

**Dr Coleman:** This is the basin-wide environmental watering strategy?

**Senator O'NEILL:** Yes.

**Dr Coleman:** For the basin-wide environmental watering strategy, we're required to conduct a review and then release a new version by 2024. We have made commitments in the past to bring that forward by a year and possibly release it in 2023. We're currently re-examining those time frames, just given the deliverables that we're facing over the next two or three years. So it may be released in 2023, but we may look to leave it until 2024.

**Senator O'NEILL:** So we shouldn't expect it this year at all?

**Dr Coleman:** No. It will be 2023 at the earliest.

**Senator O'NEILL:** Perhaps you can provide, on notice, where it is up to, because obviously it's significant. What are the challenges with the deliverables that you just referred to?

**Dr Coleman:** There's the ongoing Basin Plan implementation activity—so, the SDL adjustment mechanism rollout and water resource plans—

**Senator O'NEILL:** And the fact that New South Wales are trying to push it out to 26 and haven't hit their targets—there's a big hole there, isn't there?

**Dr Coleman:** Yes, so there are the ongoing Basin Plan implementation challenges, but also we're looking past that towards the Basin Plan review, so we're also investing in a lot of science. Through the water and environment research program, our intention is that that science investment will then be incorporated in the next basin-wide environmental watering strategy.

**Senator O'NEILL:** I'm sure scientists are stakeholders, but there are other stakeholders from the community, from business and from governments. If you could provide a full list of the stakeholders that you are consulting and a draft plan of work, that would be very much appreciated.

**Dr Coleman:** No worries.

**Senator O'NEILL:** Thank you. I will go now to Indigenous water entitlements, which I've asked about on a number of occasions. This is so important to the First Nations communities out along the river. We know that there was a very significant oversight in not including First Nations on the Murray-Darling Basin Authority and that that has been overcome in more recent times, but there are \$40 million of cultural water entitlements—and I can tell you, from being out in the basin, that, as time has passed, the First Nations people are becoming more aware that perhaps that wasn't sufficient for their needs and they weren't adequately consulted. But \$40 million of cultural water entitlements were promised, and that was back in May 2018, to be delivered in four years. So we're just a matter of weeks and days away, now, from the schedule that was much announced in the marketing of this government. Is it still the case that, of these \$40 million, zero dollars have been paid to Australia's First Nations people, who were promised this by the government in 2018?

**Ms Connell:** As we advised at the previous hearing, responsibility for that program has now been transferred to the National Indigenous Australians Agency. So how the money has been applied is now a question for them.

**Senator O'NEILL:** The last time, Ms Connell, that you told me that, the national Indigenous hearings were going on, and it was all news to them.

**Senator PATRICK:** They're on now, along the corridor.

**Senator O'NEILL:** And wasn't that the case last time, Senator Patrick? You wandered over, didn't you? So do you want to just put on the record what happened there? We were told—

**Senator PATRICK:** The answer was: zero. So, at the end of the day, the department here held it for three years, zero was spent, and now it's been flicked off to someone else.

**CHAIR:** Do you want the update, though, on where we're up to?

**Senator PATRICK:** They're saying that it's not their responsibility.

**Senator Duniam:** You'll have to go to the other committee—the cross-portfolio committee currently sitting—to get the update.

**Senator O'NEILL:** Can I ask about the \$40 million, though, that were held by you and everybody thought were being managed by you, until the last hearing: Has that funding now been transferred to the NIAA?

**Ms Connell:** Yes. I think on page 36 of the portfolio additional estimates it confirms transfer of the responsibility for the program to the National Indigenous Australians Agency.

**Senator O'NEILL:** Do you think that will give it another three years to just sit there and do nothing? It is extraordinary that this hasn't happened.

**Ms Connell:** We've certainly provided them with the information that we worked on with the stakeholders, in terms of the trust model that was investigated. The other key option that was looked at or considered was the program being run by the Indigenous Land and Sea Corporation, which is part of the NIAA portfolio. So they obviously have access to all the information they need about how that agency runs and the programs it delivers, because my understanding is that it's got responsibility for a \$1.5 billion fund that can be used for land and water acquisitions. They've been in operation for a couple of decades now and so have a much more sophisticated suite of business support and capability programs to work with Indigenous communities on acquisition of land and water rights.

**Senator O'NEILL:** Can I take it from that that your department was given the \$40 million and that was the mistake of the government; they should have been smarter and given it to the agency that could properly deliver it?

**Ms Connell:** That is not a matter for me to comment on.

**Senator O'NEILL:** Is your department doing anything to track that \$40 million to make sure it actually gets out the door?

**Ms Connell:** There has been a movement of funds. The funds have been moved from our portfolio to the national Indigenous Australians portfolio. It's on the public record.

**Senator O'NEILL:** So you are no longer following the money?

**Ms Connell:** My team have regular discussions with the National Indigenous Australians Agency. One of the key elements of the community investment package was a river rangers program. We discuss the progress of that program. There was initially an amount of money—\$3 million, I think—allocated for one year. The government announced as part of the MYEFO measures a further four years of funding for the river rangers program. We work with NIAA on that front and on a range of other matters where our portfolios intersect.

**Senator O'NEILL:** But no longer on the \$40 million that didn't get delivered?

**Ms Connell:** We obviously have talked to them about how it's going and whether there's any additional information we can provide or support them on, but they are the portfolio with principal responsibility for Indigenous issues.

**Senator PATRICK:** To be clear, it's zero of the \$40 million and two of the 450 gigalitres and Senator Duniam has delivered 2.8 million of one billion trees—all consistent.

**Senator Duniam:** Oh, Senator Patrick!

**Senator O'NEILL:** I might just open some questioning—and I know that Senator Grogan will finish on this and ask more detailed questions—on the fish kills. The Menindee and the Parramatta River are obviously very significant concerns. While I know that Senator Grogan will ask some questions, I want to put on the record that as a duty senator for the seat of Parkes, which encompasses Menindee, the community will never, ever forget what happened there. Internationally, that is the image of what mismanagement of the Murray looks like to the rest of the world. Given that we really prize our natural assets and the river is such a totemic of the western part of New South Wales, I have serious concerns about the blackwater issues that threaten the river. I'm also very concerned about what's been happening in the Parramatta River.

**Ms Connell:** I might ask Mr Reynolds to talk to how the blackwater event is being managed in Menindee. The Parramatta River is an issue for the New South Wales government.

**Mr Reynolds:** The current blackwater event at Menindee is very different to the previous event that led to the death of a lot of fish. This is a very large flood event. There's a lot of really poor-quality water at the front of the flood as it moves across the floodplain and picks up a lot of vegetative matter off the floodplain and brings it to the river. Blackwater is a natural event. It's the New South Wales government and WaterNSW who manage the operations at Menindee. We do liaise with them, but they are the decision-maker.

**Senator PATRICK:** But don't you get a trigger point? Don't you take over at 640 or something?

**Mr Reynolds:** At that point, we can call water to support the Murray, but the decisions about where to release it from and how it's passed through the lakes remain with New South Wales. The MDBA just has the right to call water to support the Murray uses. But, at the moment, as this water moves down to Menindee, options to shandy

that water with better-quality water that's already in the lakes are being used. So WaterNSW is diverting some of the blackwater at the front of the flood flow back into the lakes and letting it spread across the larger water body. As it gets into the larger service area, it gets a chance to reoxygenate and it gets diluted with fresher water.

They're also releasing some of the water past the main weir at Menindee and allowing some fresher water from the lakes to come back down the stream to the river to shandy that water into the lower Darling. It is a challenge to manage such a large volume of poor-quality water, but taking these actions provides an opportunity for fish that would otherwise be affected by that to move off into fresher water. It's a very different circumstance to the previous fish kills, which were at a time of very low water availability—they were basically stagnant pools within the river—and due to changing weather and a sudden cooling they inverted and mixed with really poor-quality water. It's a very different circumstance and a different range of management actions that are being undertaken now.

**Senator PATRICK:** Are you in control of the—the 640 has been hit, hasn't it?

**Mr Reynolds:** Yes, from a river-management point of view the MDBA can call water, but we don't make decisions about where it's released from. We never do, even when it's in our control. That's a decision for WaterNSW.

**Senator PATRICK:** I want to go back to the Narran Lakes water reinvestment that we were talking about. Ms Connell, do you have any control over this? I know there's a grant, and I don't know whether it's you or the department who does grants.

**Mr Taylor:** The grants are being managed out of the Commonwealth Environmental Water Office.

**Senator PATRICK:** Have you engaged consultants in relation to that grant?

**Mr Taylor:** Yes. This is the third time we've done it. We've published all the information around the previous two, and this case will become public as well if it's activated. There are independent valuations of the water. There's independent verification around the water quality, which in this case becomes a major issue because we're taking water out of storage and putting it back in the river. There's a lot of rigour around that independent water-quality work. There's also independent verification of the volume of water that is being released. I think that's pretty good, because there's a tension in that the owner of the water doesn't want to release any more than they have to, and we want to make sure we get every drop that we're entitled to, so that verification will be there. We're also working with the state government in Queensland around the accounting treatment of that to ensure there's no growth in take—once the water comes out, there's a cap on how much and when the owner of that storage can put water back in there, so there's no double dipping in that sense.

**Senator PATRICK:** That's good. Who are the consultants and how much are they being paid?

**Mr Taylor:** I can take all that on notice.

**Senator PATRICK:** Who are the valuers?

**Mr Taylor:** I can get that to you within a few minutes, if somebody's watching. We'll take that on notice.

**Senator PATRICK:** Are there any other projects like this where you pay users and irrigators not to use water?

**Mr Taylor:** This is part of our strategy of using all the water in the system in the most innovative and efficient way that we can. There are circumstances where we are paying for increased losses or efficiencies. That way, all the delivery of operational water is doing the environmental outcome, but through a slightly different shaped hydrograph that wouldn't be as the river operators might use that water if they had carte blanche on the most efficient way. We might ask them to modify that hydrograph to get a fish-breeding event or slow down withdrawal so the birds don't leave a mess. We'll pay the difference between what the operational water would have done and we are doing. These are innovative ways of making all the water in the system go further.

**Senator PATRICK:** Is this the only one exactly like this?

**Mr Taylor:** We've had one where we've had a foregoing of water, and we've got a circumstance here where we're looking to purchase water back out.

**Senator PATRICK:** It seems to me almost like a hybrid. It's not quite a water buyback, which is not permitted under the current government; it's almost like a temporary buyback.

**Mr Taylor:** It's like a trade. We've sold water occasionally, temporarily. We don't sell and we have never sold entitlements, but we have sold water on the temporary market. This is an example of getting access to water on a temporary basis.

**Senator PATRICK:** What is the origin of this particular activity? Did it come from the department? Have any ministers been involved in this?

**Mr Taylor:** No. This is a Commonwealth Environmental Water Office initiative. We're quite proud of the innovation associated with these sorts of things where we're either offsetting losses or getting into these grant situations.

**Senator PATRICK:** As I said, I agree it's innovative and interesting. But it raised my antenna because of the property involved. That's why I was turning to that. Have those answers come back?

**Mr Taylor:** No-one has tapped me on the shoulder. I'll go and see if I can find them.

**Senator PATRICK:** Thank you. My next questions are to the MDBA in relation to the water markets inquiry. I think they're quite technical. One of the recommendations associated with this market inquiry was to remove tagged or grandfathered water licences. Can you tell me what a tagged water licence is?

**Mr Reynolds:** I'll see if I get this right. There'll be others that might be able to come back. A tag trade is where water that is held in a valley has been transferred or sold to a different valley but is still linked to where its original source was from. So the allocations associated with it fly where it originally started from.

**Senator PATRICK:** Are tag trades between the Murrumbidgee and New South Wales Murray subject to the Murrumbidgee Valley trade limits?

**Mr Reynolds:** Tag trades are not subject to the trade limits. That's the reason to try and get rid of them; that brings it all back to an equitable footing.

**Senator PATRICK:** What's the relevance of the date in here: 22 October 2010?

**Mr Reynolds:** I might have to take that on notice, but I think that that's when tags ceased being issued. There were no more tags after that. They all predate that, and that's the legacy issue that needs to be dealt with.

**Senator PATRICK:** Do you record the trade of tag licences?

**Mr Reynolds:** We reconcile interstate trades and trades from valleys. The actual tags are held by the states in terms of their water registers.

**Senator PATRICK:** But you're aware of them?

**Mr Reynolds:** Yes, because—

**Senator PATRICK:** They're not treated any differently to other trades in terms of how they're presented on the account?

**Mr Reynolds:** I'll have to take on notice exactly how they're presented. Sorry. This is quite a technical area.

**Senator PATRICK:** Sure. In relation to the inter-valley accounts, I wouldn't expect to see any tag licences that were beyond that date, 22 October 2010, based on what you just told me.

**Senator REYNOLDS:** Yes. I'll have to take that on notice.

**Ms Connell:** I can read from the report that the Basin Plan exempts water access entitlements established before 22 October 2010 from the restriction. The Basin Plan generally provides that orders placed under a tagged water access entitlement are subject to the same restrictions applying to other any allocation trade between those two locations. The problem is that currently the owners of grandfathered tags can order water for delivery from one zone to another at times when trade is restricted.

**Senator PATRICK:** But that has not changed; that's still allowed.

**Ms Connell:** The intention is to change that so there's a more equal playing field.

**Senator PATRICK:** That means you then have to have an ability to somehow repay the source value—is that right?

**Ms Connell:** The issue is that once the grandfathered tag is removed it'll be a level playing field. If there's prohibition on trading, generally as a result of reduced availability, that will apply across the board.

**Senator PATRICK:** Okay. If you could take on notice how they are accounted for, just a short description of that, I'd be grateful. Next, I have questions about the National Water Initiative, as we agreed, Chair. It's probably the Water Grid Authority that looks after that, is it?

**Ms Connell:** No, the National Water Initiative is the responsibility of the department.

**Senator PATRICK:** How much has been paid to the Northern Territory government under the National Water Initiative?

**Ms Connell:** Payments under the first iteration of the National Water Initiative concluded quite a few years ago now.

**Senator PATRICK:** They started in 2004 or something, didn't they?

**Ms Connell:** That's right. I think the payments were for a period of four or five years. I'd have to take it on notice. Certainly no payments have been made in the recent past.

**Senator PATRICK:** My understanding from the National Water Initiative review is that the Northern Territory has not really implemented the initiative—is that fair to say that?

**Ms Connell:** For the National Water Initiative, one of the key reform recommendations was that states undertake water resource planning and set up sharing arrangements where there was likely to be significant competition for resources. So the Northern Territory has in place water sharing arrangements in some catchments but by no means across the entire Territory. I'd have to take on notice the payments that were due to the Territory under the initial agreement because it's 15 years old.

**Senator PATRICK:** Sure. I understand that. Just the total amount, if you could.

**Ms Connell:** Yes.

**Senator PATRICK:** I'm watching some stuff happening in the Northern Territory now with water, and it looks to me like the cotton industry is basically moving into the NT, and there is a program that's been funded by the National Water Grid Authority for two projects—Katherine Logistics and Agribusiness Hub and the Emerging Agribusiness Precinct at Gunpoint Peninsula. When I look at the documentation that's associated with that, it appears as though in effect the hub is about funding a GIN. That's what it looks like to me.

**Ms Connell:** We've got representatives from the Water Grid here today, so I will ask the First Assistant Secretary to come to the table.

**Senator PATRICK:** Thank you.

**Mr Taylor:** Just while that's happening, the consultant that did the work for us in the Narran case was Marsden Jacob, and it was \$7,920 including GST. The title of the report is 'Independent valuation of the price of water from the private storage in the Lower Balonne'.

**Senator PATRICK:** That's a valuation—

**Mr Taylor:** report that we commissioned.

**Senator PATRICK:** Sure. Is that the only consul that you used?

**Mr Taylor:** There are other consultants. 2rog will do the independent water quality work, and then the Queensland government will do the work on the accounting of the water.

**Senator PATRICK:** The verification.

**Mr Taylor:** The verification.

**Senator PATRICK:** Do you pay the Queensland government?

**Mr Taylor:** No, because it's part of their licensing.

**Senator PATRICK:** Can you get me the value of the other contract as well? I'd be grateful for that.

**Mr Taylor:** Sure.

**Senator PATRICK:** Thank you. Water Grid Authority, I'm not sure if you heard my question. I'm just looking at some money recently made available, \$41.3 million, for two projects in the Northern Territory—the Katherine Logistics and Agribusiness Hub and the Emerging Agribusiness Precinct at Gunpoint Peninsula. How much of that \$41 billion is for the Katherine Logistics and Agribusiness Hub?

**Ms Purvis-Smith:** I think those two projects come under the connections pathway fund, which is part of the National Water Grid Fund. It's a newer part of funding from last year where states and territories could put applications in for smaller water infrastructure projects, and there was a maximum of \$5 million of Commonwealth funding for each project to a maximum of \$20 million per state or territory. I think those two projects come under that pathway funding arrangement. I don't have the details of each of the projects, but we can take that on notice for you.

**Senator PATRICK:** How is the Katherine Logistics and Agribusiness Hub relevant to water infrastructure?

**Ms Purvis-Smith:** Again, that would come under the detail, and we can find that for you and provide that on notice.

**Senator PATRICK:** Is the cost of that fully recoverable? Because I think that's the way your program works, isn't it?

**Ms Purvis-Smith:** This part of the program is that the Commonwealth government provides not a co-funding—it's not necessarily 50-50, and in fact in many of the projects under this pathway funding the state is putting in more than the Commonwealth. So, it depends on the project and it's on a project-by-project basis. In terms of recovery, are you asking whether the Commonwealth is able to recover the money we're providing?

**Senator PATRICK:** Yes. I thought that was the principle behind how the initiative projects worked.

**Ms Purvis-Smith:** Maybe I'm misunderstanding—and apologies if I am—but it's not a loan to the state or territory in the sense that it is funding a particular project. It's partly funding a project, so it's a grant to a state or territory for a particular project. We don't recover it in terms of it being a loan to a state or territory. Am I understanding your question?

**Senator PATRICK:** Yes. That's fine. Maybe I'll go back to the secretary. If you've got this initiative and there are a whole bunch of things you have to do as part of the initiative and the Northern Territory hasn't done those, why do they get access to the funding? I would've thought that conforming with the initiative would have been the incentive to provide funding.

**Ms Connell:** My understanding is the extent to which the state or territory is applying the principles or the obligations under the National Water Initiative is a component in the grid's consideration of final funding.

**Ms Purvis-Smith:** As part of the framework of the National Water Grid, it takes into account the principles of the National Water Initiative, but, for example, each of the projects are also looked at in isolation. Again, this might become more apparent when we get you the details of the project on notice.

**Senator PATRICK:** Maybe I'll stop there and you can provide them to me on notice. I'll either put some questions on notice perhaps through the chamber or at the next estimates.

**CHAIR:** Senator Grogan, back to you.

**Senator GROGAN:** Can I take you back to the current blackwater event?

**Ms Connell:** I'll ask Mr Reynolds to return to the table.

**Senator GROGAN:** Regarding current blackwater events, do you have any projections on the impact? What are you anticipating that we're going to see?

**Mr Reynolds:** It is uncertain about how much mixing we will get. To date we haven't seen any fish kills in the Menindee Lakes or the Lower Darling. We are certainly working with New South Wales. New South Wales are managing this. We are hopeful that we will be able to avoid any significant fish deaths, but how the water passes through the system and how much mixing and dilution we can achieve is not certain. It will probably depend somewhat on weather conditions as well. But at this stage we haven't seen any fish deaths, and we're certainly hopeful that we might be able to pass water through the system and not have any.

**Senator GROGAN:** Noting that this situation is quite different from the other situation—the feast-and-famine scenario—while obviously having the same or a similar outcome in terms of the impact on fish and the like, is there any planning in place into the future on options to try and alleviate, ameliorate or mitigate these kinds of activities? We've seen a number of blackwater events over the last ten years—five or six, I believe. Do you have any plans?

**Mr Reynolds:** Blackwater is a common occurrence right across the basin at different stages. Some events are smaller than others—

**Senator GROGAN:** I guess I'm talking about the more significant events.

**Mr Reynolds:** Certainly there are quite effective monitoring programs that we have and coordination activities that we put in place in the lead-up to this year and, indeed, last summer to monitor areas of potential risk for blackwater throughout the system. That depends very much on the flows through the system and localised flows and the like. The coordination between state agencies and the Commonwealth has certainly been enhanced. We do have things like the deployment of aerators and the like, which in certain circumstances might be a useful alternative, or something like what the Commonwealth Environmental Water Holder is doing at the moment, delivering small volumes of fresh water into the Edward-Wakool system. Mr Taylor spoke about that earlier today. There are things that can be done in some circumstances. The nature or the scale of the blackwater event that's coming through the northern basin into the Menindee Lakes at the moment—those sorts of interventions are pretty limited, and the things that are being undertaken now, such as diverting water through the lakes to dilute it, are at the limits of what we can conceivably do. Certainly the planning and being ahead of individual events and

making an assessment of what interventions might be possible are foremost in both our and state agencies' thinking.

**Senator GROGAN:** Do you feel that there's an impact of climate change at play here? Obviously there are those of us who believe in it; there are those of us who don't. But significant weather events—we know there are changes. There are changed weather patterns. We're seeing more extreme heat, cold, wet and dry. Is this going to exacerbate the situation we're looking at, and does it need a greater level of focus to manage the system?

**Mr Reynolds:** Certainly how things trend into the future is foremost in water managers' thinking. One of the challenges with the current event, after such an extended dry period and drought, is that there's a lot of debris build-up. Organic matter builds up on flood plains, and the first flood that comes through picks up that material. So certainly that will be a challenge if we see extended dry periods. There is significant variability in Australia's climate that is potentially going to be exacerbated by climate change factors. Certainly our planning and management of water resources, the availability of environmental water at times—those sorts of tools—give us a greater ability to manage and intervene, but there will be events like the current one that are of a scale that cannot be completely managed.

**Senator GROGAN:** I want to turn to the recommendations from the fish deaths report. I asked you some questions last time, and you provided a response in terms of where you're up to with all of those recommendations. Could I have a quick and dirty update.

**Ms Connell:** I don't think that would do the 35 or so recommendations justice. They cover quite a wide range of issues, from modelling and native fish management strategies to communication between agencies. What I can say is that the recommendations that were supported by the government are key components of all the relevant work programs that are being undertaken, and Mr Reynolds—

**Senator GROGAN:** Maybe you want to take that on notice, then, because you did provide me with an update after the last session. Maybe you could do the same for me again.

**Ms Connell:** Yes. We'd be happy to work with the MDBA to provide you with an update. We should just note that one of the key recommendations was about uplifting the modelling capability, and that's something the MDBA has spoken about at length today.

**Senator GROGAN:** A significant number of those recommendations were levelled at New South Wales as their responsibility. Have they delivered on those, or have you or the MDBA had any engagement with New South Wales around their responses to those recommendations?

**Ms Connell:** Most of the recommendations are embedded now in a range of different work programs. From memory, there's one that deals with end-of-system flows, which are an element of water resource planning, for example. We can certainly work with the states to provide an update on how they're progressing the recommendations, but the ones that were agreed to by basin governments are now embedded in ongoing work programs.

**Senator GROGAN:** I might just ask a couple of quick questions about climate change. The *2020 basin plan evaluation* said:

... Basin governments and the MDBA need to prepare to adapt the Basin Plan in 2026 to incorporate future climate scenarios and trends.

It said that this means improving tools et cetera, et cetera. Have you landed that work program?

**Mr Reynolds:** Yes. We have, and we've published that on our website.

**Senator GROGAN:** Excellent. How is that progressing?

**Mr Reynolds:** It's mapped out in three stages. The first stage, through to 2023, is to prepare an outlook, which we're calling the MDB Outlook. That's to assess what we think the threats and opportunities to the basin will be at that point in time and to take stock of the challenges we might face and the things that communities might need to adapt to. That work is in train. Part of it is supported by the Water for the Environment Research Program, the \$20 million investment, and that's got a climate adaptation component to it. That work is underway. The subsequent phases, which are beyond 2023, are really about what the adaptation activities might look like, but, of course, that's a later stage.

**Senator GROGAN:** So that's the research program for climate adaptation?

**Mr Reynolds:** That's part of the Water for the Environment Research Program, or what we call WERP, a \$20 million investment. Climate adaptation is one of four themes.

**Senator GROGAN:** Was there a research program to be released?

**Ms Connell:** That's the program Mr Reynolds is talking about.

**Mr Reynolds:** That is the program.

**Senator GROGAN:** Was there a report to be released from that program? No?

**Mr Reynolds:** There will be a series of reports as the work progresses. The research has commenced, but is not complete. The research program is over four years, so we're in the early stages of that at the moment.

**Senator GROGAN:** When we will be likely to see the first results from that adaptation program?

**Mr Reynolds:** I might just ask Dr Coleman, who's got more familiarity with that exact detail.

**Dr Coleman:** The research program commenced mid last year. It runs for four years, from the middle of 2021 to the middle of 2025. We're expecting the first results from this research program to come out in the middle of this year or possibly September, depending on how the research goes.

**Senator GROGAN:** Great. I hope you haven't moved all the way to the table for no good reason. I'm terribly sorry. I'm trying to be quite on task here; I'm trying to cut things down so that everyone can go home, so bear with me.

**CHAIR:** Thank you, Senator Grogan—no need to apologise.

**Mr Metcalfe:** Chair, I think we've got the inspector-general on call. I'm just checking whether he is in fact required.

**Senator DAVEY:** I have a few questions for him.

**Mr Metcalfe:** Right. Okay.

**CHAIR:** Thank you for checking, Secretary. Do you have something that you need to update?

**Mr Metcalfe:** We might do that at the end, if that's okay.

**CHAIR:** Alright.

**Senator GROGAN:** The National Water Grid—my understanding is that the National Water Grid has \$3.5 billion for water infrastructure.

**Ms Purvis-Smith:** Yes, that's correct. It's a \$3.5 billion funding program.

**Senator GROGAN:** How much has been spent so far?

**Ms Purvis-Smith:** I can give you a few details. There's \$1.9 billion committed so far. Uncommitted is \$1.5 billion. Would you like contracted?

**Senator GROGAN:** Yes, that was my next question. You know the list. You just roll through it.

**Ms Purvis-Smith:** That's right. I came prepared from last time. Contracted is \$1.6 billion.

**Senator GROGAN:** How many are at a stage where they've got a completed business case.

**Ms Purvis-Smith:** What I have is part of the committed but non-contracted. There is \$374.9 million of the committed that is yet to be contracted, so the rest of that is contracted, and we contract with the states and territories.

**Senator GROGAN:** Excellent. And the \$160 million National Water Grid Connections funding pathway?

**Ms Purvis-Smith:** That is the connections pathway that is part of the \$3.5 billion, but I can take you through—

**Senator GROGAN:** Yes, just what that segment is doing.

**Ms Purvis-Smith:** That is \$107 million for 40 projects within seven packages. I'll see if I have information on contracted. Someone has just advised me that they are all contracted. As at 31 December, nine projects have commenced construction works, and 27 are expected to commence in the first half of this year, 2022.

**Senator GROGAN:** Have they all been announced?

**Ms Purvis-Smith:** I think they have all been announced, yes. In fact, it's up on our website, the National Water Grid website. They're all up there.

**Senator GROGAN:** You say it's \$107.

**Ms Purvis-Smith:** That's right.

**Senator GROGAN:** I think I had a figure of \$160.

**Ms Purvis-Smith:** When the program was first announced, \$160 million was the funding envelope, and then states and territories had to bring forward and apply for and provide projects that they would like funded. Part of the eligibility criteria was that the Commonwealth would fund a maximum of \$5 million per project, up to a



maximum of \$20 million per package for each jurisdiction. So it really depended on what the states and territories came forward with.

**Senator GROGAN:** Right. So some of them haven't used the whole value?

**Ms Purvis-Smith:** That's correct, and the ACT did not bring any forward.

**Senator GROGAN:** What happens to that remaining money?

**Ms Purvis-Smith:** That has stayed in the National Water Grid Fund.

**Senator GROGAN:** That would then be used for some of those other grid scenarios.

**Ms Purvis-Smith:** It'll be part of the uncommitted money.

**Senator GROGAN:** And it would just be moved into something else. Lovely. Thank you very much. You've been very helpful. Where am I going now? Constraints management.

**Ms Connell:** I'll just ask Dr Derham to come back to the table.

**Senator GROGAN:** I will initially flag that I did miss some bits when questions were being asked about this, so if I double up, please tell me and I'll just go back and read the *Hansard*.

**CHAIR:** That is the first time I've ever heard somebody say that they will go—

**Senator Duniam:** I'm just going to say that that's exemplary. Can you go back to caucus and say that this is how it should be done?

**CHAIR:** I know. This is an A-plus. Thank you.

**Senator GROGAN:** The constraints management strategy was adopted in 2013. Has there been any work done to quantify what the reduction in flood risk would be for rural communities, if all is implemented?

**Dr Derham:** The Murray-Darling Basin Authority's Mr Reynolds would be better placed to answer that.

**Mr Reynolds:** There hasn't been work done explicitly around what the flood mitigation would be. The constraints management strategy's about enabling flow rates greater than we currently regulate through the river system and managing the impacts of those. States, as part of their program development, need to consult with their local communities, and they're committed to doing that, around what the mitigation of those impacts of higher flow rates would be. That will, ultimately, determine what sorts of flood impacts there are.

One of the challenges is understanding, if the system is operated at higher flow rates and there's a subsequent rainfall event or something, what the impact of that might be. That's part of the program development, to work through those issues. There hasn't been a quantification of that flood risk at this point.

**Senator GROGAN:** That's nine-odd years that the strategy doesn't benefit, would you think, from understanding what it potentially is going to result in?

**Mr Reynolds:** I think the constraints management strategy is about enabling the river to run at higher levels and managing the impact. At natural flood events, up to those limits of whatever that flow rate ultimately is, there would be some benefit to local communities about the mitigation of the impacts of those events. In terms of quantifying that, either in a financial or frequency aspect, that has not been done.

**Senator DAVEY:** Can I also highlight that the constraints management strategy concept, which was in the Basin Plan, is there. A strategy per se has not fully been developed. There are five different areas where a strategy has to be developed. I'm not sure if any of them are finalised, at this point?

**Mr Reynolds:** No, the projects themselves are to define and settle on the flow rates and settle on the mitigation works to manage those flow rates. That's what the projects entail.

**Senator GROGAN:** It was announced in 2013 and it's still not done. Is that what you're saying?

**Senator DAVEY:** Pretty much.

**Senator GROGAN:** That's a bit alarming, though, isn't it?

**Senator DAVEY:** Try living there and being one of the communities that wants to see an outcome, an agreement, some sort of indication of what is planned.

**Senator GROGAN:** Mr Reynolds, I wonder if you could address that issue?

**Mr Reynolds:** The delivery of those projects, like the SDLAM adjustment, the SDL adjustment projects, is with the states, and the states need to take those projects forward. South Australia is reasonably well progressed, and New South Wales and Victoria are undertaking community consultation around those activities.

**Senator GROGAN:** 'Well progressed' after nine years sounds a bit short on delivery. Is there a reason?

**Mr Reynolds:** They certainly are very challenging projects. The understanding within the community as to what the projects will deliver and what those outcomes might be is something that has been quite contentious, and the states are continuing to work on those issues.

**Senator GROGAN:** I think it's quite alarming. One of the aspects of the strategy is the negotiation of easements with private landholders.

**Mr Reynolds:** That could be one of the elements of managing a high flow rate, yes. Potentially, it's a flood easement.

**Senator GROGAN:** And it is in your strategy piece, I believe.

**Mr Reynolds:** It's part of the concept that the constraints management strategy is based on, yes.

**Senator GROGAN:** To relax the constraints on their land. Is that still part of the strategy? It was there in 2013.

**Mr Reynolds:** It's one of the elements that states would be looking at as a way of managing the impacts of operating rivers at higher flow rates, yes.

**Senator GROGAN:** How many private landholders would fall within the scope of that work?

**Mr Reynolds:** I think across all of—there are several thousand landowners or properties that would be, potentially, impacted along the Murray.

**Senator GROGAN:** Have any of those easements been agreed, to date?

**Mr Reynolds:** The states are implementing that program. I'm not aware that they've actually settled on easements at this point in time, no.

**Senator GROGAN:** This strategy keeps sounding better and better, doesn't it! Am I right to say it's a 10-year strategy?

**Mr Reynolds:** The constraints management strategy is to relax the restrictions on the flow that we can get through the river system and manage it in perpetuity.

**Senator GROGAN:** But it's a 10-year strategy that's got less than two years left on it.

**Mr Reynolds:** The plan for implementation is through to 2024, yes.

**Senator GROGAN:** Are you anticipating not delivering on this, or are you anticipating some sort of Herculean experience in the next two years to deliver?

**Mr Reynolds:** The states can continue to work on this program. The deadline is there. They're committed to progressing it and they continue to undertake those consultation activities.

**Senator GROGAN:** What I'm hearing is that the states aren't pulling their weight, or they're not making the kind of progress that would deliver us the 10-year strategy. What is the Commonwealth's plan to get the states to deliver, or do you just have to suck up the fact that it won't happen, or that it does not look very likely to achieve the ends that it set itself in the beginning?

**Mr Reynolds:** It is part of the sustainable diversion limit adjustment mechanism. It is a key part of that. The states have indicated a commitment to pushing on to the 2024 deadline, and that's what we continue to work to.

**Senator GROGAN:** Thank you. I'm done.

**CHAIR:** What perfect timing. Mr Secretary.

**Mr Metcalfe:** Earlier today—I think Senator McAllister asked the question, but we can check on that—the department undertook to come back with an update in relation to the plan for delivering the 450 gigalitres. We've worked through today to provide an update of the many activities that are underway to work towards that 450 gigalitres, of course noting that there is over \$1.5 billion of resourcing available to assist with that. In tabling that update for the information of senators, and doing it today rather than on notice, I know that the minister wanted to make a few comments.

**Senator Duniam:** Just with some of the points that have been provided to me. The Australian government is committed to and has a plan for improving progress towards the achievement of the 450 gigalitres to provide enhanced environmental outcomes in the basin. As the secretary said, over \$1.5 billion is available in the Water for the Environment Special Account for the specific purpose of recovering 450 gigalitres. The first review of the Water for the Environment Special Account, 2020, found that the recovery of 450 gigalitres of additional environmental water was not on track to be achieved by 30 June 2024 without significant intervention. The way forward lies in an approach that maximises water recovery for the environment while minimising impacts on farmers and communities. That's why the Australian government is recovering water through investment in off-

farm water infrastructure, which includes urban and industrial projects, rather than further buybacks, which have impacted communities. Projects funded under the program will improve the efficiency of water delivery infrastructure and increase the volume of water available for irrigators and communities. They will also help us to reach our river health targets of returning 450 gigalitres by the month of June 2024.

Minister Pitt has acknowledged that generating 450 gigalitres of water savings by 2024 is a tall order, but the government's commitment is to push as hard as we can to make our irrigation networks as efficient as possible. Minister Pitt has called on the Murray-Darling Basin states to nominate infrastructure projects through the Off-farm Efficiency Program, which includes urban and industrial projects, which can generate water savings for the environment without taking water from farmers. The MDB Ministerial Council has committed to and has a strategic focus on implementing the Basin Plan, including delivery of supply and constraints efficiency of 450 gigalitres and also toolkit measures. I think the secretary has tabled that document already. Yes.

**Senator GROGAN:** Can I just make a reference to that very quickly? You were going to bring us an update on projects and suchlike.

**Mr Metcalfe:** That's what I've tabled.

**Senator GROGAN:** Assistant Minister, maybe I could ask you a question at this point. Your colleague Damian Drum MP, from the National Party, has referred to the 450 gigalitres as something the plan is demanding be flushed down the river and that it can't be delivered—and this is his quote—'without causing incredible pain and damage to the agriculture sector.' We had a little conversation this morning—

**Senator Duniam:** So I understand; I've been advised this was canvassed this morning.

**Senator DAVEY:** You just heard about the constraints management strategy. That is one of the reasons why it can't get down. It's because we haven't done that.

**CHAIR:** I just want to flag that we have a hard marker at four o'clock. People have questions. Ask the question, and let's keep going.

**Senator Duniam:** Are you trying to marry up what was said with what I have just read out?

**Senator GROGAN:** No, it's just that you're talking about the 450 gigalitres; you're talking about a commitment to it. Part of the challenge I see is that on one side—we speak to Minister Ruston about this all the time. She's very committed, she's very passionate and she, like me, lives in South Australia and is very connected to the river. Then we see all of the shenanigans from the National Party, which is part of the coalition and, hence, your partner, and there's this divide. We all know that not everyone gets along all the time. But this is a very important and critical piece of work, and there's this divide in your coalition. I just want to put to you something that Bridget McKenzie said. As you were probably briefed this morning, we were talking about the amendments—

**Senator Duniam:** I was actually watching it in my office this morning, which might be considered sad, but I was taking it—

**Senator GROGAN:** I'm going to go with 'committed'.

**Senator Duniam:** That is not what my friends tell me, but anyway.

**Senator GROGAN:** When that whole scenario was going down, with the amendments being put forth—and I've tried to adapt my language here, so let's have a crack and see how we go—it included legislating for no more buybacks, renegeing on the 450 gigalitres and removing the 2024 deadline. That was the amendment. It didn't progress; it didn't get voted up, but Bridget McKenzie said that the Nationals would continue to agitate around these changes. She also flagged that the issue would form part of the new agreement for your coalition. My understanding is, after each election, or around every election time, you renegotiate the deal between the Liberals and the Nationals to form the coalition. She said, on the record at a press conference, that this is going to be one of the key things that they use in the negotiation for the new coalition agreement. Can you give us a sense of what that might look like? How worried should those of us who are committed to the Basin Plan, and committed to the Murray Darling river system, really be?

**Senator Duniam:** As has already been referenced, the general issues you're referring to have been canvassed at length this morning. I've made pretty clear—and it largely echoes what Senator Ruston said in her attendance this morning, and the comments she made—the commitment the government has to what we've outlined here in the documents being tabled around the tangible elements of that, what it's looking like on the ground and what it will look like into the future. That's the government's position. As you said, there are often discussions; there are references made to differences of opinion. No-one likes seeing the sausage made, but the end product is very tasty.

**Senator GROGAN:** Not right now it isn't, if it's the Murray-Darling Basin you're worried about.

**Senator Duniam:** When you have a chance to look at that document that's been tabled, you'll probably have a different view. We're committed to it, and that's where we're going.

**CHAIR:** Senator Roberts, I believe you have one question before we release the agency.

**Senator ROBERTS:** Mr Reynolds, you gave us a statement here at Senate estimates on 28 May 2021, and I'll just read from that:

Finally, the March rain has delivered a more positive forecast for the next irrigation year compared to the same time last year. Indicative opening allocations for next year under a conservative extreme dry scenario are ...

Then you gave us the releases. In fact, the rain in that period was well above average, with some areas experiencing record falls. This is from your website. Even the area in red is now blue. I'm not blaming you for the weather forecast, by the way. Dam levels are from 92 per cent. It seems that farmers always start with minimal water allocations and then later, after the season, farmers get offered some more that farmers can't use. So farmers have missed an opportunity to make more money. Surely this has to stop. Who provided the 'extreme dry' scenario? When was it changed to 'pouring down', as in this year? Did the use of the 'extreme dry' scenario cause farmers to lose early season water allocations?

**Mr Reynolds:** No, it doesn't. When we do our analysis, we model a range of scenarios. I don't recall exactly the words in that statement, but I would have quoted from one of those scenarios, which was extreme dry—very conservative. States, under their allocation frameworks, provide the allocation to irrigators. The MDBA's role is to advise the states on the volume of water they might expect to have under a range of scenarios. States adopt a conservative approach to allocating water to make sure they don't over-allocate early in the season and are unable to deliver it later in the season—that is a much poorer outcome. When the MDBA provides advice to the states on the water they might have available, we provide them a range of scenarios, not just the extreme dry, and they work within their own allocation framework on where they actually make an allocation decision.

**Senator ROBERTS:** On whose advice do you base that consideration?

**Mr Reynolds:** The MDBA does the statistical analysis of projected inflows for the season and develops those estimates of the volumes of water that might be available to each of the states, applying the water sharing arrangements that are specified under the Murray-Darling Basin Agreement. The states then use their allocation frameworks and their assessment of the appropriate level of risk in making allocation decisions.

**Senator ROBERTS:** Thank you. Chair, we understand that there was a discussion about Yanco, which I hadn't intended asking questions about. We're going to evaluate the Yanco decision, because it is significant to us, but I'm not going to ask questions.

**CHAIR:** Thanks, Senator Roberts.

**Ms Connell:** Chair, can I make a correction to the record. I advised the committee that the advisory group to the water market reform road map had met four times. They have met three times, with a fourth meeting organised.

**CHAIR:** Thank you. I believe we can now release the department. Thank you. It's been a big day. There was something else is going to say that this useful, but it has escaped me. Thank you. You go with our thanks.

**Mr Metcalfe:** Thanks very much, Chair. I'll stay, as is the custom, but my colleagues will take their leave of you after a long week.

**CHAIR:** Yes, it's been a long week. Thank you.

**Senator GROGAN:** Thank you very much. We really appreciate all your contributions.

**Mr Metcalfe:** Chair, on indulgence: knowing the long history of discussions, I thought there were some good questions today. But I've been reading a learned article written in the *University of New South Wales Law Journal* back in 2007 about water and the federation. I'll quote a couple of sentences:

During the development of the Australian Constitution—

which is now 130 years ago—

water was of major concern to many of those participating in the Constitutional Convention Debates. The portions of those debates devoted to the Murray River and its tributaries, and the right to use the waters therein, were some of the most heated and protracted. The records are rich with veiled insults, rhetoric about resorting to arms and threats to derail Federation.

And it notes that Prime Minister Deakin said in 1902:

[T]his is probably the most complex—I might almost say the most obscure—part of the whole Constitution; and it will be extremely difficult to determine—first, what are our rights and powers; and next, the most tactful and effective way of asserting them.

So I just want to congratulate the committee on maintaining a long tradition without resorting to arms!

**Senator GROGAN:** I was actually just going to ask you, Mr Metcalfe, whether you are suggesting we take up arms!

**Mr Metcalfe:** I'll leave that to you, Senator!

**Senator ROBERTS:** We also commend our forefathers for getting yet another thing right.

**Mr Metcalfe:** A lot of the constitutional debates were on this very issue.

**CHAIR:** Thank you, Mr Secretary, because that is exactly what I was going to refer to. It is interesting to see our state colleagues reform their states' rights and protections and arguments in this place. I guess that's why the Senate was formed, to ensure that all states are represented.

**Senator ROBERTS:** Hear, hear!

### Interim Inspector-General of Water Compliance

[15:30]

**CHAIR:** I now welcome via videoconference the Inspector-General of Water Compliance. Do you wish to make an opening statement?

**Mr Grant:** Thank you, Chair, and good afternoon. I'll just make a short statement, given the time of day. I appreciate the opportunity to meet with you again, the last time being in October. Since that point, the office has progressed extraordinary well through our work priorities. We're on track to deliver significant outcomes from those reports in a matter of weeks and near months. I'm referring to the work on the CEWH, the river operations and the Pearson review, and also a substantive body of work that has been done in relation to metering.

I'm joined today by Deputy Inspector-General Blacker, who is in charge of the regulatory component of our office, and by Deputy Inspector-General Leopold, who looks after capability. Our office has 28 staff, excluding my position. We're currently at 22.4 FTE and we're in the process of filling those 5.2 vacancies. As part of the recruitment process we have three staff seconded from other state and federal bodies and three labour hire contractors. For instance, we're working with NBAN, MLDRIN and Indigenous [inaudible] over weeks to ensure that they can provide us with some assistance from the Indigenous community for potential applicants for those roles.

In addition to that we reached out to Senator Wyatt following the last Senate committee hearings, regarding the transfer of responsibilities to him of the program. That was under some conjecture at the last committee hearing. We're very—

**CHAIR:** Sorry, Mr Grant, it's Minister Wyatt. We don't want to promote him accidentally!

**Senator Duniam:** This is all on *Hansard*!

**Mr Grant:** He's already a gentleman and a scholar!

**CHAIR:** Indeed! I'm sorry to interrupt.

**Mr Grant:** Our staff remain located throughout the basin, as well as in a couple of city offices. We currently have seven live investigations in hand. We have two investigations that came in to our field officer at Loxton, and those have been referred to the South Australian authorities for investigation. We have two compliance audits currently underway, three accounting audits and one insurance audit. The MOU for developing the basin [inaudible] will be completed as a single MOU within the first quarter of 2022 and we'll publish that.

With that, we're very happy to answer any questions.

**CHAIR:** Senator Davey.

**Senator DAVEY:** I have a lot of questions! Thank you very much for appearing today, Mr Grant—

**Mr Grant:** It's nice to see you, Senator.

**Senator DAVEY:** My questions are particularly around the review of metering. You're undertaking an audit into metering and compliance across the basin. I was expecting this audit to be released in February, but I understand that it has been delayed—is that right? Can you tell us why it has been delayed?

**Mr Grant:** We have two bodies of work. I'll hand over to Mr Blacker in a moment to take you through those precisely, but we have two bodies of work that are being undertaken, and one of those came across with the office of compliance when we were mugged. We've been working also with the contractor Baringa in relation to that.

Our inquire and review section is doing a body of work, and our standard and assurance team is also doing work on that. I'll hand you over to Mr Blacker and he'll give you a precise update on the timing and status of those pieces of work.

**CHAIR:** Just before you hand over, would we be able to get a copy of your opening statement tabled? Senator Grogan believes it might have answered some of the questions she would otherwise ask.

**Mr Grant:** I made most of it up as I went. It was off the cuff.

**Senator GROGAN:** I thought he looked like he was running off something. I'm sorry. That's fine. I'll have to ask you the questions again.

**Mr Grant:** I was reading off points. I could reconstruct it and give you the same points. It's not a prepared speech.

**CHAIR:** Thank you. Just send through the points, if you like.

**Senator GROGAN:** Send through the points and I will have a quick look over them then I won't ask you the questions.

**Mr Grant:** I'm happy to answer your questions.

**Mr Blacker:** We are really interested in three things in relation to metering. We've been particularly looking at the commitments made by states over a long period of time and they do go across multiple governments for some period of time. Metering was promised as part of the National Water Initiative in 2004. It was part of the national framework for non-urban water metering 2009. It was recently recommitted to through the Metrological Assurance Framework update and every independent review has pointed to more accurate and widespread meters as essential reform. That is what is driving our regulatory priorities in relation to metering. [inaudible] work in recent months to look at the [inaudible] market. We heard a number of concerns from people about aspects of the ability of the supply market to deliver with the scale of the reforms [inaudible]. We know that they are technically challenging and logistically challenging as well.

We have done some research to break down the supply chain looking at supply, delivery, installation and validation of meters and each of the subcomponents that water users need to step through to become compliant. So we have mapped those individual elements and we've looked for any barriers in the supply market against each of those individual elements. We are confident that the commercial markets for non-urban water meters can meet demand for AS4747 metering requirements by 2025, which is the compliance compact commitment by all jurisdictions.

There is adequate supply of compliant meters between 40 millimetres and up to 1,800 millimetres pipe size. It is often said that large meters are not available, but the evidence we have obtained suggest that they are available. There are [inaudible] available meters, which are compliant with the Australian standard requirements and eight of those meters are available in the pipe size up to 600 millimetres. [inaudible] the market [inaudible] looked at the reform progress across the basin and we've been looking particularly in New South Wales at lessons that could be learnt for future tranches of water metering reform, whether they are in New South Wales or [inaudible].

**Senator DAVEY:** When it comes to compliance, and I understand AS4747 is the standard, does that also require telemetry?

**Mr Blacker:** As I mentioned earlier, we are looking at three particular elements: coverage, accuracy and timeliness [inaudible]—

**CHAIR:** Unfortunately, your sound is breaking up. Could you try holding your microphone closer to your mouth or turning off your vision.

**Mr Blacker:** Apologies. We are looking at three elements of the metering reforms, particularly. We are looking at the coverage: making sure that there are meters present. We're looking at the accuracy: making sure that they have Australian standards accuracy, which is a plus or minus five per cent error rate. We're also looking at timeliness. Timeliness comes out of two places: it comes out of the compliance compact in 2018 and it also comes out of the metrological assurance framework agreed to by all jurisdictions in April 2021. We know that at the moment New South Wales is rolling out telemetry as part of their metering reforms, and we have recommendations as part of the ACCC's inquiry that go to telemetry and the opportunity for telemetry in South Australia. We also think, based on our previous audits, that applies in Queensland as well.

**Senator DAVEY:** When you produce your report, here's a request from me—I think I've been asking this since even before the IG's office came about—to provide a simple matrix that actually shows like-for-like comparisons. I know in the past the reports have said, 'The state is X per cent compliant,' but they're compliant with their state rules, not necessarily with the compliance compact rules. Can we get a simple matrix that shows

like-for-like comparisons between the basin states, including a column on how many meters are in the state, how many are fully compliant with AS 4747, what the timeline is to compliance with 4747, and where there may be grandfathering clauses?

I believe South Australia has got a policy that meters installed prior to July 2019 are exempt from the new metering standards. I also believe Queensland has decided that pumps over 400 mils are exempt from the AS 4747 standards because they're too large, which goes against the evidence you've just given. I also believe that Victoria is concerned about the cost of replacing existing meters before the end of their operational life because they're not AS 4747. It would be really handy for the committee if we could get that simple breakdown so that we knew that we were actually comparing apples to apples instead of comparing state jurisdictional rules to different expectations in different states. Would that be possible?

**Mr Blacker:** Yes, that is exactly what we're working on at the moment. We've already been out to all jurisdictions requesting that data so that we can produce that like-for-like comparison across the basin and give that complete national picture of metering reforms. You mentioned there the Queensland metering policy. We are engaged with the Queensland department on that matter at the moment and are expressing our expectation around Australian standards. We're also engaging with all jurisdictions on metering data to make sure we can produce that simple report. We, like you, have heard when we've been out and about across the basin that people are after a really simple, short, sharp, infographic-style document that can show in a simple way what is happening in metering reform.

**Senator DAVEY:** Are you getting full cooperation from the states insofar as them providing that sort of data and information to you and in a timely way?

**Mr Blacker:** Yes. We have received data from all jurisdictions except one, and we are working with Victoria to finalise an MOU as a prerequisite to Victoria providing that. They're looking for the formal collaboration arrangements before providing that data to help inform the report.

**Senator DAVEY:** Finally, Mr Grant, you said you had live investigations ongoing. Are these compliance investigations, and can you give us a brief overview about what you're investigating?

**Mr Grant:** Absolutely. No. 1, basin compliance water trading rule investigation in the Victorian Murray. The issue is unrestricted access to water trade, Basin Plan, as part of chapter 12, part 2. I will provide a list of this to the committee, if you like, or do you want me to read them all out?

**Senator DAVEY:** Can I get both? Just the headlines now, but if you then provide us with a list we can investigate a bit more.

**Mr Grant:** Sure. No. 2 is water trading rules relative to sensitive water market information; that's in Menindee Lower Darling. No. 3 is also water trading rules in the Murrumbidgee, allegations of trade barriers with an IAO. No. 4 is another trading rule one, statewide in New South Wales—a potential restriction on trade. No. 5 is Murrumbidgee, unrestricted access to water trade, another trading rule. No. 6 is the Water Act compliance issue. That's relative to the last Senate committee hearings that we were at—the WESA review, section 86AJ. Today I received a report of that investigation. No. 7 is another water trading rules issue basin wide regarding trade price reporting. The two that have been referred to South Australia to those authorities, to our field officer there, was an allegation of an illegal pump site and an allegation of an unfair penalty notice being issued. They sat with the state jurisdiction.

**Senator DAVEY:** That's an example of where it's really important that you continue to work with the states to have that power to refer issues that come to you.

**Mr Grant:** Absolutely. It's a two-way street. Anyone can refer any complaint they want to us. If it's not within our purview or our legislative remit then we refer it to the appropriate jurisdiction.

**Senator DAVEY:** Thank you. That's all from me.

**CHAIR:** Thank you, Senator Davey. Senator Grogan.

**Senator GROGAN:** You did talk in your intro—but I didn't quite catch it because the sound was a bit crackly—about the legal proceedings you've got on foot. Can you give us a quick rundown?

**Mr Grant:** That was the list I just read out then—those investigations.

**Senator GROGAN:** Just the total number?

**Mr Grant:** It was seven live and two others—

**Senator GROGAN:** Two compliance?

**Mr Grant:** The categories? Six of those seven are water trading rules and one of those is water compliance.

**Senator GROGAN:** Thank you. The last time we were at estimates, you advised that your office had three officers attached to an office in Adelaide. Can you elaborate a bit on your presence across Adelaide, South Australia, and the kind of work that your officers have been undertaking?

**Mr Grant:** Just in Adelaide?

**Senator GROGAN:** Yes. I'm very parochial.

**Mr Grant:** Yes, okay. I love Adelaide, and Loxton I'm particularly fond of. I will refer to Deputy Inspector Leopold to make sure I get this accurate, but two of them are in the audit and investigation team. If I could just get confirmation from my deputy on the third, on which team she sits in?

**Ms Leopold:** In inquiry and review.

**Mr Grant:** That's the Adelaide office. Then we have our field officer at Loxton and we have a standards and assurance team member also at Loxton.

**Senator GROGAN:** Do you get across to Loxton or Adelaide to visit with these officers much, even in COVID times?

**Mr Grant:** Yes, I do. I've been to Loxton I think three times. We opened the office down there and had an official opening. I get down to Goolwa as well, down to the barrages. Yes, I get around as much as I can—as you rightly say, limited by COVID, unfortunately. I'm very keen to get out and about more, and that will hopefully be possible this month onwards.

**Senator GROGAN:** Excellent. Well, we'll see you in Adelaide.

**Mr Grant:** I'll look forward to it. I'd be happy to meet with you any time. Just give us a yell.

**Senator GROGAN:** Thanks very much. And I just have one more point of clarification. You've tabled this list, but you didn't table your statement.

**Senator Duniam:** It will be in *Hansard*, but we could table that statement if you'd like, yes.

**CHAIR:** Thank you, Minister.

**Senator GROGAN:** Yes, because those numbers that you gave us in the beginning would be very useful.

**CHAIR:** Thank concludes today's proceedings. I thank Minister Ruston and Minister Duniam and all witnesses who've given evidence to the committee today. Thank you to all the department officials, and thank you to Hansard, Broadcasting, the secretariat and my colleagues.

**Committee adjourned at 15:50**