REPORT ON PROCEEDINGS BEFORE

SELECT COMMITTEE ON FLOODPLAIN HARVESTING

FLOODPLAIN HARVESTING

CORRECTED

Virtual hearing via videoconference, Sydney, on Friday 24 September 2021

The Committee met at 9:00.

PRESENT

Ms Cate Faehrmann (Chair)

The Hon. Lou Amato
The Hon. Mark Banasiak (Deputy Chair)
The Hon. Sam Farraway
The Hon. Ben Franklin
The Hon. Rose Jackson
The Hon. Adam Searle
The Hon. Penny Sharpe
The Hon. Mick Veitch

The CHAIR: Welcome to this virtual hearing for the inquiry into floodplain harvesting. Before I commence I would like to acknowledge the Gadigal People, who are the traditional custodians of the land on which Parliament sits. I would also like to pay my respect to Elders past, present and emerging of the Eora Nation and extend that respect to all Aboriginal people present. Today is the Committee's third and final hearing, and it is being conducted virtually. This enables the work of the Committee to continue during the COVID-19 pandemic without compromising the health and safety of members, witnesses and staff. As we break new ground with the technology, I ask for everyone's patience through any technical difficulties we may encounter today. If participants lose their internet connection and are disconnected from the virtual hearing, they are asked to rejoin the hearing by using the same link as provided by the Committee secretariat.

Today we will hear from a number of stakeholders, including legal experts; the Natural Resources Access Regulator; irrigators and other water users; local councils; the Minister for Water, Property and Housing, the Hon. Melinda Pavey, MP; and departmental representatives. Before we commence, I would like to make some brief comments about the procedures for today's hearing. While parliamentary privilege applies to witnesses giving evidence today, it does not apply to what witnesses say outside of their evidence at the virtual hearing. I therefore urge witnesses to be careful about comments they may make to the media or to others after they complete their evidence.

Committee hearings are not intended to provide a forum for people to make adverse reflections about others under the protection of parliamentary privilege. In that regard, it is important that witnesses focus on the issues raised by the inquiry terms of reference and avoid naming individuals unnecessarily. All witnesses have a right to procedural fairness according to the procedural fairness resolution adopted by the House in 2018. There may be some questions that a witness could answer only if they had more time or with certain documents at hand. In these circumstances, witnesses are advised that they can take a question on notice and provide an answer within 21 days of receipt of the transcript. Today's proceedings are being streamed live and a transcript will be placed on the Committee's website when it becomes available.

Finally, I will make a few notes on virtual hearing etiquette to minimise disruptions and assist our Hansard reporters. I ask Committee members to clearly identify who questions are directed to and I ask everyone to please state their name when they begin speaking. Could everyone please mute your microphones when you are not speaking. Please remember to turn your microphones back on when you are getting ready to speak. If you start speaking whilst muted, please start your question or answer again so it can be recorded in the transcript. Members and witnesses should avoid speaking over each other so we can all be heard clearly. I remind members and witnesses to speak directly into the microphone and to avoid making comments when your head is turned away.

BRET WALKER, Barrister, Fifth Floor St James' Hall, affirmed and examined

The CHAIR: I now welcome our first witness. Mr Walker, would you like to begin by making a very short opening statement?

Mr WALKER: Yes. More than two and a half years ago, I published my report as the royal commissioner for South Australia with respect to the Murray-Darling Basin. In its chapter 14, I addressed quite a few matters that at least overlapped considerably with what I understand to be the concerns of this Committee. I hope there is some useful consideration to be found in that chapter for the purposes of this Committee. It will be clear, I think, from what I wrote back then that I took the view that floodplain harvesting was so long overdue for governmental attention that it was becoming a real embarrassment in water regulation in the eastern States. One of the problems is that this State, which is hydrologically terribly important and perhaps the most important of the jurisdictions involved with the basin, has for a very long time tried to adjust political, legal and economic considerations—not very successfully—in relation to floodplain harvesting. It may be that culturally, and in a very understandable way, the intermittent and sometimes disastrous flooding—that is, having too much of the good thing water—has really removed floodplain harvesting from proper hydrological regulation.

Generations ago, I can well imagine how measurement of a flood and its extent, let alone taking from it, would have been very challenging. But we have not done much governmentally to repair that technological challenge in, say, pre-war years. It does seem to me that one symbolic way of indicating today the gross inadequacy of the social and governmental history with respect to floodplain harvesting in New South Wales is to reflect on the obscurity to lawyers of the interrelation between the Water Act 1912, insofar as it survives as to what I will call its unrepealed effect or portions, and the Water Management Act, which of course contains, in theory, the State's latest governmental intentions with respect to, among many other things, floodplain harvesting. As a lawyer, and I mean this very seriously, I think it is a failure of our system if you need to be a full-time lawyer to understand law such as the Water Management Act. I have a perhaps naive but strongly held view that law is defective to the extent that you need to be a silk, as I am, in order to find your way around its provisions. I think that is a really serious aspect.

Reflecting for today on what I had written for you by way of an opinion, I would update one thing, and I mean this really seriously. When I urged that regulation of floodplain harvesting should be set about so as to be achieved with clarity, I should have added to that that it should also be intelligible to people who are not silks. I am not suggesting that it is particularly intelligible to me as a silk, and I really dislike, I have to say, the puzzle-making approach to legislative drafting of which the Water Management Act is not a particularly egregious example, but is still a bad example. I do not understand why statute cannot be written in such a way that farmers, graziers, regulators, parliamentarians and people concerned with the environmental effect cannot, without a single law degree among them, understand how it is that the public resource which is water has been regulated—I hope for the common good. I would urge, without any great optimism that it will ever be achieved, that the law be intelligible according to the standards of well-meaning but not legally qualified persons.

The one other thing I should add—I do not know whether it will come up in an answer to a question—but I have benefitted greatly from a discussion with a colleague, Mr Tim Horne, concerning the continuing effect in the areas still regulated by the 1912 Act. I probably have made an assumption in the way I have written my opinion. The assumption being that I was asked to address those matters that are regulated by the provisions that I was asked to address of the Water Management Act and thus understood the questions about the 1912 Act to be, as it were, inquiring about a possible overlap. There are of course areas where the Water Management Act does not reach, so to speak, and the 1912 Act has continued effect. However, I should make it clear that the 1912 Act does not in terms—I stress in terms—address floodplain harvesting.

There is an indirect possibility of an effect on the use of so-called works which could give rise in a relatively indirect fashion to the possibility of offences having been committed with respect to what we would call floodplain harvesting—that is, offences with respect to the 1912 Act. However, that will depend entirely upon a case-by-case factual determination of the use of works—and I stress the use of works. Where works can be lawfully used, there will be a very important question as to whether what I will call an incidental or intermittent use in terms of flood would amount to an offence. That is not a matter that I can possibly advise on in the absence of particular facts. It needs to be understood that the 1912 Act is, in my view, both obscure and indirect in any possible effect it may have upon historical floodplain harvesting.

The CHAIR: Thank you, Mr Walker. We will go straight to questions from the Opposition.

The Hon. ADAM SEARLE: Thank you, Mr Walker, for your opinion. The opinion you provided the Committee dated 15 September, you were specifically asked to advise whether floodplain harvesting offended against the various penalty provisions you were asked to comment on. That is correct, isn't it?

Mr WALKER: It is.

The Hon. ADAM SEARLE: In relation to 60A of the Water Management Act—I think it is at paragraph 10 of your opinion—do I understand your advice correctly that essentially that provision does not apply because the section 55A declaration was not made in a form that would capture floodplain harvesting within 60A?

Mr WALKER: Yes. I would go further and say I suspect—again with not much respect to those who are addicted to this puzzle form of drafting—it was actually intended to ensure that it did not apply. I am not suggesting that is sinister. I wish it could have been more direct.

The Hon. ADAM SEARLE: Indeed. At your paragraph 15 where you say it appears floodplain harvesting was not unlawful while the Water Act 1912 governed the position—

Mr WALKER: Yes.

The Hon. ADAM SEARLE: Section 392 of the Water Management Act currently vests all water rights in the Crown. Is that correct?

Mr WALKER: It does.

The Hon. ADAM SEARLE: And section 393 abolishes all common law rights to the taking of water in New South Wales. Is that correct?

Mr WALKER: It does. It is part of, I would call it, the splendid Australian initiative to put water in the hands of the people who should control it—that is, the people.

The Hon. ADAM SEARLE: If water is owned by the Crown and all common law rights have been abolished, if there is floodplain harvesting without a licence and without any approval from the Crown, does that offend in some way against the Water Management Act? Not necessarily constituting an offence, but would floodplain harvesting therefore be in some way in conflict with the Water Management Act?

Mr WALKER: That is a question which, as I know you know, requires consideration to the number of different ways the law views water. The first answer is, of course conduct can be unlawful without being an offence. That is common and sensible. Second, it can be unlawful both by statute and also at common law, such as torts of conversion and the like. There are also related torts, such as nuisance, by which, for example, one landowner may complain that another landowner has prevented the first landowner from enjoying a natural flow of water. Those are matters that are affected by Australian, first of all, colonial and then State parliaments deciding to reverse the English position and to put the dominion over water in the hands of the people in Parliament. However, water still remains something that flows and it is not sensible to speak of the ownership in terms of property of H2O molecules in any particular person, in my view, any more sensibly than it is to contemplate ownership of the molecules of nitrogen and oxygen in the atmosphere—that part of the environment rather than something which is, as it were, owned in the same way that I can own a pencil or a motor car.

For those reasons the unlawfulness—if it be unlawfulness—of floodplain harvesting in the sense of one person detaining and using water which is part of the public resource is probably not something which gives rise to any legal recourse for the past—damages et cetera. But it might of course give rise to the possibility of what I will call an administrative law injunction—that is, equity's jurisdiction to assist the law in this case declared by the statute. That would be a very clumsy and expensive way. I cannot imagine a more expensive way of regulating floodplain harvesting than leaving it to one-off ad hoc injunction applications in the equity division of the Supreme Court to regulate people's conduct with respect to floodplain harvesting.

The question really does raise, as it were, the thing that ought to have been considered more than 100 years ago. But if you do take the water resource into public hands, where I strongly believe it has to be, then it really is part and parcel of that control that you define what people can do, what people can't do and what sanctions will follow if the law is disobeyed. With respect to floodplain harvesting, that has never been done, including up to today, because although there are provisions that provide for it to be done, as you all know better than anyone else, it has not yet been done.

The Hon. ADAM SEARLE: So although it may not constitute an offence, floodplain harvesting may nevertheless, depending on the fact situation, offend against the Water Management Act and there may be legal consequences for that? Although, as you say, leaving it to equity might be clumsy.

Mr WALKER: Yes. Although that is the sharpest tool there would be. I think I have got to be really careful about saying it would offend against the Water Management Act. It would be conduct that sits most oddly with the general provision and provisions of the Water Management Act that make water a publicly owned and controlled resource. But that does not mean it is contrary to the Act because naturally enough a Parliament could, in certain circumstances, say of public resource; You, the people, may treat it as, if you like, the commons. So it

can be owned by the State for the people without needing regulation that would prevent particular individuals from having recourse to it. That is the centuries-old notion of the commons.

So, no, it does not follow that it is against the Act, but I have to say it is against what might be seen to be the political program of all the Water Acts of which I am aware from colonial times and for the last century or more. It is against the notion that there ought to be control. It does not mean there is an offence. It does not mean there is unlawfulness that it would be sensible to go to court to remedy. It does mean there is a crying need for the legislators to consider what to do. I myself think floodplain harvesting being treated as an aspect of the commons—that is, a public resource that anybody can help themselves to as they like—is absurd and totally at odds with the intergovernmental agreements that culminate, for example, in the Basin Plan.

The Hon. ADAM SEARLE: Under the Basin Plan there is this notion of the cap; that is the legislative requirement to limit surface water extractions to the level of development as at 1 July 1994. Floodplain harvesting was not expressly approved in New South Wales and was not subject to any licensing. Does it follow then that whatever take is being taken through floodplain harvesting does not fall within that legislated cap?

Mr WALKER: The short answer is I do not know. If I may put that a bit more sharply, and that is a sorry reflection on the political notion and use of the cap. The fact is that dubious legality, and that is as far as I think one can sensibly put it, with respect to some or all floodplain harvesting activities is not at all addressed, as you have made very clear, Mr Searle. It is not at all addressed in the way in which the cap was negotiated as a concept, let alone understood administratively in terms of volumes. I myself think it is far too neat—and probably wrong—an approach to say that no floodplain harvesting activities should ever have been regarded as contributing to the historical usage which constituted the cap.

That would appear to be at odds with what might be called the social justice of a lot of floodplain harvesting being notorious. That is well understood to be occurring by people who understood they were doing what they were entitled to do and, under the eyes of governments of all stripes that had no objection to it in a large amount of material historically—not statutes, but other administrative material—plainly regarded it as something that, as it were, came with the territory. If your land was the kind of land that would from time to time, as city people would call it, suffered floods, you were entitled to take the benefit. Those were days of course long before massive turkey nest shaped dams that—one could only imagine what gigantic turkeys some of them must have been because—

The Hon. ADAM SEARLE: Indeed.

Mr WALKER: —technology has moved on, earthmoving has moved on and lasers have a lot to answer for.

The Hon. ADAM SEARLE: The Commonwealth Water Act that sets out the legislative authorisation for the Basin Plan, if takes of water exceed the caps developed under the plan, that would be contrary to the Basin Plan and the Commonwealth water legislation. Is that a correct understanding?

Mr WALKER: Yes.

The Hon. ADAM SEARLE: So if the Government of New South Wales wanted to put in place a licensing arrangement for floodplain harvesting that had the effect of allowing the take to exceed the cap, that would not be lawful, whether that action was undertaken by the State department or the State Minister? It would be in conflict with [disorder].

Mr WALKER: It would be unlawful and can lead to action under the Commonwealth Water Act, which ultimately would remove from the State its regulation through water sharing plans, water regulation plans and water resource plans—control over matters within the State. That would be, I would have thought in Federal terms, a very bad outcome. It could also lead to more direct legal consequences, such as injunctions. Yes, it would be unlawful.

The CHAIR: Opposition time has expired. We will move to the crossbench. I will kick off with a couple of questions. Just on what you were just referring to, Mr Walker, the Murray-Darling Basin Authority [MDBA] has made a submission to this inquiry. They attached their floodplain harvesting position statement from June 2019, in which it said:

> When a new and better understanding of the volume of floodplain harvesting is determined it is likely that the baseline diversion limit for valleys where floodplain harvesting is occurring will change. Where this results in an increase this does not mean that there has been growth in floodplain harvesting. A change in the estimates of the baseline diversion limit simply reflects a more precise and certain volume of what was already legally being taken.

What is your view on that statement by the MDBA?

Mr WALKER: I have strong views about it. I will start with I strongly deprecate the intention that I impute to those who advance that as an argument. Do they or do they not plainly mean that the sustainable diversion limit is affected by the discovery of better information concerning a state of affairs at times in the past? Unless there is an answer to that direct question, those words that you have just quoted, with which I am very familiar, are, in my view, very mischievous. They dodge the central question, which has to do with the allocation between the protection or rehabilitation of the hydrological system against the historical consensus among governments that we—that is, the people—have been taking too much.

So the mechanism for controlling that by means that all of us can see transparently—usually volumetric measures of take—require fundamentally under the Water Act and the Basin Plan the establishment and observance of sustainable diversion limits [SDLs]. The MDBA, not for the first time, does not explain the legal reasoning by which the statement you have read would have any effect in terms of administration. If it means that the SDL floats around by reason of better intelligence being found, then that is simply wrong. The law stipulates otherwise concerning the adjustment of an SDL.

If it means that we should always be alert to getting better information, including about the past, I completely agree. I find it massively ironic that the MDBA, which devoted resources to denying my Royal Commission access to information, now would like it to appear that it is happy for information to be revealed and improved. I am very anxious for information to be revealed and improved about historical take from the system. I am very annoyed, to put it mildly, that the MDBA still will not engage with the requisite legal analysis of how, in particular, an SDL may be adjusted. It cannot be adjusted by somebody simply producing another research paper.

The CHAIR: I certainly wanted to ask the MDBA these questions, but we have issued two invitations to the authority to appear before this Committee, both of which they have rejected. Do you have an opinion about that, Mr Walker?

Mr WALKER: Yes, I think it is disgraceful conduct and it has got nothing to do with its legality. This is meant to be a Federal nation—a Federal nation. I simply do not understand how the MDBA and any Ministers who are affecting this conduct by the MDBA can regard it as in the national interest that there should not be a complete sharing and unafraid exposure to debate and investigation of all the material—legal, hydrological, economic, agricultural, social—that the MDBA needs to be on top of. My own view is that it reflects very poorly on the Commonwealth that it continues, as it has for about 100 years, to regard itself as standing apart from and immune from the investigation capacity of the States. My own view is that the States ought to do something about it, particularly by stipulating in every intergovernmental agreement that nothing will happen unless there is an unconditional acceptance that the organs of the State can investigate by compelling material from organs of the Commonwealth.

The CHAIR: Thank you. I think my time is almost—well, it is, actually. It is just beaten by the clock, as they say. I will now pass the time over to Mr Mark Banasiak.

The Hon. MARK BANASIAK: Thank you, Mr Walker, for appearing today. In answers to Mr Searle, you talked about the linkage between the Commonwealth and the State, but also in your opinion you mentioned 2012. That was a fairly significant date though, wasn't it? The States essentially self-binded themselves to the Commonwealth, from which they can actually excise themselves within 28 days. Is that correct?

Mr WALKER: I am not sure I understood. I am sorry, I don't think I did understand.

The Hon. MARK BANASIAK: The date 2012, particularly November 2012, was when they signed that intergovernmental agreement, which essentially meant the States self-binded themselves to the Commonwealth and are able to excise themselves. I want your comment on that with regards to your comments to Mr Searle where you said that potentially there could be injunctions on the State because of their non-adherence.

Mr WALKER: I do not know what it means to self-bind. If you mean there was an intergovernmental agreement, what thereafter occurs with respect to the statutory effect of Commonwealth legislation, in particular the Water Act, is a straightforward question of law that has to be obeyed, and Commonwealth law is paramount over State law. I am not sure whether that is getting at what you were saying. States do not get a choice about whether they comply with applicable Commonwealth legislation; they are bound.

The Hon. MARK BANASIAK: You mention the 1912 Act in your advice, and we heard evidence on Wednesday from Horne Legal that the part 8 renewals from 1912 did not constitute a licence. Therefore, floodplain harvesting was never licensed; therefore, it was illegal. In your view, were those part 8 renewals not necessarily a licence but at the time considered a property right that had to be transferred to the Water Management Act of 2000?

Mr WALKER: I am aware of historical material—by which I mean what bureaucrats et cetera thought they were doing—which would actually strongly support what you have asked me to consider; that there was this unfortunate analogy drawn between the permissions, formal or informal, under the Water Act and property. As a lawyer, I regard that as very sloppy thinking and very unfortunate, but, if I may say so, a forgivable notion—that is, such permissions are plainly valuable. We, as humans in society, tend to regard things which are valuable as property. That is not always true, obviously. So I think you are absolutely right. There has been a cultural tradition rather than a legal one that has seen these things as property. One of the difficulties about seeing it as property is it then tends to excite people's indignation about it being taken away without compensation. That is very unfortunate because, as you all know better than anyone, so-called water rights are always adjustable according to whether it has rained or not. [Disorder].

The Hon. MARK BANASIAK: Sorry, Mr Walker. Just picking up on that, if it was decided to essentially fully extinguish those Part 8 renewals and, therefore, there would be no floodplain harvesting, would there be a case for those people to apply for just terms compensation given the cultural—

Mr WALKER: No. That Parliament would have to provide for that. Parliament could provide for that, but there is no existing right of that kind. Do not ever forget that the States are not bound by the equivalent of the Commonwealth's 51 (xxxi) so there is no just terms constitutional requirement binding on the State. It depends upon statute from time to time.

The Hon. MARK BANASIAK: More on that interaction between the Commonwealth and State, who between the two has the responsibility or the right to allocate water rights? Is it the Commonwealth or the State?

Mr WALKER: A small book could be written in answer to that, and I am really glad that it remains a question in your minds. The short answer is both. That is a typical, unsatisfactory answer from a constitutional lawyer, but let me explain. By means that I have tried to explain in the early chapters of my Royal Commission report, the Commonwealth has undoubted power in a very comprehensive fashion to regulate aspects of the use of water in the basin. Whether it amounts to regulating all aspects of that is open to doubt. On the other hand, the States unquestionably, subject to inconsistent Commonwealth law, do have full power to regulate the resort to waters in their territory.

There are a couple of not particularly important constitutional provisions—that is, Commonwealth constitutional provisions that justify some footnote here but not for today's purposes. But by and large, the Commonwealth has large powers—probably not, on the face of things, as comprehensive as State powers—but I think, as I have set out in my royal commission report, the Commonwealth powers are broad enough to encompass what they have done in the Water Act. What they have done in the Water Act of course prevails over any inconsistent State legislation by reason of section 109 of the Constitution. That is a really longwinded way of coming back to where I started. Both have powers. It is not one to the exclusion of the other. But in the event of inconsistency, our Commonwealth Constitution says that Commonwealth law prevails by rendering the inconsistent State law inoperative to the extent of the inconsistency.

The CHAIR: We will now go to questions from the Government.

The Hon. SAM FARRAWAY: Good morning, Mr Walker. On behalf of this Committee, the Clerk of the Parliament obviously sought the independent advice from you around the legality of floodplain harvesting practices. I just wanted to confirm in what capacity were you invited to appear before the inquiry today?

Mr WALKER: I was invited by the secretary to the Committee. When you say "in what capacity", I have done a number of things which may have suggested I could say something useful, but that is for others to judge.

The Hon. SAM FARRAWAY: Sophie Baldwin, the CEO of the lobby group Southern Riverina Irrigators [SRI], wrote in the *Deniliquin Pastoral Times* on 14 September 2021 that the $230,000 levy "has allowed us to engage the services of Bret Walker SC, who is considered one of Australia's most formative minds on water". It goes on, "His report in the up and coming NSW Upper House inquiry confirms SRI's position," and that is that floodplain harvesting has never been legal. I just wanted to confirm a bit of context around that article. Have your services been engaged by SR Irrigators to provide a report to this inquiry?

Mr WALKER: No, not at all. That does not mean I have not had retainers for a number of different people and organisations, but there was no retainer from anybody except the Clerk on behalf of the Committee for this opinion.

The Hon. SAM FARRAWAY: So is it fair to say that your services have not been retained by SRI to act to matters that are pertinent to this inquiry?

Mr WALKER: For giving the opinion to this inquiry, absolutely. Not at all. There is no private—I have a number of retainers or briefs in relation to water and have had for quite a few years but none of them, of course, involves the task of giving an opinion to this Committee.

The Hon. SAM FARRAWAY: Thank you. What did your independent advice to this parliamentary Committee and inquiry find around the questions it asked on the legality of floodplain harvesting practices in New South Wales?

Mr WALKER: As I tried to explain in the opening statement, it is not possible without having facts of particular cases and circumstances fully to explore the legality of what I will call floodplain harvesting over, say, the last 100 years in light of the 1912 Act because the 1912 Act does not in terms address the question of floodplain harvesting. If it affects it, it does so indirectly by addressing the question of the use of works for which licences and permits are required. It gives rise to the question whether it follows that every time one's permitted rainfall run-off dam happens to be filled as well by floodwaters through floodplain flows as opposed to simple rainfall run-off, that your subsequent resort to that water as a farmer or grazier is floodplain harvesting of a kind which is beyond the use for which the dam was constructed. That will be a factual question to which it is not obvious to me at all that there will be a simple yes or no answer consistently, regardless of individual circumstances. The 1912 Act, alas, does not, in my view, address the question of floodplain harvesting as such. Our tradition legally is that a law that does not address an activity can scarcely be regarded as one that has created an offence in relation to it. That would be absurd and tyrannical.

The Hon. SAM FARRAWAY: You touched on almost needing a legal profession to understand water policy and law—

Mr WALKER: Not policy.

The Hon. SAM FARRAWAY: Not policy, water law.

Mr WALKER: You are the bosses of policy.

The Hon. SAM FARRAWAY: Yes—well, trying to be. With water law, I would go on to say that in your advice on 15 September, you did say that floodplain harvesting was a legal activity and was not unlawful.

Mr WALKER: Yes. I have expressed what I have expressed. Please do not misunderstand me. You talk about policy and law.

The Hon. SAM FARRAWAY: Well, it is a law.

Mr WALKER: It should be obvious from my opinion, as I hope it is obvious from my Royal Commission report, that floodplain harvesting is an activity that nowadays is crying out for regulation. All regulation means is that to conduct the regulated activity otherwise than in accordance with the regulation will be an offence or should be an offence or at least should expose you to an injunction. Don't get me wrong; I am not saying it should always have been lawful—far from it. I am not saying it should now be unrestricted and lawful. That would be terrible. But I am saying that I was asked questions about offences, and crime is a serious matter. No, there are not offences that operate at the moment.

The Hon. SAM FARRAWAY: Obviously you are saying that we are crying out for regulation. I made a note earlier—it was about 9:20—crying out for legislators to be involved and you just said also that people are crying out for regulation. When you look at environmental outcomes, in your view, how will more water flow to the environment if floodplain harvesting regulations are not in place and if it is not licensed, not regulated, not metred and if there is no compliance enforced? How will we get more water flow to the environment?

Mr WALKER: I think that goes to the heart of the matter. If floodplain harvesting were simply allowed to develop according to local practices without monitoring, regulation or enforcement of limits, then I think it is obvious to everyone that there is likely to be a reduction of an amount that is unknown but must be material in what I will call return flows into rivers. That is by no means the only environmental or hydrological consequence of unregulated and unmonitored floodplain harvesting, but it is one of the most obvious ones. So it is a way of answering your question by saying that of course there will be an effect not just on the environmental aspirations that the Basin Plan seeks to advance but also on indigenous enjoyment of flows and, very importantly, consumptive use downstream. It is no more complex than if you prevent water that otherwise would have flowed back into a river from flowing back into a river, then the river will not be as full as it would have been otherwise.

The Hon. SAM FARRAWAY: Following on, Mr Walker, what are the native title rights, in your opinion, over water?

Mr WALKER: As I am sure you realise, that also is a matter that is dependent upon particular circumstances that are required to be proved under the Native Title Act according to particular circumstances. But

there is no doubt, as that Commonwealth statute makes clear, that waters can be the subject of those traditional rights. They do not amount to what, in terms of settler's law, is ownership or control over water, but it certainly involves matters that can be described, as they have to be, in the determination of native title by respect to use of water and social and sacred significance of water responsibilities as much as rights. But you cannot generalise. It all depends upon the individual determinations for the individual claimant groups. On any view of it, and correctly, the Commonwealth Water Act, the Basin Plan and I think now social consensus requires that they always be taken into account.

The Hon. SAM FARRAWAY: In the South Australian Royal Commission, and obviously I note your opening remarks and your capacity then as the royal commissioner, you say that licensing and metering regimes for floodplain harvesting is necessary and it is remarkable that it has not been implemented in New South Wales. You also say that there is no objection in principle to the approach canvassed by New South Wales that would require floodplain diversions to be licensed. It is a pretty clear statement. Can you expand on that just a little bit for me and for the Committee?

Mr WALKER: Yes. You have got to pinch yourself to remember that it was in 2004 that by an intergovernmental agreement for the so-called national water initiative it was accepted that there needed to be, among other things, a close attention to floodplain harvesting. It was agreed in that that the States, including New South Wales, would implement such matters by 2011. That is 10 years ago. The things that were required to be implemented certainly included the recording, that is the study and description; the licensing, that is the regulation by control with limits; and a robust compliance and monitoring system, and none of that has happened. My comment is: How terrible, what a great shame and I do wish you would hurry up.

The CHAIR: Thank you very much, Mr Walker. On that—

The Hon. SAM FARRAWAY: [Disorder] have got to stop disallowing it.

The CHAIR: On that unequivocal note we have run out of time. Thank you once again for appearing before the Committee. It was much appreciated, as was the advice that you furnished last week.

(The witness withdrew.)

(Short adjournment)

GRANT BARNES, Chief Regulatory Officer, Natural Resources Access Regulator, affirmed and examined

The CHAIR: Mr Barnes, would you like to begin by making a short opening statement?

Mr BARNES: Thank you. I appreciate that. Firstly may I acknowledge that I join this inquiry today from Gurringai lands and I pay my respects to Elders past, present and emerging. The Natural Resources Access Regulator [NRAR] is an independent statutory body. NRAR is independent in that its operations, including compliance and enforcement, are not subject to the direction of politicians, to bureaucrats or to external entities. Unlike most other publicly funded organisations in New South Wales, the agency that I lead is accountable to an independent board. Both the board's independence and limitations on ministerial input are enshrined in the Natural Resources Access Regulator Act. Independence is a core component of the recommendations made by Mr Ken Matthews prior to NRAR's formation. Mr Matthews advocated that decisions about compliance and enforcement should be independent of water policymaking, water planning, water regulation making and water delivery services to customers.

The NRAR Act confers significant powers and discretion on myself as Chief Regulatory Officer and on the board. Given these extensive powers, an accountability framework is in place to ensure those powers are used appropriately and legally. Those mechanisms include the board charter, staff code of conduct and ethics and integrity obligations. Further, NRAR is subject to the oversight of the NSW Ombudsman, the Audit Office of New South Wales and the Commonwealth Inspector-General of Water Compliance. Assertions made by some submitters to this inquiry that question our independence are strongly refuted and cannot be left to stand unchallenged. As such and under the instruction of the board chair, the Hon. Craig Knowles, these matters were referred to the New South Wales Independent Commission Against Corruption. Thank you.

The CHAIR: We will now go to questions from the Opposition. Mr Searle, are you kicking off again?

The Hon. ROSE JACKSON: I am, Chair.

The Hon. ADAM SEARLE: No, I think it is Ms Jackson.

The Hon. ROSE JACKSON: Rose Jackson here. In relation to the ambiguous legal status of floodplain harvesting, which is the first term of reference of this inquiry, and the pre-existing Crown Solicitor's advice, which I am sure you are aware of, that essentially suggested that the practice is probably illegal, why did NRAR exercise its discretion not to undertake any compliance work in relation to floodplain harvesting?

Mr BARNES: Our goal is that water law is complied with 100 per cent of the time. We do so to ensure that the many water users who do consistently comply with the law get a fair go. During the first two years of our operation a flood event was something that many people could only have wished for. As the drought began to break, the use of section 324 temporary water restrictions by the Minister for water and her delegates provided a clear mechanism to protect first-flush events and enable enforcement. NRAR has actively managed and monitored all section 324 orders imposed. We did so using a combination of boots on the ground and eyes in the sky. Thousands of square kilometres of flood plain and thousands of storages were assessed. We were very pleased with the rates of compliance, which were consistently high.

For example, 561 storages were remotely monitored in the lower Macquarie and in the Namoi over a 10-day event; 57 sites of interest were identified. Following more detailed analysis, 10 storages in six properties were referred for an inspection. Five landholders were found to be fully compliant with the law. One landholder was found with irregularities related to logbooks and they received an official caution. In the absence of temporary water restrictions, we have further developed our remote monitoring capabilities, as I will describe later on if able. We have deployed this technology during all flood events in 2020 and 2021. Of the most recent events, we determined no irregularities with the first two that we monitored. We did detect activities of interest during the analysis of an event in 2021 and we have referred 26 clusters for investigation. Those matters are being actively investigated. The full range of enforcement actions are available to us should we find breaches of the law that are substantiated by the evidence and where the criminal standard of beyond all reasonable doubt is probable.

The Hon. ROSE JACKSON: Your assertion is that you have undertaken compliance activity but at this point no-one has been found to be non-compliant, as opposed to you have not undertaken that compliance activity in relation to floodplain harvesting in the first place. Is that correct?

Mr BARNES: I have given you a detailed answer as to how we actively monitor and surveil flood events using a combination of boots on the ground and our eyes in the sky program. We are able to detect with a high degree of accuracy the movement of water, the abstraction of water, the storage of water and the use of water. Using that technology, we do take action and we have taken considerable ones over the course of the past three

years. For instance, there are two components to floodplain harvesting: There is the use of the infrastructure and then there is the use of the water.

With respect to infrastructure, this has been a focus for us since our inception. We have undertaken 852 investigations regarding the unauthorised construction or use of a flood work or water supply work; 338 investigations have been finalised with a determination that a breach of the Water Management Act has occurred. Those relate to unauthorised levees, channels and banks on the flood plain; 200 of them relate to unauthorised flood works. Of those 338 matters where we finalised a determination of a breach, we have issued 205 directions, 155 formal warnings, 149 penalty infringement notices and we have undertaken eight prosecutions.

I could go on to describe the work that we have undertaken with respect to water allegedly taken without a water access licence. Similarly, 714 allegations have been made. We have finalised investigations with a determination of a breach in 232 instances. We have applied 286 sanctions. Those are 122 formal warnings, 75 penalty infringement notices, one financial sanction under section 60G, two enforcement undertakings and 12 prosecutions. I can assure the Committee that we take very seriously our role to enforce the law. We do so credibly, we do so on the basis of the evidence and we do so in a manner that holds ourselves accountable and transparent.

The Hon. ROSE JACKSON: I am taking from the evidence that you have given so far and I think perhaps the comment that you made in your opening statement that you reject evidence that NRAR acts under the instruction or with the direction of DPIE in relation to compliance on floodplain harvesting. Is that the evidence that you were alluding to when you said that you have referred that to ICAC? Is that what you were referring to?

Mr BARNES: That is true. There has been commentary in the media, there have been written submissions to this Committee and there have been verbal statements made that call into question the independence of NRAR. I refute that absolutely and believe, as does my chair, that matters that go to questioning NRAR's independence should be referred to ICAC. We have made referrals ourselves. That is the independent body that is able to make those adjudications and we leave it with them.

The Hon. ROSE JACKSON: Perhaps you might describe in your terms your relationship with DPIE because obviously you do have a relationship with it. It does provide information to you and you are in correspondence with it. In your terms, how do you describe your relationship with DPIE and the information that it is providing to you?

Mr BARNES: Quite simply, the department is the agency that makes the rules. We are reliant on them to do so in a robust manner, in a credible manner and in a means by which we can then perform our task to enforce those rules. Water regulation is incredibly complex, as no doubt the Committee understands through its inquiries into floodplain harvesting. We have a statutory obligation to deliver an effective, efficient, accountable and transparent regime for water compliance. We are highly reliant upon the department to enable us to do that work. In addition, my staff and I are employees of the department. We rely on the department for human resources advice, financial advice, information and communications technology support and otherwise. But in terms of the work that we do in compliance and enforcement, that is absolutely independent of the department. The decisions that the board and I make about what actions we take in enforcing the law are ours and ours only.

The Hon. MICK VEITCH: I just have one question and it relates to measurement, metering and the gauging stations within river systems and the capacity that they provide for you to undertake your compliance work. What investment needs to take place to make sure that if floodplain harvesting were to be regulated that we actually have that measurement regime in place that would assist you with your compliance work?

Mr BARNES: As a regulatory professional, the absence of the licensing framework for floodplain harvesting, as was envisaged by government policy from 2013, is problematic. It is problematic for water users and it is problematic for the regulator because the critical element of the licensing framework is the imposition of clear and enforceable conditions on the activity. The framework also proposes metering requirements that enable adherence to those licence conditions to be monitored and enforced.

Whilst I appreciate the debate that persists as to the legality of the activity, what is absolutely beyond dispute is the fact that the status quo is absent enforceable licence conditions and devoid of robust measurement and monitoring requirements. Activating the floodplain harvesting framework will set the rules for how and how much water can be accessed from the flood plain. It will do so in a way that ensures certainty for licence holders and makes clear their legal obligations. It is imperative that if this activity was to be licensed, it comes with robust monitoring and metering requirements. It is absolutely essential, Mick.

The Hon. ADAM SEARLE: Thank you, Mr Barnes, for coming along. It is Adam Searle. Mr Barnes, I think you have been provided a bundle of documents by the secretariat this morning. Do you have those?

Mr BARNES: Yes. I received an email from the secretariat four minutes before 10 o'clock.

The Hon. ADAM SEARLE: That is okay. Could I ask you to open that bundle of documents. I have some questions that relate to them. The first page is an email from Dan O'Connor at DPIE to Jim Bentley at DPIE and others. I understand that you are not the author of this document or indeed, it seems, the recipient, but nevertheless the tone of the email suggests a great degree of closeness between DPIE Water and NRAR. It talks about NRAR exercising its discretion and then it says, "We (DPIE Water/NRAR) will need to have a clear position on this as soon as possible." That does suggest a great degree of synchronicity at a policy level between your organisation and DPIE Water. How do you explain that if, as you say on your evidence, you are a fully independent body?

Mr BARNES: Clearly I am not the author.

The Hon. ADAM SEARLE: No.

Mr BARNES: I am identified, along with a number of others, as a cc.

The Hon. ADAM SEARLE: Yes, you are.

Mr BARNES: Jim Bentley is the primary author. It was sent rather late at night, wasn't it?

The Hon. ADAM SEARLE: Yes, it was. That seems to be a habit these days.

Mr BARNES: I do not recall receiving the email at the time. I am just reading it quickly here.

The Hon. ADAM SEARLE: Can I just suggest that at least from a DPIE Water perspective they seem to regard NRAR as a kind of adjunct of DPIE Water? Would that be a fair reading of that?

Mr BARNES: If it is a fair reading, it is an incorrect imposition on NRAR. We are not a partner with the department when it comes to enforcing the law in a fair and firm, transparent and accountable manner. That is my response—

The Hon. ADAM SEARLE: Do you challenge [disorder]—

Mr BARNES: —and that of the board. I absolutely refute that there is any imposition here as to our independence. The author [disorder]—

The Hon. ADAM SEARLE: Mr Barnes, did you challenge that at the time? Did you write a response saying, "What is this 'we'"? Or did you just let it go?

Mr BARNES: I have received this document from you just minutes ago. I have read it. I do not [disorder]—

The Hon. ADAM SEARLE: I am happy for you to take this on notice.

Mr BARNES: Sure.

The Hon. ADAM SEARLE: I am just interested to know whether you challenged that supposition on the part of DPIE Water. Perhaps we can move on to page 3. It refers at page 3 to two cases where this has occurred. Is that a reference to floodplain harvesting breaches? Can you provide us any details of that or do you just simply not know? Do you need to take that on notice as well?

Mr BARNES: I will take that on notice. I see it is reference to a *Sydney Morning Herald* article so that would require me to do a bit of investigating.

The Hon. ADAM SEARLE: If you could come back to us on notice as to what those two matters were and where they are up to.

Mr BARNES: Certainly—happy to.

The Hon. ADAM SEARLE: Page 4 refers to an early draft of the board papers to be discussed at the executive. Page 6 sets out the problem issue, which is the Minister's office, water users and broader community asking NRAR to make its position clear in response to the disallowance of the exemption by the upper House. Page 7 outlines a number of options for the board. Page 8 has an analysis—a sort of pros and cons—of those three options. Can you tell the Committee which option the board adopted and why?

Mr BARNES: I would have to take that on notice because it will be in the minutes of that meeting. What I certainly can say on the record now is that the board expects me and my officers to provide them with free and frank advice. We have done so, I believe, in this instance. It came at a time immediately after the disallowance when there was considerable and numerous requests to NRAR for it to communicate what it was going to do as a result of the disallowance. The board sought advice. That advice was provided in a written form, some of which

you have presented back to me now. As I say, I can give you the answer to what option was progressed when I check the minutes. I will take that on notice.

The Hon. ADAM SEARLE: Of the three options, the first option was that NRAR could indicate that as floodplain harvesting is now not exempt and licences and approvals are not issued, taking water in this matter is potentially a breach of the Water Management Act. The second option was that as a temporary measure NRAR request that those taking floodwater consistent with floodplain harvesting policy identify their intent. The third option was allowing the take of floodplain harvesting by water users with a registration of interest lodged with the department in line with the Government's policy. You see the pros and cons there. Are you saying you do not recall which option NRAR adopted?

Mr BARNES: Clearly I do not want to mislead the Committee so, with respect, I will give you an absolute assurance via a question on notice as to what option. I can testify today that NRAR has done in this instance as we have always done. We have enforced the law and the law as it currently stands on the books. In my previous answer I demonstrated to the Committee just how extensive that enforcement of the law has been. The agency I lead takes its role very seriously and we have shown in 31 instances, for instance, prosecutions being taken to the court.

With respect to floodplain harvesting with the disallowance and the uncertainty that brought about, we obtained legal advice. That legal advice was required to support the carriage of investigations that were underway. It was also used to inform our compliance approach. From that point we continued—as I said before—to actively monitor, using some very sophisticated technology, the movement, abstraction, storage and use of water. As a result of that monitoring, I advised before that there have been 26 instances where we believe there could be a breach of the law related to floodplain harvesting activity. Those instances have been referred to my investigators and they are investigating those matters right now. A full range of enforcement tools are available to us and will be deployed once we have substantiated a breach based on the evidence that we have obtained.

The Hon. ADAM SEARLE: Can you look at page 20 of that bundle, which is a letter from you to Ms Baldwin of the Southern Riverina Irrigators, and also look at page 18? There seems to be a discrepancy between the advice you provided Ms Baldwin and your own internal advice about how many storages greater than 1,000 megalitres were being referred to. Can you explain to the Committee why that discrepancy was there? That is, there was a very different number you provided to Ms Baldwin than you appear to have been provided internally by Mr Johnston.

Mr BARNES: I am scrolling rapidly; I am reading as quickly as I can. I am going to take that one on notice if I may, sir.

The Hon. ADAM SEARLE: Sure.

The CHAIR: We will move to questions from the crossbench. Mr Barnes, just to be clear in terms of the last question from Mr Searle in terms of internal advice in relation to the number of structures that Southern Riverina Irrigators were asking were in the northern Basin, I think you said internally that there was greater than 560 storages over 1,000 megalitres and 840 storages under 1,000 megalitres—you wrote to Russell Johnston in your department. Then a few days later you wrote to Southern Riverina Irrigators and told them that, in fact, there were only 373 storages greater than 1,000 megalitres and 693 storages less than 1,000 megalitres. I know you said you will take that on notice but surely you can shed some light on why we lost several hundred storages in those few days between internal and external communications.

Mr BARNES: I am sure there is a reasonable explanation that explains the discrepancy, but again I will need to take that on notice. With respect, I have only just got these documents.

The CHAIR: I want to turn to an opinion piece that was published in *The Land* on 12 October. The opinion piece is called "Clearing muddy waters". Are you aware of that opinion piece?

Mr BARNES: Yes, I wrote it.

The CHAIR: Why did water Minister Melinda Pavey's office have to approve that opinion piece?

Mr BARNES: We have a protocol with the Minister where we give notice to them of an intention to engage with the media. I think you are referring to an email that I have seen where someone not employed by NRAR has inferred that the Minister's office will need to review the documents. That is an error. That is not the protocol. The practice, as I say, is that the communications that come out of my office are constructed independent of the Minister and it is done equally independent of the department. We own our voice and we have the means, via the protocol, of communicating directly to the Minister. We do, as you would appreciate in terms of no surprises, give notice to the Minister's office when op-eds are being done, when media releases go out, when

I speak with Michael Condon and the *NSW Country Hour*. They do not review and they do not endorse or check off our media engagements or releases.

The CHAIR: That opinion piece did not go to the Minister before it was published in *The Land*?

Mr BARNES: Let me be clear: It went to the Minister for the office's information. It was read by them, clearly, but any advice that is inferred that suggested that they had an influence over that text, I strongly refute. It did not happen.

The CHAIR: In that opinion piece you suggested that the 2020 disallowance by the New South Wales upper House of the floodplain harvesting regulations created uncertainty and led to an ambiguous environment. How did the disallowance create uncertainty?

Mr BARNES: The Water Management Act is Byzantine in its complexity, in its construction and in the multiple hierarchies of sharing plans down to various instruments. The complexity inherent makes it very difficult for water users to understand their obligations to consistently comply with them. It is difficult for us to monitor; it is difficult for us to enforce. It is a complex beast. A licensing framework that is envisaged removes considerably that complexity, making it much clearer to water users what are their obligations and much clearer to us about how we can enforce those. That is what I am referring to.

The CHAIR: In other words, before the disallowance I do not think there was any certainty. I think you just described an uncertain environment in terms of the regulatory framework for floodplain harvesting before the disallowance anyway. But your opinion piece suggests that it was the disallowance that created uncertainty.

Mr BARNES: What was in my mind when I wrote that is that water users who had been actively participating in preparing for the enactment or the conferral of these licences had been engaged for many years. It had been policy, and still is, of the New South Wales Government since 2013 so there was a clear pathway to licensing this activity. That provided some clarity and some certainty. The disallowance—what I said at the time—created some ambiguity and uncertainty as to when or if that activity would ever be licensed.

The CHAIR: On 18 May 2021 NRAR put out a statement to irrigators, I understand, that said:

> Any landholder considering floodplain harvesting may wish to seek their own legal advice.

Again, was this done in conjunction with Minister Pavey's office?

Mr BARNES: No.

The CHAIR: Did Minister Pavey know that you were putting that out at that time?

Mr BARNES: The protocol we have with the Minister's office is that we give notice in advance of an intention to engage with the media via a media release or otherwise, and I can just assume that we were consistent with that protocol.

The CHAIR: Can I just check, though, that this is not a media statement. This is a statement to irrigators. Does Minister Pavey have to check the correspondence that you, as the independent regulator, have with irrigators and landholders?

Mr BARNES: No, absolutely not.

The CHAIR: Do you think that this statement was checked with Minister Pavey before it was issued?

Mr BARNES: Not to my recollection. That would be highly unusual if that was the case.

The CHAIR: This was a statement that said:

> Any landholder considering floodplain harvesting may wish to seek their own legal advice.

Why is NRAR, as the regulator, telling farmers to seek their own legal advice when it comes to floodplain harvesting?

Mr BARNES: Because at the time we were getting repeated calls both directly and via the media for NRAR to make statements as to the legality of floodplain harvesting. It is not my role as a regulator to provide legal opinion. My job is to enforce the law. I leave questions of legality to the lawyers. It is not for me, as a regulatory professional, to provide that legal advice. We also thought it was prudent to do so because of the very complex and often bespoke circumstances that water users and landholders have when they are accessing water. The way their infrastructure is set up and how it is used and deployed is really quite often quite unique. There is typically not the standard answer that one can provide that fits all, hence the advice at the time—and we would continue to do so—that if there was any doubt that a water user might have about the legality of their own operations, they should seek legal advice.

The CHAIR: If a farmer has their own privately obtained legal advice that says it is okay for them to undertake floodplain harvesting, does NRAR then just leave them alone? I am trying to think of all the different landholders seeking different private legal advice and how on earth NRAR can be the independent regulator enforcing compliance with the law if you are encouraging 600 or more landholders to seek their own private legal advice.

Mr BARNES: In the absence of clear statements to legality at the time and repeated requests both directly and through the media for us to clarify the situation, we made it clear at the time—and I will do so again today—that it is not our role to make declarations of legality or otherwise. That is for the lawyers to make and others, not for us. When it comes to our investigations, they are done on a case-by-case basis considering the individual circumstances that are presented to us, the evidence that we collect and an evaluation of innumerous discretionary factors that are before us. We use that information to determine what course of action we take when we substantiate a breach of law. Whether a water user has taken legal advice before or not is a matter for them and not for us.

The CHAIR: My time has expired. Mr Mark Banasiak?

The Hon. MARK BANASIAK: My questions relate to metering, in particular the current metering forms, and then how that will translate into metering floodplain harvesting if and when regulation is passed. You have recently reported that 45 per cent of large irrigators in tranche one did not have accurate meters. However, there seems to be about 411 missing sites that you failed to report on. How many irrigators are we talking about in those 411 missing sites?

Mr BARNES: We report the number of works, not number of sites, not number of approvals, not number of entities, not number of landholders, not number of water users. We report the number of works.

The Hon. MARK BANASIAK: How many works are missing, then, that you cannot find?

Mr BARNES: We inspected 715 works across the period of April and May. We did so as part of our compliance campaign for the non-urban metering rollout. Water users in that first tranche—those with works greater than 500 millimetres—were obliged to comply with these regulations from 1 December 2020. We promoted our approach to compliance to stakeholders in the years leading up to that first deadline. We made very clear what our expectations were and we were very fair, and continue to be so, in terms of encouraging water users to demonstrate best endeavours. Three months after that first deadline had elapsed we advised stakeholders that our compliance campaign was commencing. We began with a desktop audit, which was then followed up by a phone survey of water users and then we undertook the field inspections of those 715 works.

The additional ones not inspected at the time were works that were subject to ongoing investigations, works that were owned by the Government and maintained by WaterNSW and a couple of works that we had not yet got on farm to inspect. Of the works that we did inspect—that 715—we found about half of those were out of scope for the first tranche because they were either inactive, that is they were never constructed or had been decommissioned, or we found a small proportion where the size of the work was smaller than what was on the approval. Of about the 360-odd that were in scope that we did inspect, 45 per cent of those at the time were unable to demonstrate that the meter met the accuracy requirements specified by law.

The Hon. MARK BANASIAK: You have reported that the customer details for 36 per cent of those sites are actually incorrect. What is being done about that, given that you utilise water account data from WaterNSW and it essentially has a 36 per cent error rate in its data? Why are you not publicly taking them to task over their tardy accounting? If we go back to your statement to the Chair where you said you own your own voice, one would assume that you would take WaterNSW to account for providing you with faulty information.

Mr BARNES: Accurate details in the water accounting system is an absolute necessity. The onus to keep details accurate is on the water user. They have an obligation to advise WaterNSW as to their contact details. They are also obliged to keep their various approvals and licences up to date and there are mechanisms through WaterNSW by which they can do that. I can absolutely assure you that we have communicated clearly and on numerous occasions to WaterNSW our findings both in terms of the accuracy of contact information and in terms of the accuracy of various water approvals and licences. This information that we have conveyed to them is something that they already knew and have made numerous commitments to work with water users to address and they are continuing to do so.

The Hon. MARK BANASIAK: What are your steps going forward in terms of managing compliance? If we go into tranche two, where you are looking at possibly upwards of 7,500 to 8,000 works that you will need to inspect, how many of them do we know are active or actually have a pump or pipe? Do we have those figures?

Mr BARNES: We are working on that at the moment. Our working assumption is the proportion of inactive works that we determined in tranche one will be similar in tranche two, and we are using some pretty sophisticated mathematical algorithms and so on behind the scenes to come to a more accurate determination. Clearly it is in the interest of us because we want to deploy on farm where we know a high likelihood that the works are active rather than going to large proportions of inactive sites.

The Hon. MARK BANASIAK: What is that mathematical modelling or data telling you in terms of those percentages that may be unaccounted for or out of scope?

Mr BARNES: That it is high—that there are a large proportion of works that are not active despite what is shown on the works' approvals. You might know this colloquially as the sleepers and dozers. There are lots of instruments out there held by water users that have not been activated for various reasons or at some point in time have been decommissioned, and simply the task of informing WaterNSW of that fact—tagging the work as inactive—has not been done.

The Hon. MARK BANASIAK: Why has it not been done?

Mr BARNES: I could speculate lots of reasons.

The Hon. MARK BANASIAK: Do you think WaterNSW has a responsibility to follow that up based on its accounting data?

Mr BARNES: The onus is on the water user to keep their contact information up to date. If I was to move house next month—go somewhere else—I am obliged to update my contact information on my driver's licence. These are simple and well-understood obligations that extend quite commonly in many regulatory regimes. Now [disorder]—

The Hon. MARK BANASIAK: Yes, but there is also—I am going to stop you there. There is also an obligation of the agency where those details are held. If that person does not adhere to those details, there are consequences. It seems like WaterNSW is either not giving you the job of enforcing those consequences of inaccurate details or they are not doing it themselves. There is a corresponding responsibility of WaterNSW to follow up that inaccurate data. Yes, there is an obligation of the individual user, but WaterNSW also has an obligation to, I guess, issue consequences for that failure to oblige.

Mr BARNES: I do not detect a question there; that sounds like a statement.

The Hon. MARK BANASIAK: Do you agree with that statement—

Mr BARNES: [Disorder].

The Hon. MARK BANASIAK: —that WaterNSW also has a responsibility, like Service NSW, the Firearms Registry and other agencies? If you do not update your details, there are consequences, whether they are fines or infringements or whatever. It seems WaterNSW is not fulfilling its responsibility in doing that. Do you agree?

The CHAIR: I think there is an angry little triangle where Grant Barnes was; that is like the spinning wheel of death for the old computers. Grant, can you hear us?

The Hon. MARK BANASIAK: It does not seem so.

The CHAIR: The secretariat will be trying to get Mr Barnes back. We will just pause for a second. Sorry about that, folks.

The Hon. MARK BANASIAK: There he is.

Mr BARNES: Can you hear me?

The CHAIR: Mr Barnes, did you get the last question from Mr Banasiak?

Mr BARNES: If it was in relation to WaterNSW and what they were doing with respect to updating user information, yes, I did. My answer was that we have informed WaterNSW of our findings and they are taking action.

The Hon. MARK BANASIAK: What is that action WaterNSW is taking, Mr Barnes?

The Hon. SAM FARRAWAY: I think time has expired, Madam Chair.

The CHAIR: No, it has not. I have got 45 seconds remaining here. Keep going, Mr Banasiak.

The Hon. MARK BANASIAK: What action is WaterNSW taking, given that it does have a responsibility as an agency like other agencies to actually deal with people who are not keeping their data up to date? What action is it taking, to your knowledge?

Mr BARNES: I am very happy to speak to the actions that NRAR are taking both in metering and if we got back to floodplain harvesting, I can answer questions in relation to that. I cannot speak for WaterNSW.

The Hon. MARK BANASIAK: I will pass to the Government.

The CHAIR: Mr Farraway again, please.

The Hon. SAM FARRAWAY: I just wanted to confirm—if you could just answer some facts or get some of these numbers onto the record. How many farms currently floodplain harvesting would have metering and how many farms currently floodplain harvesting will need meters if they are issued with a licence?

Mr BARNES: The information that I have and that was referenced before by way of a letter to Ms Baldwin was that 373 storages greater than 1,000 megalitres were being assessed for water supply work approvals and there were 693 storages less than 1,000 megalitres that were being assessed for water supply work approvals. All those storages would require monitoring and metering, and the regulation that was disallowed specifies as to what those requirements would be.

The Hon. SAM FARRAWAY: Mr Barnes, are there any farms currently floodplain harvesting in the northern valleys that will not receive a floodplain harvesting licence? Do you think that those farms would need to remove their floodplain harvesting infrastructure without the licence?

Mr BARNES: The first part of your question—I suggest you hold that one over for my departmental colleagues who are managing the policy. The latter part—what might one do—the circumstances, as I said before, can be complex and specific to farm. One of the things that I understand quite clearly is these storages are not exclusively used for floodplain harvesting. They form many purposes. They can hold high-security water or supplementary water. They can be stock and domestic water—all sorts of things. A storage that may not be part of a floodplain harvesting licensing regime does not necessarily see it needing to be removed, particularly if that storage is authorised under the Act.

The Hon. SAM FARRAWAY: Do you think that more water would have gone to the environment if floodplain harvesting regulations had not been disallowed?

Mr BARNES: Yes.

The Hon. SAM FARRAWAY: Moving on to some particular areas, do you think that the Macquarie Marshes and the Gwydir Wetlands would receive more water than they currently do if the Government issues licences as they are currently proposing, in particular with the Macquarie Marshes and the Gwydir Wetlands?

Mr BARNES: In the absence of a licensing regime where there are conditions on its use, constraints on volume—in absence of that—I think one can fairly conclude that there is water that was used to grow crops that could have been in the Macquarie Marshes or in the Gwydir Wetlands.

The Hon. SAM FARRAWAY: Mr Barnes, in your opinion, do you believe that more water would have gone to the environment if the Government policy to license and meter floodplain harvesting had been in place for the last 12 months?

Mr BARNES: Yes.

The Hon. SAM FARRAWAY: NRAR released a media statement saying Toorale National Park needed to undertake metering on its works approvals for the large banks on its former irrigation farm. My question is, Mr Barnes, will Toorale need to be metered if it has works which direct floodwaters away from the river or into storages and are you aware of what meters will be installed at Toorale?

Mr BARNES: We conducted an extensive investigation into the operation at Toorale and determined and communicated publicly that there was no breach of law in the operation. We did, however, believe it appropriate for measurement of the water use on site to be imposed and we have done so by way of issuing a formal direction to the National Parks and Wildlife Service. That direction requires them to install metering equipment within a certain period of time.

The Hon. SAM FARRAWAY: Thank you, Mr Barnes. What are NRAR's current staffing and funding levels?

The Hon. PENNY SHARPE: Point of order, please, Madam Chair.

The CHAIR: Yes. A point of order has been taken.

The Hon. PENNY SHARPE: I fail to understand how this question is within the terms of reference of this hearing. If the Government want to do a budget estimates with NRAR this would be well and truly within those questionings. But I would ask the Government to ask questions about the terms of reference of this hearing, not the ins and outs of the workings of NRAR.

The Hon. SAM FARRAWAY: To the point of order, Madam Chair: We are talking about the legality, obviously, of floodplain harvesting, we have got the regulator in front of us who would be responsible for regulating this licence if it was implemented and we are asking about their funding and staffing levels and resources within their agency to possibly regulate this if it is licensed. How is that not part of the terms of reference? How is that a question that is not allowed?

The CHAIR: Yes. There is no point of order. Continue on with the questioning.

Mr BARNES: Would you please re-present the question?

The Hon. SAM FARRAWAY: Yes, certainly, Mr Barnes. What are NRAR's current staffing and funding levels?

Mr BARNES: So, staffing, we have 187 staff spread across 21 office locations, pre-COVID. That number is a substantial increase over the former compliance and enforcement agencies before our formation. Budget-wise, we have a budget around the $27 million mark. If you require an absolute figure I will take that on notice because I do not have the finance paper in front of me.

The Hon. SAM FARRAWAY: No, that is fine, I suppose. In the event floodplain harvesting licensing is implemented, do you feel that NRAR is capable, as the regulator, to have the resources to regulate it, essentially?

Mr BARNES: Yes, I am confident. It will, of course, depend on what regulations—if they are put up again, what modifications may occur. But based on our understanding of them prior to disallowance, there would be a requirement on us to actively monitor adherence to the conditions. Part of that would be done with boots on the ground, deploying staff. Part of it would be done by maintaining our "eyes in the sky" program.

The Hon. SAM FARRAWAY: Mr Barnes, in your opening statement and your submission you have talked about eyes in the sky and boots on the ground and how you conduct investigations. I am just interested if you could expand on how the satellite technology is used by NRAR?

Mr BARNES: Certainly, and I have submitted to the Committee some documents that describe it—one by way of a presentation. We have also prepared a video to step the members through it. But, quite simply, we have access to satellite imagery from NASA and from the European Space Agency, we have access to lidar information—that is, laser information—from Geoscience Australia and with some pretty cool mathematical algorithms and some really, really smart people inside of NRAR we have constructed a means of actively surveilling the movement, storage, access and use of water. We have constructed a dashboard that allows us to do that almost automatically, to run that surveillance. That is maintained over the northern Basin at the moment—over 300,000 square kilometres, which is Germany and France combined. It is incredible technology that we have got. Again, members of the Committee may want to take a look at that presentation and the video just to see for yourselves the technology.

The Hon. SAM FARRAWAY: Thank you, Mr Barnes. So, just following on from that, in your view, with the technology that is available to NRAR, are you able to tell where floodplain harvesting takes place now across the State and to what level of accuracy?

Mr BARNES: Yes, and to a high level of accuracy.

The Hon. SAM FARRAWAY: There has been much talk about floodplain harvesting in the north. Do you believe that floodplain harvesting is occurring in the south?

Mr BARNES: Yes.

The Hon. SAM FARRAWAY: NRAR has said:

> Following the disallowance last month, we understand water users and landholders across the State are facing uncertainty regarding floodplain harvesting.

We spoke about this earlier, there were other questions, but just reiterate what you meant by that uncertainty from NRAR's point of view.

Mr BARNES: What I meant from that uncertainty is that landholders and water users in the northern Basin have been participating in the Healthy Floodplains program for many years with an understanding that it would culminate with the issuance of licences. Those licences would come with obligations, including the requirement for activities to be monitored and measured. Those licences, bringing those clear obligations

forthwith, would allow us to ensure that those obligations were being met and enabling us to enforce them. So all of that is not here at the moment, hence the reference to uncertainty.

The Hon. SAM FARRAWAY: Thank you, Mr Barnes. I think you have answered everything that I wanted to ask, so I am fine, thank you—unless there are other Government members that have any questions?

The CHAIR: It is 10:50. We have got this session until 10:55. Are there any other members that wish to ask any questions of Mr Barnes?

The Hon. SAM FARRAWAY: Actually, there is one other question—if that is alright—I can ask to Mr Barnes. You may need to take it on notice, I am not sure, but would you be able to explain the difference between the floodplain management plans in the north versus the south or what the plans are north and south?

Mr BARNES: I think that question is one best held for my departmental colleagues.

The CHAIR: Thank you, Mr Barnes. I actually have one just about the emergency works regulation. How does NRAR ensure water has been returned to the environment that is captured under this regulation?

Mr BARNES: The emergency works regulations enable entities to respond immediately to dire situations that have a detrimental impact on life and property. There is an obligation of an entity to inform NRAR in advance of the activity being undertaken to de-water and to do so 14 days later once that activity has concluded. It is expected, at that 14-day period, that the entity describes the volume of water taken and how that water was returned to the environment. It is our expectation that most water that has been removed would be returned to the groundwater source, either through reinjection or infiltration, or released to the stormwater system.

The CHAIR: That is a requirement, is it?

Mr BARNES: It is an expectation that we have and communicate to those seeking to access the exemption.

The CHAIR: Just to be clear, when you say it is an expectation that you have, that is not actually in the regulation? Because that is the first time I think I have heard about that 14-day expectation, as you say. So, just to be clear, it is not in the regulation but you are saying it is an expectation that that happens?

Mr BARNES: I am drawing from information that is on the website, that is structured by way of questions and answers. As to what is in the regulation or not, I would take that on notice. It may be helpful, if I may, just to say since that regulation was put in place we have received 34 notifications. All of those were in the coastal, residential or metro areas. The majority of those were to address failures in the sewerage system and most of those exemptions were sought by water State-owned corporations or local councils.

The CHAIR: Okay. Thank you, Mr Barnes. If there are no other questions? Thank you very much for appearing before the Committee today. The secretariat will be in touch with anything in relation to questions you may have taken on notice. Thanks again for appearing. The Committee will now have a short break until 11.10 a.m.

(The witness withdrew.)

(Short adjournment)

CLAIRE MILLER, Chief Executive Officer, NSW Irrigators' Council, affirmed and examined

CHRISTINE FREAK, Policy Manager, NSW Irrigators' Council, affirmed and examined

PETER HOLT, Special Counsel, Holding Redlich, NSW Irrigators' Council, affirmed and examined

MICHAEL MURRAY, General Manager, Cotton Australia, sworn and examined

The CHAIR: Would any of you like to begin by making a short opening statement? Firstly, I will go to the NSW Irrigators' Council. Is that you, Ms Miller?

Ms MILLER: Yes, that is me. I will make a short statement, thank you, Chair. We represent 12,000 water users across New South Wales. We have levy payers and member organisations in every basin valley. Our members everywhere are overwhelmingly family owned and operated farms growing cereals, fibre, dairy and fruit, to name a few. The broadacre farmers are mixed croppers. They do not just grow cotton or rice but wheat, barley, canola, soybeans and many other crops as well. The MDBA defined it well:

> Floodplain harvesting, if well managed, allows for water to be taken and stored when it is plentiful and then used at a later time when water is scarce—without needing to extract water from the river during periods of lower flow.

Floodplain harvesting is, in that way, the most sustainable form of water take of all. The cap and the Basin Plan SDLs apply to water take as a whole. There are not separate caps for floodplain harvesting and for general security or any other form of take; they are taken all together. So that means if there was no floodplain harvesting farmers can still use water up to the SDL, but it will mean that more is taken from rivers under other existing licences and rights. We think this is the worst outcome for the environment, for connectivity and for downstream communities.

Some big scary numbers get bandied around with floodplain harvesting, but I would like to put those into perspective. Annual average current take in northern New South Wales is an estimated 350 to 390 gigalitres. Using the MDBA's water balance tables underpinning the Basin Plan, that means floodplain harvesting in northern New South Wales amounts to just 3 per cent of the average 12,100 gigalitres of northern Basin inflows. The licence volume will cut the estimated current take down to 259 gigalitres if the IPART pricing determination last week is any guide and that means reducing our New South Wales floodplain harvesting take to about 2 per cent of northern Basin inflows. So 3 per cent down to 2 per cent and more than 100 gigalitres returned to increase the undiverted 70 per cent portion of the pie for the environment. That is what we are arguing about here.

Now I know many of you may be thinking, "Well, that's fine in a wet year like this, but what about in the dry years or average years—the take will be a much bigger proportion then". Except it will not be, because it does not flood in those years. Floodplain harvesting happens when it floods. The Committee has been bombarded over concerns about critical human and environmental needs in the Barwon-Darling, cultural water, poor management of the Menindee Lakes—to name a few. None of these concerns—they are all extremely legitimate, but none can be solved through floodplain harvesting regulation because this reform is about flood management. These other issues can only be solved through better drought management policy. Cultural water requires a whole program on its own to address two centuries of injustice. Work is already underway to improve drought management policy. This work must be completed by 1 July 2023—it is written in black and white in the Border Rivers water sharing plan—and we expect that will cascade through the other water sharing plans.

This work will improve connectivity, right down to Menindee. It will protect first flush events so that drought-breaking floods are not touched until it is clear that downstream targets will be met. Rules such as the individual daily extraction limits and resumption of flow are already in force in the Barwon-Darling. NSW Irrigators supports this work. We want it to progress as quickly as possible and these issues to be addressed, but we do not think floodplain harvesting regulation should be delayed in the meantime so the practice continues unregulated and unlimited. That is in no-one's interests. Thank you.

The CHAIR: Thank you very much, Ms Miller. Mr Holt, did you have an opening statement as well?

Mr HOLT: Just briefly, if I may, just in terms of setting the context. My name is Peter Holt. I am a Special Counsel at Holding Redlich. I am recognised by the Law Society as an accredited specialist in planning and environmental law. I worked for the Department of Planning for 12 years in a variety of senior legal and policy roles, and I have been in private practice since 2016. I have advised a number of the landholders and certain key groups on the implementation of the floodplain harvesting licensing framework under the Water Management Act. I have also followed the debates and had an opportunity to review a number of the submissions and the advice of Mr Bret Walker, SC, and also an opportunity to listen to him speak earlier today. Thank you.

The CHAIR: Thank you very much. Mr Murray, do you have a short opening statement?

Mr MURRAY: If I may. As part of my role, I oversee water policy for our industry. I have been an irrigation farmer in the southern Basin, an executive officer for the Gwydir Valley Irrigators Association based in Moree and have worked on water policy for Cotton Australia for more than a decade. I think my first conversation regarding the volumetric licensing of floodplain harvesting would have been with then natural resources Minister Craig Knowles in the first part of the last decade and I have continued with each water Minister since, be they Labor or Coalition. Cotton Australia is the peak advocacy and policy body for Australia's 1,400 cotton growers. Typically, two-thirds of our annual cotton production is grown in New South Wales and one-third in Queensland. While cotton is often regarded as the dominant crop across the northern Basin, it is not the only crop grown or irrigated within the north. Cotton is also a very significant crop in the southern Basin, where we have seen significant growth—mainly in the Murrumbidgee—over the past decade, including the construction of three cotton gins.

To be very clear from the outset, cotton growers support the volumetric licensing of floodplain harvesting, well recognising this will lead to a significant reduction from the current level of annual average take and that we, along with all irrigators, must be compliant with the Murray-Darling Basin Plan and the large number of associated pieces of Federal and State legislation. While I have not been able to listen to all the witnesses to this inquiry, it seems to me that the vast majority of participants are in furious agreement on this point and the sooner licensing is implemented the sooner regulatory control will be firmly in place and irrigators can plan with less water but a greater degree of certainty. It also seems to me that many participants in this inquiry have linked a whole lot of water-related issues to floodplain harvesting. The reality is that genuine issues such as climate change, Indigenous water rights, connectivity et cetera relate to all forms of water take as much as they relate to floodplain harvesting and are therefore more appropriately addressed in wider water forums.

I think we should be very mindful that the volumetric licensing of floodplain harvesting represents the last phase of a long, sometimes tortuous, frustrating process that we have seen for all water licences in New South Wales being converted to volumetric licences. This process started in the 1980s and gathered pace with the introduction of the Water Management Act 2000. There is no doubt that the equitable volumetric licensing of floodplain harvesting has taken far longer than it should have but, with tens of millions of dollar spent, it is also the most modelled, most ground-proofed, most reviewed, most consulted and most thorough volumetric licensing process in New South Wales and, I strongly suspect, the nation's history.

From a strictly cotton perspective, as an industry we are committed to ensuring that whatever water is directed by entitlement holders to cotton it is used as efficiently as possible and we are very proud of all our industry participants who, since 1992, have driven a 48 per cent reduction in how much water is used to grow a bail of cotton. We are committed to continuing this trajectory of improvement. Thank you.

The CHAIR: Thank you very much. We will now go to questions from the Opposition? Mr Mick Veitch, is it?

The Hon. MICK VEITCH: Yes, thanks Chair. My first question is directed probably to Ms Miller from the Irrigators' Council and it relates to some information that the Committee heard on Monday regarding the inadequate gauging of the northern rivers and its impact upon being able to measure the water flows. Ms Miller, do you think there needs to be a greater investment in the gauging and metering of the river and its tributaries in the north?

Ms MILLER: I would absolutely agree with that. This regulation will bring in metering for floodplain harvesting and that is going to be a really important source of the vital data that we need to make sure that the resource is being used sustainably, no-one is taking any more than they should and it will inform future available water determinations to make sure the total take of water stays within the cap and sustainable limits. But where we are really missing out here is the measurement of the total water balance across these landscapes. There are not enough gauges throughout the northern rivers as it is now to really track where water is going and where there are natural or other losses occurring. We particularly do not have a great sort of—you know, we can only measure what is going down rivers and then hydrologists make best estimates of how much water is then out across the landscape.

I think from yesterday you would have seen footage of—when you had your virtual tour—a hell of a lot of water is out there across those flood plains. We do not really have a good grip on how much there is out across the flood plains so you can actually then get a better sense of how much is really being caught by floodplain harvesting against the total volume that is moving across the landscape. That gauging throughout the river system is also absolutely essential for drought management activity or drought management policy to address these concerns about connectivity and to make sure that rules and protocols to improve water flows in those dry years ensure that critical human needs and downstream targets into Menindee—all of that picture—can be done. We absolutely do need much more investment in gauging and measurement right throughout the system.

The Hon. MICK VEITCH: So that information you are talking about, the sort of transparent data collection processes, doesn't that then better inform the modelling? Aren't we able then to put much more accurate information into the models that are being used?

Ms MILLER: It will put much more accurate information into the models. Obviously, the models that have been put together to inform the regulation for floodplain harvesting are using the best available information. They are extremely robust. Now we can argue about modelling methodology and go backwards and forwards. My experience with modellers all in the same room is it tends to come down to a conversation about "my model is bigger than yours" and when you say to all of them, "Yep, okay, that's fine—if you did it this way and you did it that way, what material difference do you think there would be in the results?" you will find generally they go, "No, we're all in the ball park, we're in the same ballpark, we just think that there's better ways to get there".

So, yes, you will have information that comes into the models and will better inform those. That is good, but it is not a reason to stop and say, "Well, we're not going to regulate floodplain harvesting" and then we will not have the information at least from that source. Most of the information that you need is in fact coming from better gauging and measurement throughout the river system. I think Ms Freak wants to add to that.

Ms FREAK: Yes. Thanks, Claire. The only way to improve confidence in modelling is through action data and the only way to get that action data is by putting in place a regulation that requires everyone who floodplain harvests to meter that water take. I would add that there is a sense of urgency and time immediacy on this as well, because at the moment we are in a wet year, next year is likely also going to be a wet year and shortly after that we will be going into another dry phase—just knowing the boom and bust phases that are typical of the northern Basin. Unless we get some action data on floodplain harvesting coming in soon, we will be having the same conversation about modelling confidence in another five years. So there is a sense of immediacy around how we need to go about getting this action data in place, and that requires a metering regulation to do that.

The Hon. MICK VEITCH: Thank you. Because time is limited and there are a few of us trying to eat off the same table here, so to speak, I have got one last question before I hand over to—I think—my colleague the Hon. Rose Jackson. It relates to the 1994 cap and whether floodplain harvesting as it was proposed in the regulation would have been within the 1994 cap or whether it was actually going to be new take—if it was above the 1994 cap—and whether or not it is your understanding that it is actually within the cap?

Ms MILLER: So our understanding—and, yes, we have talked to the MDBA and I have been involved in the Basin Plan reforms and things since their inception way back in 2007—is that floodplain harvesting has always been incorporated into cap models. It has also always been incorporated into the water sharing plan models. So it is definitely part of that equation and always has been. It is very disappointing that the MDBA has not chosen to appear before the Committee so that you can directly ask them. But what I am talking about here have been accepted processes right throughout this reform.

The Hon. MICK VEITCH: Okay.

Ms FREAK: There needs to—

The Hon. MICK VEITCH: Thank you. Yes, we are all very annoyed about the MDBA—

Ms MILLER: Sorry, Ms Freak can add.

Ms FREAK: Sorry, Mick, just quickly. In addition to that, the entire objective of this reform is to reduce floodplain harvesting down to the cap. That is what all the available evidence suggests will occur through the proposed policy, so we have no reason to believe that will not be the case. I would also add that compliance with the limits is assessed by not only New South Wales but it is also assessed by the MDBA at the end of every water year and we have seen the SDL compliance report come out very recently. If there is an issue, that does get identified and make good provisions are put in place. Every water sharing plan has over-usage provisions, so in the very unlikely circumstance that there would be an increase in take that goes above limits there are mechanisms to very quickly pull that take back down.

The Hon. MICK VEITCH: Thank you. We are annoyed about the MDBA as well.

Ms MILLER: [Disorder.] But, you know, the MDBA is unequivocal. They have said to us existing cap models have all been thoroughly reviewed and approved and the process that is being followed by New South Wales is exactly the same process that has been followed by all of the other basin States.

The Hon. MICK VEITCH: Okay. Now I am handing over to Ms Sharpe, not Ms Jackson.

The Hon. PENNY SHARPE: Thanks for coming along today. I have just got two questions relating to the same thing. One of the outcomes of getting the licensing regime in place is essentially establishing that there would be compensable mechanisms for those that have licences. Is that correct?

Ms MILLER: Christine, I'll throw this one to you, since you're the one with the Masters degree in environmental law.

Ms FREAK: That ultimately comes down to what the impact is going to be. Generally, when water is reduced from these licences that is known as an available water determination, or AWD. Water users for all types of water licences are very familiar with having the AWD or the water allocation adjusted based on how much water is available in the system. That is not compensable. We have seen a significant decrease in general security reliability, for example, where irrigators only get access to, say, 50 per cent of an entitlement, or we have recently seen the reductions to the AWDs for supplementary water access. That is not compensable, no.

The Hon. PENNY SHARPE: Thank you. There has been quite a lot of discussion about that, which leads me to the next point. My understanding is that there has been an anomalies committee—as this process has gone through over a long period of time, that there has been essentially a process that has gone through and individual farms have worked with the department through this anomalies review process to actually get what they believe to be more accurate data in relation to their take. Could you just take us through how that has operated from your point of view?

Ms MILLER: Before I just go to Ms Freak on that, I would just say that this committee's activities are confidential for a very good reason: They are dealing with individuals. We are not party to that committee's deliberations in any way, shape or form. Christine?

The Hon. PENNY SHARPE: Yes, sorry, I was not suggesting that you were. I am just trying to understand, from your members' point of view, the process that has operated under.

Ms FREAK: That committee does deal with the exceptional circumstances, so to speak—so the people that do need to have reviews undertaken. There are a number of people on that committee. I have not been involved in the processes, so that question is probably best directed to the department later today.

The Hon. PENNY SHARPE: Thanks. Ms Jackson?

The Hon. ROSE JACKSON: Thanks, Ms Sharpe. I wanted to ask about a reference that you made, Ms Miller, in your opening statement—but it was also in your submission—about the role that river connectivity and downstream targets might play in ensuring this system works effectively. I particularly want to draw on that point that you made that it is obviously easier to have these conversations in very wet years when we have flooding. But how can we ensure that the smaller floods or smaller wet events that we have in drier years, which can often be particularly important first flush events after a dry period—how can we ensure that the environmental and social needs of those lower down in the system are met in those circumstances when water is more scarce because we are in a dry period?

Ms MILLER: I do not wish to pre-empt the really important work that is already underway through the connectivity review that the department has already started. I did refer to that work being completed by 1 July 2023. That work includes a very diverse stakeholder representative group which has people on there from right across the basin and many Indigenous representatives, so it is very diverse and very representative. I do not want to pre-empt their work because the issues that you are talking about here will be dealt with through that work, based on good policy and the best data that we have, to look at where there may be a need for changes in rules or protocols. I would imagine that some of those rules and protocols could be looking or expanding on or whatever—I don't know. But, for example, we already have the resumption of flow rule that suspends extraction in drier periods in the Barwon-Darling, when those first flows start to come through, until a certain target is reached at Wilcannia.

We saw that in action for the first time in January this year and actually the forecasts were well over what the target was. So I would say to the Committee to take some comfort in that. It is not a lot of comfort for our irrigators, because that is water that they have forgone that they could have accessed. But, nonetheless, their access was suspended until WaterNSW was confident that a certain volume would be passing Wilcannia. As I say, in the event, it ended up being a much larger volume and the river kept running strongly past that 10-day period and a lot of water got down into Menindee as well. There are also current rules now that have only been in force for just over 12 months—individual daily extraction limits on irrigators in those dry periods and things to sort of try to improve that connectivity. So we would expect all of that work to be done and based on science and evidence over the next couple years, and we support that.

The Hon. ROSE JACKSON: Can you understand though that because those issues around connectivity and those downstream targets are so important for the people who live and work in those communities, the fact that is a little bit disconnected from this process because it is part of that sort of separate river connectivity process does raise some questions or some anxiety about how extraction through floodplain harvesting might impact on

them? I mean, can you understand how people might be a little bit nervous about the disconnect between those two things?

Ms MILLER: Absolutely I understand why they are nervous. I will just throw to Ms Freak.

Ms FREAK: Yes, absolutely, and I think what we have to acknowledge here is that this reform that we are talking about is a flood management policy and a lot of those connectivity measures are drought management policies. You cannot solve drought problems through flood policy. So with that acknowledgement [audio malfunction] strategies are incredibly important. They are important to our industry as well. I will just bring to the Committee's attention the first flush that occurred in March 2020, which was then followed by an independent assessment and that provided a range of recommendations on how to improve first flush management. We support the recommendations that came out of that and the department now is undertaking a very significant work program on that, as Ms Miller was referring to.

That panel assessment actually addressed a lot of these issues around sequencing. So what we have to recognise here is that stakeholders are in pretty broad agreement that drought management needs attention. The Irrigators' Council, at the time of that first flush event, actually was on the record calling for better downstream flow targets as well because we needed certainty around when those water sharing plans were no longer going to be suspended and when normal water sharing access rules would resume. But that is a drought management conversation. [Audio malfunction] as part of that, conducted that assessment and found on the matter of sequencing—and I will quote. They said:

> It is vital that [these] reforms continue [relating to floodplain harvesting], not only for reasons of achieving better water management generally, but also because they will help improve management of future first flush events.
>
> …
>
> The work we have suggested can be carried out alongside current work programs to improve connectivity, complete rollout of floodplain harvesting licensing reforms…

And then they continue to name a number of other reforms as well. So it really does come down to a sequencing matter. I do not think we can accelerate that process on drought management because, as Ms Miller said, it does have to be subject to the science. But given that we are in a wet period at the moment and given this reform to floodplain harvesting has been going on for so long, it is crucial that a licensing regime can come into place at the earliest possible opportunity.

Ms MILLER: I might just add to that, Ms Jackson. I absolutely know why—you know, we have just been through a terrible, terrible drought and people are of course traumatised by that experience. And I might say, they were traumatised throughout the northern Basin. The Namoi River was a dry river bed as well. People did not put crops in. They did not grow anything. No-one had any water throughout the system. There were not any secret floods somewhere that people got water from. So it was a really stressful, terrible time that really highlighted the desperate need that we have to work on drought management policy and improve all of that. So, given the experience that everyone has just been through, of course they are going to be anxious to see some kind of—to see a resolution in that and to feel confident that process is underway.

In the past it as always been it rains for five minutes and no-one thinks we need to talk about drought policy anymore. But, as Ms Freak has said, that process is in fact underway and it is a really good time for it to be underway, while things are wet and while people are actually able to relax a bit and to get on with farming and get on with their businesses. It is the ideal time to be doing this.

The CHAIR: Thank you. The Opposition's time has expired. We will move to the crossbench. I will kick off with a couple. I just wanted to go to a question around the official cap models that are essentially within the cap versus what DPIE are saying are cap scenarios for various valleys. I wanted to go to Gwydir, in particular, just as an example. The official cap model for Gwydir lists the cap as 346 gigalitres. DPIE is now stating that the extraction limit of the cap scenario model is 431.4 gigalitres. That is 81.4 gigalitres higher than the official cap. From your perspective, why is that happening? Ms Miller?

Ms MILLER: This is a question that you should best be putting to the Murray-Darling Basin Authority and to DPIE. But our understanding is these differences are due to, basically, the models get updated to take in new information. The number that you are referring to there, if you go back to 2011 reports on cap and so forth—and I can send these to you if you like—from the Murray-Darling Basin Authority, they go through there the differences and outcomes for different models that are being used to determine cap. It was interesting to me to see in there that there was a difference between—well, at that time, they acknowledged a difference between—what the MDBA model was presenting and what the models in the Gwydir water sharing plan were presenting, somewhere in the scope of what you have just described right there. The differences came down to differences in the period of time that was being covered by the different models, and a few other bits and pieces.

The really important thing though to remember here, this comes down to the cap models that are being used by New South Wales have been accredited by the Murray-Darling Basin Authority and it is in a process that is no different to the same processes that have been applied in other States. Numbers in cap do move and reflect best available information. That has been the case ever since this process started in 1995 and it has continued through the Basin Plan. There is a continuum there into how they measure baseline diversion limits [BDLs] and then, ultimately, SDLs from that.

Ms FREAK: I would also add to that, Ms Miller, that updating limits does not mean that more water can be taken. What it does provide is a better estimation of the levels of take under the cap. I think the cap has been probably, if I may say, poorly understood throughout some of the presentations to this Committee. Just to clarify, the cap is not a fixed number, it is a description and that description is about the volume of diversions that could occur based on a particular development scenario. That is subject to modelling inputs and, at the time, it was widely acknowledged that floodplain harvesting was not well understood and there was not much data on it, and it was expected that would be updated. That is why there was $52 million spent on getting more data about that, to better understand what those historical levels were.

I would also add that it is nothing extraordinary for the cap to change. It has happened in other valleys for other forms of water take. It has also happened in other basin States. Queensland is going through a similar process of floodplain harvesting and their BDLs have all been amended as well through a similar process to what New South Wales has. I have also been informed that the re-estimated modelling has actually produced lower levels than the accredited cap model in New South Wales as well, so it not something that we share a concern with.

The CHAIR: [Inaudible].

Ms MILLER: I'm sorry, Ms Faehrmann, you might have been on mute. I didn't hear that comment.

The CHAIR: Sorry. You are correct. Did either of you listen to Mr Bret Walker's evidence this morning.

Ms FREAK: Yes.

Ms MILLER: Yes, we did.

The CHAIR: And you are aware that in that evidence this morning, as well as in his report to the South Australian Royal Commission into the Murray-Darling Basin, he said:

> Ultimately, the MDBA's proposal to increase SDLs by reference to increases to BDLs is unjustifiable. The Water Act intrinsically links SDLs to the ESLTs for each water resource … The Water Act does not mention BDLs at all.

He is pretty unequivocal that in fact the BDLs cannot be increased in the way that is occurring and being approved by the MDBA.

Ms MILLER: This goes to the heart of an argument which was put through the South Australian royal commission that argues that the Basin Plan is not lawful because it is inconsistent with the Water Act and assumes or contends that the Water Act requires an ecologically sustainable level of take is first established and that the Basin Plan reflects that. Then it comes down to an argument about what should be the ecologically sustainable level of take. So does that mean the water recovery target should have a two in front of it, or a three in front of it, or a four in front of it? That is a very labyrinthine and deep legal argument. The bottom line here is that all of the States and the Commonwealth agreed to the Murray-Darling Basin Plan with its formula for baseline diversion limits in it and with the sustainable diversion limit formula attached to that, and that that is how they would proceed, and that they use sustainable diversion limits with a volume of water recovery to achieve that, and that was a fair representation of the ecologically sustainable level of take, taking into account socioeconomic impacts.

So it is a triple bottom line approach. I think you are really asking, an agreed process that is nearly 10 years old that all States and the Commonwealth signed up to—with the baseline diversion limits and with the SDLs—that New South Wales should walk away from that. No other States have walked away from it; even South Australia, who commissioned the royal commission. But you are asking New South Wales, "You should walk away from that agreed process and go it alone."

The CHAIR: Thank you, Ms Miller, that is absolutely not what my questions are implying at all. In 1994-1995 I understand that in terms of gigalitres the storage level was around 600. Is that correct?

Ms MILLER: I will throw to Ms Freak for this one.

Ms FREAK: We would have to take that on notice, Ms Faehrmann. But actually it does not really matter because the cap is about the amount of diversion which could be occurring at that point in time based on the levels of infrastructure, which includes storages, dams, channels—the whole lot. So it is not about the actual development itself; it is the diversion at that level.

The CHAIR: Hang on. Okay, so it is not about the diversion itself. I am just trying to get this straight. So if there was, like, 600 gigalitres in 1994-1995—which I understand is 600 gigalitres of storage—and there is potentially anywhere from 1,100 to 1,700 gigalitres of storage now in the northern Basin, that does not matter? It is not about the levels of storage that can take the water when it floods—which is clearly a hell of a lot more if it is 1,700 versus 600. It is all about modelling instead of the actual storages?

Ms FREAK: It is about the level of diversions at that level of infrastructure. That was a decision by ministerial council, that the cap should restrain diversions, not development. So if there was further development that could occur, but that would have to be offset by purchasing water from other developments or through water efficiency.

The CHAIR: In terms of how your members work then, if they have 1,700 gigalitres of storage, they therefore do not use the additional 900 or 800 gigalitres of storage? They do not divert the additional water into there when it floods. Is that what you are suggesting?

Ms MILLER: First, they do not have 1,700 gigalitres of storage. They have, from memory, around 1,300 gigalitres of storage, so that is the first thing.

The CHAIR: Which is more than double.

Ms MILLER: Storages are also multipurpose. These storages are also used to contain water that they get from general security allocations because the way that it works up there, with the reduced river losses and so forth, is that those releases are put out in block releases from the dam and if you do not have on-farm storage to take it as it goes past your farm, then you cannot access that general security allocation at all. So these storages are there reflecting the boom-and-bust nature of the system up there so that they can store water from supplementary access under those licences and also store water that they access under general security licences and they can also put floodwater into it as well.

The CHAIR: My time has expired. We will move on to questions from Mr Banasiak.

The Hon. MARK BANASIAK: I will start with you, Ms Freak. Touching on what you said in questions to Ms Faehrmann, to your knowledge, how long has the MDBA and the New South Wales Government known that the cap has needed to be adjusted or moved around to accommodate the floodplain harvesting data?

Ms FREAK: Since the very beginning it was acknowledged that a number of forms of water take needed better data to understand them, so since its inception that has been always planned. The ministerial council documents at the time can evidence that.

The Hon. MARK BANASIAK: So really it has been a failure by government in actually getting this done and in getting the proper modelling and data to better inform the cap?

Ms FREAK: This reform has spanned a very long time, and too long in our opinion. Obviously it did require time in order to do that work and to do the very, very thorough process which it has gone through by surveillance monitoring, on-farm surveys and on-farm inspections to get that information. It has taken too long from our point of view and that is all the more reason why, now that that data is available and now that the [inaudible] data, it is time to bring it into the framework.

The Hon. MARK BANASIAK: I might just throw to you, Mr Holt, with some legal questions. We have heard a lot of commentary over this inquiry about where these water provisions are vested and whether they are in the State or the Commonwealth. I want to get your view whether floodplain harvesting water is actually being vested in the State or if it is still a property right of landowners.

Mr HOLT: If I pick up where Mr Walker left off, I think the State has changed the Water Management Act in 2014 to exert, if you like, its ability to control water on the floodplain. I say that having done that, it has not yet put in place the licensing frameworks. It has given itself the ability to do what it needs to do as part of the implementation of the floodplain harvesting framework, but it has not done that. In terms of coming back to property rights, I think Mr Walker made the point that while water is valuable, it is not a form of property.

My understanding of the way this system is working is that a common law right—a residual common law right, if you like—is now in the process of being transitioned into a statutory licence. So in that way it is consistent with what has happened in the past, say, for example, for groundwater. That is happening now. I would also point to the fact that these are expressed under the Water Management Act as replacement licences. So the question is: What is it replacing? It is replacing the ability of a landholder to some extent use water from the floodplain for their purposes. In terms of how it is being replaced and how it is being transitioned, there is an acceptance that there is going to be a licence and conditions and the monitoring framework, which is what Mr Barnes referred to earlier.

We are seeing a residual common law right become a statutory licence. There is an acceptance on the part of the Government that rights come with entitlements, and that entitlement is to use and take, for the purposes authorised by that licence, the water under the terms of that licence. I see this as a State in transition. I think there is a recognition that even though these are not property rights, they are valuable and that we are in the process of issuing replacement licences, if you like, to use that water. That is part of what is happening here.

The Hon. MARK BANASIAK: Do you think it would have been more prudent, in your legal opinion, to actually get the regulatory machinery in place before we started this transition? Picking up on what you are saying, it seems like this common law right is now stuck in what could be better determined as a bit of a regulatory warehouse. How long can it stay in that place, is the question.

Mr HOLT: I would agree with you. I see us as being stuck in transition. Part of the reason why we are stuck in transition is of course because the Legislative Council disallowed the regulation. But there are a number of things that the Government, in my opinion, needs to do to fully implement the licensing framework. Mr Walker, in his opinion, referred to the fact that certain proclamations operate within the bed and banks in regulated river systems. There are the provisions in the Act for those proclamations to be amended. There is the requirement to make the necessary transitional regulations to allow the granting of the replacement floodplain harvesting licences, and, of course, the water sharing plans in the New South Wales context also need to be amended to make provision for the water sharing rules, if you like, and allow an allocation to be used for floodplain harvesting and then ultimately licences need to be granted to licence holders.

One of the problems—back to your point about property and equity—is that at the moment, where we are there is an inequity in the sense that it is accepted that floodplain harvesting is unlicensed and unregulated. The New South Wales Government is now telling people that as a consequence of being unable to impose a regulatory environment take in the way that it is being modelled suggests that the amount of available water—the available water determination for licence holders who have supplementary water licences—has been reduced as a consequence. I suppose those people who have supplementary water licences can feel a little bit aggrieved that the amount of water that they are otherwise being allowed to take is being reduced as a consequence of being stuck in transition. Whereas I think everybody is saying what is a fair situation is that the long-term growth and the extraction referred to by Ms Faehrmann earlier should be reduced by the amount of water that is taken under floodplain harvesting licences. At the moment, those with supplementary are wearing the cost of the unconstrained growth of floodplain harvesting. There is an inequity in that.

The Hon. MARK BANASIAK: Thank you, Mr Holt. That is very helpful. I have only got two minutes left. I will throw to you, Ms Miller, to pick up on your comments and your opening statement about who you represent. You say you have got irrigators all across New South Wales. I was just wondering whether there are any nuances or differences in your members in the southern Basin about this proposed regulation in licensing. Is everyone agreed within your association that it should be licensed and it should be under cap? Is that the position or are there some nuances in your different members?

Ms MILLER: No. Our members all agree that we need to get on with the job. Enough of the legal uncertainty here and enough of the tit for tat on different legal opinions. Get on with it. They support floodplain harvesting being reduced, licensed and metered. They support the rainfall run-off exemption. I think all Committee members will have seen farmers in Coleambally speaking for themselves about why they want to see the rainfall run-off exemption go through as well. That is rather a long answer, but, no. Our members are in agreement.

The CHAIR: We will go to questions from the Government. Mr Farraway.

The Hon. SAM FARRAWAY: First to Ms Miller. What rule changes have been made in the past three years in the Barwon-Darling and how have these rules changed river operations in your view?

Ms MILLER: There have been a number of rules that have changed in the Barwon-Darling. I talk about the resumption of flow rule. That one has come in on 1 July 2020, as did the individual daily extraction limits. These in practice mean that irrigators forego water that they would otherwise be allowed to access under the terms of their licences and the water sharing plans. At that time, that 10 days when they had their extraction suspended in January, that had a direct bearing on a number of crops. You can imagine, that is a time when crops are being finished off, it is very hot and it is very dry. It was not a great thing for the productivity there, but they have worn that. That is a change where they have been put at a disadvantage with no compensation. Also, in the last three years, there have been changes in the rules applying to when they can access water under class A licences. That, in effect, means they basically cannot access water almost at all. It is very, very restrictive. There have been a number of changes that have affected access and without compensation.

The Hon. SAM FARRAWAY: I have a question again for Ms Miller and also any of your colleagues from the Irrigators' Council. Do you believe that more water would have gone to the environment if the Government's policy to licence and meter floodplain harvesting had been in place for the last year?

Ms MILLER: Yes.

The Hon. SAM FARRAWAY: I have a question for Mr Holt. In this morning's session the Committee Chair, Cate Faehrmann, asked Bret Walker, SC, several questions on the legality of floodplain harvesting, which were published online. Could those questions be considered too narrow or do you think that the scope was broad enough, in your legal opinion?

Mr HOLT: Those were the right questions to ask.

The Hon. SAM FARRAWAY: Following on from that, Mr Holt, do you agree with the advice from Bret Walker, SC, to this Committee that floodplain harvesting is not unlawful and is legal?

Mr HOLT: Yes, I agree with Mr Walker's advice and analysis.

The Hon. SAM FARRAWAY: Ms Miller, I want to move on from that to temporary licences. On behalf of the NSW Irrigators' Council, do you think that temporary licences are compatible with the National Water Initiative, which obviously all basin governments are signatories to?

Ms MILLER: No. Our understanding is that licences need to be perpetual and ongoing. I will throw to Christine on this. Again, she has got much more expertise in this area. But our understanding is that licences are issued, they are permanent and ongoing and then the way that you adjust for the impacts of climate change and for different levels of water availability under different climatic scenarios is through the available water determinations. You can see this principle in action in every other water licence type. For example, in general security licences you have a licence to a certain volume, but the amount that you actually get allocated and are allowed to use depends on how much water is in the system. That is where we are seeing, for example, reliability. In the Murray, general security has dropped down to 48 per cent and in the Namoi it has dropped down to 39 per cent and that is a reflection of the drying, warming trend being reflected in the actual available water determinations. I will flick to Christine.

Ms FREAK: Thanks, Claire, I will throw to Peter shortly. In addition to changes to the AWD, the other reason why temporary licences are just not needed is because water sharing plan changes and amendments occur frequently, and they can occur. There are also regular reviews of water sharing plans, which are conducted by the NRC, or Natural Resources Commission, who provide recommendations on what amendments are required. Any of the changes that a number of stakeholders are presenting, they can all happen under the permanent licensing regime so there is simply no need for an interim licence. Peter.

Ms MILLER: Sorry, just before Peter hops in, can I just add to that too. If you wanted to go down this path of interim licences, if you issued them for five years, what would you learn in five years? There may not be a flood in that time. What would you learn if you issued them for 10 years? Well, anything you learn needs to be repeatable, so then you are going to have to wait for your next cycle. When you have already got provisions in the current regulatory framework to review water allocations and licences and things, I do not see what you gain by going down this path of interim licences. Peter.

Mr HOLT: I just make the point that the proposal here is that the water sharing plans are amended to incorporate certain rules. What we are anticipating here is a sort of hierarchy, if you like, that long-term over-allocation is addressed by initially the reduction and the ability to take water from floodplain harvesting then moving onto supplementary and then into general security. At the moment that system is not operating, as you would appreciate, so at the moment the long-term extractions are being managed not by rules within the water sharing plan but by reductions in the available water determinations for the coming year for supplementary water access licence holders.

The Hon. SAM FARRAWAY: Thank you for those answers. They were very helpful. Back to Ms Miller, on behalf of the Irrigators' Council, are you aware—it was sort of touched on earlier, but to confirm, you are aware that obviously floodplain harvesting does occur in the southern Basin?

Ms MILLER: We do believe that to be the case.

The Hon. SAM FARRAWAY: Ms Freak, did you have any further opinion to add?

Ms FREAK: Yes, it is the case. That is largely because of the way the [inaudible] is defined in the Act to also include rainfall run-off. I have to note that the policy is a statewide policy, but it is just being applied to the five northern valleys in the first instance. But the rainfall run-off component is particularly important for

irrigators right across the State because every irrigator or every landholder is required to manage their run-off. That is an environmental requirement to prevent potentially contaminated water leaving the property.

Mr HOLT: If I could briefly, I just make the point that Bret Walker referred to the puzzle. I see it as more of a mosaic. What we are talking about here is the implementation of a tighter, more restrictive policy framework on the northern valleys. But we would anticipate that same policy framework would be rolled out consistently across not only the southern valleys but also other parts of New South Wales with the consequential amendments to the water sharing plans and the proclamations and the ability to access the exemptions. I think we are heading towards a consistent system. Obviously the Government's priority is still on the northern valleys.

The Hon. SAM FARRAWAY: Back to Ms Miller. How are the floodplain management plans in the five northern New South Wales MDB plans the same as those in the southern New South Wales Basin and, I suppose, from your point of view, what are the key differences?

Ms MILLER: I would have to take that one on notice, unless Christine has something she can add there. I am not aware of them being materially different. You would have to have the same policies applied to all floodplain management plans. Christine, would you like to add to that?

Ms FREAK: I am not aware of any differences. I might throw to Peter.

Mr HOLT: Again, I am not aware of any differences, but what I do know is that the time and money and energy of the policy work, including the preparation of new floodplain management plans, has been directed to the preparation of floodplain management plans for the northern valleys. Again, in terms of what I would expect to happen is that that consistent approach would be adopted. There may be—again, I say may be—existing plans in place in the southern valleys and you would expect to have those plans reviewed and refreshed, adopting a consistent policy position to what has happened in the north in more recent times.

The Hon. SAM FARRAWAY: This question is open again to any of the witnesses. We have touched on it with earlier witnesses, but I want to know, especially from the Irrigators' Council, what your view is on how other States regulate floodplain harvesting and to expand on what you think works, does not work and how they are doing it.

Ms MILLER: Floodplain harvesting—I am a Victorian—as far as I am aware, does not occur in Victoria or in South Australia, so that would bring it back to Queensland. I would have to take that one on notice. My focus is on regulating this practice in New South Wales. Would you like to add anything, Christine?

Ms FREAK: Queensland is going through a similar process to licence floodplain harvesting. They are due for completion in 2022. New South Wales was scheduled to be the first State to have floodplain harvesting brought into their water compliance framework, but we will see how that goes.

The CHAIR: I think Mr Murray wanted to jump in.

Mr MURRAY: In Queensland, floodplain harvesting is known as overland flow and it is largely being regulated by actually licensing storages. So you have a storage licence, it is surveyed, it has got a volume and it is allowed to receive overland flow water. That is how it has largely been regulated to date. There is a process where at least some of those have been converted to volumetric licensing, and that work is ongoing.

The Hon. SAM FARRAWAY: I have a question for Ms Miller. Does any element of the floodplain harvesting policy as it stands have significance for water users outside of the northern New South Wales Murray-Darling Basin? I think you may have actually touched on Coleambally irrigation earlier. It might be relevant to that.

Ms MILLER: Do you mean has it got relevance outside the northern Basin?

The Hon. SAM FARRAWAY: Correct, yes.

Ms MILLER: Correct, yes. The rainfall run-off exemption is extremely important right across the board. All irrigators have rainfall run-off on their properties and require an exemption, otherwise they are caught between two—basically, which law would you like them to break? They are required to keep water on their properties in order to protect the health of rivers and ecosystems, and without the rainfall run-off exemption they could be pinged for taking unregulated water for which they do not have a licence. That applies everywhere across the State. We would expect that the floodplain harvesting regulations would be applied statewide. The process that has been gone through for the north will be gone through in other States. You cannot really have two separate systems in two different parts of the State.

Mr MURRAY: Sorry, just from my perspective again, I see that exemption as part of the framework that is being implemented. That exemption makes a lot more sense once we have visibility over the changes to

the water sharing plan. The Government's position is that it is seeking to regulate rainfall run-off and, in doing that, in my opinion it needs to provide for an exemption of some sort. Again, I suppose what I am expecting to see is other water sharing plans. Again, back to Mr Searle's point earlier, the State has exerted its control over water on the floodplain. It is now progressively implementing a licensing and monitoring and evaluation framework for that water. Why wouldn't it do that in coastal New South Wales, which Mr Barnes referred to earlier, as well as in the south?

The Hon. SAM FARRAWAY: This question is open to anyone, including Mr Murray, if he wanted to answer or go first. I have asked this question of quite a few stakeholders and witnesses to the hearing. Would any of you agree with Central Darling council, the South West Water Users association, Graeme McCrabb and other Menindee locals when they state that the policy around the 640 and 480 gig rule has not delivered good outcomes for the lower Darling communities through its management by the MDBA?

Ms MILLER: I might jump in. I think that the management of the Menindee Lakes does need to be looked at. It is kind of the pivot between the joins of the northern Basin to the southern Basin. There is a question here about it is not just the inflows that are coming into Menindee, but what do you do; how quickly does it get drawn down? In 2016 Menindee was full, like every other storage. The whole basin was under water with the floods. Yet by 2017 the MDBA had made a decision to drain it. That had a direct bearing then on drought because the drought meant no more inflows came in and they left nothing in reserve there to protect critical human needs and environmental needs, and we had those terrible fish kills.

There is a real question here about the management of the Menindee Lakes. It is a two-way street here. It is not just what comes in but also what is drawn out. The 480 and 640 rule, that is just a question of who controls the water that is in there at different times. If it is above 640, then the MDBA takes control and it becomes part of the shared Murray resource under the Murray-Darling Basin Agreement. It reverts to New South Wales control at 480 gigalitres in there. When it is under New South Wales control, however, from memory, roughly 100 to 150 gigalitres still goes down the lower Darling and into the Murray and, in that sense, is part of New South Wales Murray resource. So you are still getting water going down there for the purposes of Murray allocations or offsetting New South Wales commitments to South Australia's minimum flows and so forth. It is just a question of who has got control at different times.

The Hon. SAM FARRAWAY: Just a final question because I am nearly out of time. It is open to everyone. I would ask from the industry groups you are representing, how would you describe the stand-off that we have got in New South Wales where we have got the vast majority that have said that they want to see floodplain harvesting licensed and metered and they want to see the compliance enforced and the works which are illegal removed? This has been going on for 20 years. We have heard that very clearly through the inquiry. Do you all believe that it is beyond time and that basically we are at a point where we all need to get on with it and move on with what successive governments have promised and we do need to deliver this?

Mr MURRAY: Absolutely. I do not think you can overstate just how much work has gone into this process compared to any other process if it was a State-based process around licensing. Yes, modelling is never good enough. Gauging is never good enough. Data is never good enough. But there is far, far more available today after spending—and I am not sure whether the number is $17 million, $20 million or $57 million on this process. It would be a good number to know. But there has been a huge amount of work done.

As an industry, we know we are going to lose access to water. We accept that. But we do need the improved degree of certainty from licensing. With that licensing comes the metering. The measuring gives people like Grant Barnes the ability to go and do his work clearly and gives irrigators the framework to know exactly what they can do and exactly what they can't do. Yes, you go back into Brett Walker's advice and he talks about the whole tone if not the law of government was accepting of floodplain harvesting, encouraging of floodplain harvesting. It is time to nail this final major piece of work for the Water Management Act 2000 and let everyone get on with it.

Ms FREAK: I will add to Mr Murray's comment, if I may, Chair. I would just say that this is a principle about some very fundamental basic principles of good water management. I mean, having every form of water take metered, that is just fundamental. Having every form of water take having to comply with the State's limits on water take, that is fundamental, and with the basic limits on water take as well. We are the stakeholders that are most negatively impacted by this reform because we are losing one-third of the water access—all those who floodplain harvest are—as a result of this.

We have had the difficult conversations with those who are going to be impacted and we have come to the point where we are here in good faith, accepting of this reform to happen. As Mr Walker said earlier, this is an incredibly significant, important reform and it is remarkable that it has not already occurred in New South

Wales. But now stakeholders are all at the table in furious agreement that we have to get this regulated and there is significant agreement about doing that to the 94 cap, as is proposed.

The CHAIR: Thank you very much to our witnesses for appearing. We are out of time, unfortunately. We will now break for lunch. We will be back at 12:55. I remind all members to please mute and turn your video off until then.

(The witnesses withdrew.)

(Luncheon adjournment)

EMMA BRADBURY, Chief Executive Officer, Murray Darling Association, affirmed and examined

JANE MacALLISTER, Wentworth Shire Council, affirmed and examined

PHILLIP O'CONNOR, Mayor, Brewarrina Shire Council, sworn and examined

The CHAIR: Welcome to the next session. We will begin with short opening statements. I assume all of you have one?

Mr O'CONNOR: Yes.

The CHAIR: Ms Bradbury, we can barely hear you. You might need to move closer to your microphone.

Ms BRADBURY: Feel free to call me Emma. Thank you for the opportunity to address the hearing today. I am the chief executive officer with the Murray Darling Association [MDA], which is the peak body for local government. The MDA acknowledges the traditional owners and custodians of all the lands across the Murray-Darling Basin and all First Nations in Australia and pay our respects to Elders past, present and emerging. Reform of floodplain harvesting is a complex issue. It is seeking to balance competing needs and interests—the needs of the floodplains and the connected waterways and the interests of those who depend on them. The needs of the rivers and the lands cannot be compromised without impacting in turn the interests of the communities, the economies and the individuals that rely on those waters. They are all connected.

It is evident that the needs of the rivers and waterways, the floodplains and the downstream systems are currently compromised. Without effective reform of the current legislation, this will only become more acute. That reform must be clear, consistent and accountable. Some things aren't complex. We have an interconnected system and it is in crisis due to over-extraction. That is the reality. We have climate change creating greater extremes of conditions and that needs to be factored in, and we have towns, communities, farmers and businesses that need clarity, certainty and consistency out of this reform so that they can adapt and invest and innovate for the future with confidence. That future will have less water. The MDA's submission seeks to strip away some of the unnecessary complexity. We have provided recommendations which, if adopted, will create transparency, consistency and reliability for all. Thank you.

The CHAIR: Thank you very much. Councillor MacAllister?

Ms MacALLISTER: Thank you. I would like to acknowledge that I am coming to you now from Maraura country and acknowledge their continued and enduring deep connection to country. I pay respects to Elders past and present and also extend that respect to all Indigenous people now on the call or in the future of this transmission. By country I include all things connected to that country. For today, I am especially speaking about water, which transverses, nourishes and replenishes more than 40 First Nations countries across the Murray-Darling Basin, as we call it.

I especially want to highlight the apparent unity of good neighbour custodianship, which underpins all Indigenous resource management, but especially in terms of water. I thank all who have helped by sharing their wisdom around that with me. I am here as a councillor representing Wentworth Shire Council, which extends across the far south-western corner of New South Wales from the South Australian border along the Murray River border with Victoria to just before Euston, and up through the Willandra Lakes world heritage area to just above Pooncarie—some 26,269 square kilometres in total. I thank those members who have visited our shire to understand and hear from residents and see the impacts directly. I thank also members for inviting this evidence today.

Although the time frame outlined in council's submission reflects the relatively recent past, there are issues and consistencies in policy direction over a more broad time frame which have compounded to bring us to this point. In the grand scheme of things, however, the practice of unfettered growth aided and abetted by policy decisions founded on the false premise of too much water going to the environment and the false dichotomy of irrigated versus environment, has real and quantifiable impacts on our people and place.

I have tabled an excellent report which came out after the submission from council, called *The politics of evaporation and the making of atmospheric territory in Australia's Murray-Darling Basin* by Sue Jackson and Lesley Head. The reason I have done that is I would have referred to it in council's submission had it come out a few days earlier. There is a lot of information in there that is relevant to particularly the accounting, which is couched in consumptive terms. Also I will just foreshadow that I will take any questions on notice relating to the schedule or the appendix which is attached to council's submission, the facts and figures in there and take them back to the appropriate director of council for a response, if that is okay.

The CHAIR: Excellent. Thank you. Mayor O'Connor?

Mr O'CONNOR: Thank you, Chair, and thank you to everyone for doing this. I really appreciate it. I am Phil O'Connor; I am the Mayor of Brewarrina. I have been mayor for six-odd years. I was born here on the Bokhara River and I have lived on a lot of other rivers here—the Birrie, the Culgoa and the Barwon River now. I have just witnessed such a mess the situation is of our river systems. I grew up and there was plenty when I was a kid, plenty of water. There are six rivers that run through our shire—the Culgoa, Birrie, Bokhara, Narran, Bogan and the Barwon. The land out here—I do not know whether a lot of people know this—only falls at 50 millimetres per kilometre. That is the fall of this land. Over 10 kilometres it only falls half a metre. So you can imagine, you know, water than can be diverted with a very small bank out here and diverted for miles.

Every flood is different out here, so they say. With development from Queensland and upstream—I know that Queensland, we haven't got any say what goes on up there—I have seen this water go places it has never been before over the last 20 to 30 years. There has been thousands of sheep that have been killed with the diversion of this water. It sends the flood in a different direction nearly every time that we do get a flood, which is not that often, but there are landholders that have lost thousands of sheep where they didn't expect the water to be diverted to because of these banks.

My opinion of this and of council is that floodplain harvesting should not be allowed in any form. I will make that very clear. It can never be measured properly and accurately anyway. Floodplain harvesting will only benefit one industry and there are a lot more industries and a lot more people that live along these river systems and out on these floodplains, not only upstream of here, but downstream of here. I have just seen it deteriorate so much. You know, if it is approved, it is going to be to the detriment of a lot of other farmers that live along these systems. It will only benefit one industry and that is the irrigation industry and no-one else. It will be a detriment to everyone else. I feel very strong about that, as everyone knows. Thank you.

The CHAIR: Thank you very much. We will go straight to questions from the Opposition. Ms Jackson.

The Hon. ROSE JACKSON: Thanks, Chair, and thanks everyone for coming along, for your written submissions and your opening statements today. I want to ask a question to Ms Bradbury, although others can feel free to jump in if you have views. One of the things that you mentioned in your submission and your opening statement are things like the importance of including the most up-to-date and future modelling in relation to climate change, for example, and once we have better measuring and monitoring of what water is being taken and where, that might also inform future decisions about what a licensing regime may look like.

Do you have any views about the best way to construct a licensing regime that allows for those kinds of things to be taken into account in the future? There have been suggestions, for example, about interim licences. There have been suggestions about permanent licences but with adaptive management or amendment framework built into that. There have been suggestions that those things can be adequately managed just through annual water determination. So there is a range of ideas about how some of that additional future information might be considered and drawn into the regime. I just wondered if you had any views about those options.

Ms BRADBURY: One of the things that we really need to achieve out of this reform is certainty. I am really concerned that over time we have tended with this particular legislation, or the reform of it, to try and put the cart before the horse and to create solutions to a whole host of problems embedded within the legislation rather than looking at the foundational issues, which is that we need to establish a sustainable level of take that enables our systems and of course their dependent economies to be sustainable. How do we do that? The first thing we need to do is determine what does that actually look like and then build a regulatory framework around that.

I think there are sufficient examples of regulatory frameworks around natural resource management reforms in other areas, whether that is fisheries, forestry or in other areas. These are global issues and there are global solutions to them that would enable us to create a regulatory framework that is consistent, that is reliable and that actually addresses the needs of the system, rather than the gaps within the current legislation or framework as it sits. I would love to be able to sit down and actually develop a regulatory framework with those who have better expertise in this space than me. But I think it is about cutting back to the simplicity of what is the issue and create a regulatory framework around it that addresses that need. I think it is reasonably well mapped out in the Water Act, but the regulation has overcomplicated itself and now we are in the current position.

The Hon. ROSE JACKSON: I might direct my next question to councillors MacAllister and Ocker. We have heard evidence from academics and others in the environmental movement about some of the environmental consequences when we do not get this right and some of the environmental consequences when we over-extract water from the system. But I thought it might be a little bit useful for you to talk about some of the social and community impacts. It is mentioned in your submissions, obviously, and you have mentioned it in your opening statements. Just talk a little bit about what happens to communities and to the people that you represent when we get this wrong, when the water does not flow and when those communities downstream are not able to access water in the way that they used to historically.

Ms MacALLISTER: If I may go first. It has had a deleterious and compounded impact on our community over a very long period of time. Trauma can be a compound and vicarious beast. As well as having continued experience of the trauma of not having not only the amenity but also the industry and the community togetherness that healthy flowing rivers bring, it also can be something that when spoken about those who hear are also traumatised and re-traumatised in the telling, to the extent that certain people—and I will not identify them—have mentioned that they can no longer speak about the impact on their industry and on their personal mental health because their family will no longer allow it. Such has been the level of deep depression over a continued period of time.

We have had post-traumatic stress disorders, we have had skin irritations be continued. I suppose, filling without proper cleaning, and not that that is anybody's fault, but it is the nature of cyanobacteria that once it infects there needs to be very deep cleaning to food grade standards of the receptacles that hold the water and that has led to in children antibiotic resistance, which can impact them into the future whenever they have an infection. In the current climate, that is terrible.

Speaking to our ratepayers in Pooncarie, there is an eight-year-old child—again, I am not going to mention people—who cannot swim because the river has either been too low or running dangerously high that it will not permit children to swim. Now these are just a couple of examples but there are so many and I could go into it. There is not enough time to address all of the impacts, but they are very serious. This is 2021 for goodness sake. There are a lot of third world conditions and diseases, including bacterial meningitis, which should not be occurring in this day and age, due to not providing adequate, safe, clean, critical human water needs for an extended period of time.

The Hon. ROSE JACKSON: Councillor O'Connor.

Mr O'CONNOR: Yes, thank you. Being here, living in this community, you see how different it is when the rivers are running in the community, especially how it just builds people up here. They are just totally different, the people that have been here for a hell of a long time when the rivers are running. This is our chance here now to make a good decision. When the rivers were dry—and I will say that here—there were that many people, when the rivers weren't running, fighting; families arguing that never argued before. It just affected so many people. When the rivers started running again—this is on the social side of it—it just brought peace and happiness to this community. I tell you what, it is a lot easier to handle in my position and look after this community when there is a lot of happiness and a lot of happy people here.

We have only got two big farms in our shire; there is a hell of a lot more upstream. This is our chance. Economically, I will just say that for years as we were growing up there were that many fishermen and the pubs were full and people used to come out in boatloads—20 and 30 in each group. The town really flourished and there was a lot of money getting around from these people coming. Now you are lucky to see two or three fishermen come in six months, you know, because of the river's hell. But it is our chance to make it come back to what it was. Thank you.

The Hon. MICK VEITCH: My question is to each of you, essentially. It arrives from reading Brewarrina council's submission, so we might start with Mayor O'Connor in answering this question. You were very forthright, as you always are, but you were very forthright in your submission in regard to the non-tradeability of floodplain harvesting licences. I would love to get each of your views about the capacity to trade floodplain harvesting licences or not to trade them. We will start with Ocker.

Mr O'CONNOR: Thank you, Mick. I do feel very strongly about this because I have seen evidence of water being traded in the past with extraction licences. There was a flow coming down the river which hit the A Class pump threshold at Collarenebri, and the licence up there had used all its capacity of water. So they transferred a licence from Bourke, upstream, to use that water and we ended up with nothing again from that A Class extraction. This will be exactly the same if it ever gets through—of trading these licences up and down the system—and I can never see it working, Mick. I just cannot see it. As I mentioned, I got told at one meeting that they were going to measure the water with gauge boards. I did bring up at that meeting—I said, "Did everyone ride a horse here, did they?" Fancy measuring the capacity and the flow rate with gauge boards. It cannot be measured properly, mate, and trading just should not be allowed.

The Hon. MICK VEITCH: Thank you. Councillor MacAllister?

Ms MacALLISTER: I very briefly echo the statement that we heard from Rachel Strachan and others in our shire as well. As we have heard, the nature of floodplain harvesting is geographically unique, so it cannot be traded. It does not make sense. We have already seen the market result in a concentration of licences to very few owners of high-class licenses. We have seen industry move upstream to access more regular flows. The lower Darling used to be the highest-security water in the Murray-Darling Basin—sadly, not the case. We have seen

Tandou move its licences from the lower Darling to the Murrumbidgee, I think. We have seen what impact that has had. Moving the financial resource around does not work for a resource like water, which is connected to the land; it must pass through the land, not only across the top of the land but also through the groundwater. There are considerable concerns around letting the market decide the need or the availability of a resource which is a critical human right, in actual fact—a survival need.

The CHAIR: Ms Bradbury, did you want to respond to that as well before we move on with questioning?

Ms BRADBURY: Yes, if I could add to that, Madam Chair. To pick up on and really emphasise Councillor MacAllister's point, she makes the point that water is quite unique as a natural resource, in that its fundamental requirement to deliver any benefit at all is in location. There are other natural resources where we can have regulatory frameworks that enable them to be traded and shifted et cetera, and they will still continue to deliver value inherent in what that trade represents. Fresh water is absolutely unique; as Councillor MacAllister said, it has to be at its location for it to add value to businesses, communities, economies and commodities in that space. Again, I think in terms of looking at the regulatory framework we have got to look at not only floodplain harvesting but also the market itself, in terms of its regulation of the market and how that interacts in relation to floodplain harvesting, to make sure that we do not pull one lever here and have an adverse consequence by not pulling a corollary lever over there. The MDA [inaudible] very much that the market must maintain first principles requirements about water being available at its sustainable—you know, where it needs to be.

The CHAIR: Thank you very much, Ms Bradbury. You do need to speak a little bit closer to the microphone. We caught it, but hopefully Hansard did as well. I will kick off with a few questions, if I may, from the crossbench. I am just looking at your submission for Wentworth Shire Council, Councillor MacAllister, and I think this is an important point to capture for this inquiry. You brought to our attention the fact that in August 2017 the then water Minister, Niall Blair, gazetted a Barwon-Darling Valley floodplain management plan which gave him the power to approve flood works built illegally, even if they did not comply with requirements prior to the plan. I think it is worth exploring that a little bit. You also say in here that there remain very concerning issues about which structures were approved and whether they had been assessed against cumulative downstream impacts. So there are two parts to the question. The fact that that happened—do we know how much was approved then? And why is it important that these structures are assessed in terms of their cumulative impact downstream?

Ms MacALLISTER: Thank you, Ms Faehrmann. Council was cautioned very strongly against using the term "illegal" because, as we have heard, there has been considerable discussion around the fact that something that is not yet enacted in law is not necessarily legal or illegal. It may well be lawful simply because there has not been a law—for example, slavery was never illegal until there was a law making it so. The fact that there was retrospective approval of works without what I would deem to be appropriate environmental input or assessment—in particular, one thing that our council has been calling for consistently right from the get-go is the cumulative downstream impacts, which seemed to be not even registered on the radar until we continually brought it up. There is a direct link. In terms of the second part of your question—sorry, it is gone.

The CHAIR: That's okay. I did want to explore that a little bit further, maybe also with Mayor O'Connor. The issue with all of these storages and works that have been built, as I think you alluded to in your opening statement, is the impact that they have not just, say, on the river downstream, but all around them in terms of environmental impacts and impacts on neighbouring landholders. You have argued that you do not think there should be any floodplain harvesting. Is that correct? If so, those structures need to be looked at in more detail in terms of the impact that they are having all around them. Is that the case?

Mr O'CONNOR: Yes. If I can go first—yes, that is correct. As I said, with the fall of this country a grader can create a structure, and even a road can send water for 10, 20 or 50 kilometres where it has never been before. I know we cannot take all the roads away and do that sort of stuff. But upstream of here and north of here, the banks that have been built to transfer water from the river out to the fields are 15 or 20 feet high. When the river is big and it gets out of there and it sends water into places that it has never seen before, that is not natural and it is not helping any of the existing flood plains that have been there for thousands of years. It has changed so much over the last 30 or 40 years, as we know, but we have got to try and fix it if we can. If we do approve this it will just get worse and worse. I cannot see it getting any better. It will just make some people richer and be detrimental to everyone else.

The CHAIR: Thank you. I have another question in relation to drought and climate change. We have heard from a number of witnesses and submissions that things such as the massive drying out of the Darling/Baaka River was essentially an impact of droughts and climate change. What are your thoughts on that? I might go to you first, Councillor MacAllister.

Ms MacALLISTER: I think council has addressed it very well in their submission. The natural resources commissioner did state in the draft report that manmade drought has pushed the lower Darling into—

sorry, the mismanagement of the water resource has pushed the lower Darling into drought three years earlier than it should have. That statement was amended in the final report, but the sentiment remains and the evidence is very clear, particularly when we look at the subsequent reports of Vertessey, the academy of sciences et cetera. There is a lot of evidence. I am happy to report also that there is a flow going down the anabranch today. The Great Darling Anabranch also gets missed out, as does the lower Darling. We are very excited to hear about that because it is well needed, and that is an area that has been ignored for far too long and is vital. All of these areas—the Menindee Lakes, the Great Darling Anabranch and the lower Darling—are significant ecological communities which populate the entire Murray-Darling Basin with native fish, at the very least, and all have been recognised. That is probably enough.

The CHAIR: Yes. I wanted to explore that a little bit in terms of the area in which you all live. Sometimes it is treated as though if a little bit of water is sent down the river and the anabranch and a stream here and there, that is it; that is good enough. But, in fact, the history and the ecological requirements of flood plains—without the ability for water to be spilling out over those flood plains as well, it has a huge environmental impact. Is that right? Would any of you like to comment on that as well? It is not just the water in the river itself.

Mr O'CONNOR: Yes, if I could go first, Cate. Yes, you're dead right on that. It used to be that when the floods would come out, they would go out along the billabongs and spread out for 20 kilometres down these channels, and the crayfish and the fish that used to come up them—they do not exist now. All of the crayfish and all of the crustaceans are gone. Twenty to 30 kilometres north of here, if you go to where the [inaudible] creek and Hospital Creek run out of the Barwon, I have only seen them run once in the last 20-odd years. Narran Lake is part of that system as well, on the Narran River, and it has really impacted the Northern Rivers especially. I know I said before that we cannot control what goes on in Queensland, but growing up as a kid those rivers flooded across those plains—the Culgoa, Birrie, Narran and Bokhara rivers—and they would nearly join all of those rivers up. Every few years it used to happen, but now it does not. I know we are looking at this system in the middle of it, being New South Wales. We cannot control what goes on north of us, but that is a major problem as well. It needs to be looked at by the Federal department.

The CHAIR: Thank you. I might need to jump in. I am sorry. My time has expired and we do have very limited time, so I will go to Mr Mark Banasiak.

The Hon. MARK BANASIAK: Thank you, Chair. I might start with you, Ms Bradbury. On page 3 of eight of your submission you make a recommendation about the 500 per cent carryover; we have heard some considerable concern from people over that. You say, "If it is to be allowed, you should exercise the highest levels of precautionary principle." What does the highest levels of precautionary principle look like in your eyes? Can you put a quantitative figure on that?

Ms BRADBURY: Sure. Thank you for your question. If I can just clarify, the submission recommends—it may be ambiguous as it is written. Just to really clarify, we argue that the 500 per cent carryover should be scrapped outright and that if any carryover at all is to be allowed under the regulation, it should exercise the highest levels of the precautionary principle. I know we do not have a proposed figure; I think that needs to be determined in consideration of all the facts at that first principles level, the first principles being we need to have system that is sustainable for our ecologies, our communities and our economies—and, based on what we see legislated in the Water Act, in that order of priority. There are principles in place that will determine how we calculate what those carryover requirements are, because they all go back to established principles that are quite clear. We do not have a particular figure but we do argue very strongly that the highest levels of precaution need to be taken on all extractions, but certainly on carryover.

The Hon. MARK BANASIAK: Okay, thank you. I might just go to you, Ms MacAllister. On page 2 of your submission you talk about the first regulations regarding floodplain harvesting. You talk about how it happened on Friday 7 February with no prior notice and no consultation, and it imposed a restriction which was then lifted almost immediately. Do you think, because it was done in such an underhanded way, that it really damaged public trust in DPI's ability to manage this highly contentious issue?

Ms MacALLISTER: Absolutely. Thank you, Mr Banasiak. I wholeheartedly support your contention that it was an underhanded way. Indeed, Mr Walker spoke about the need for clarity. I think clarity of purpose is really an express requirement when making policy. We know that as councillors when we are writing motions. You know that as legislators. The fact of the matter is that there needs to be an expression of what is the purpose of the legislation, why is it coming into effect and what does it propose to achieve. The fact of gazetting regulations at four o'clock on a Friday afternoon and then lifting them three days later—we were still carting water to our communities until May.

We still had no critical human water needs actively met—that means real, on-the-ground water that people could access for drinking and for brushing their teeth—for another three months at least. Not only could

floodplain harvesting and supplementary licences be activated; A, B and C Class licences were being activated. Our growers on the lower Darling did not have water and they had licences. There is an inequity there, but there is also a failure, and it is a State power of the Constitution to provide water to its people. It is unfair that the burden of cost and the burden of provision of critical human water needs must fall to local councils.

The Hon. MARK BANASIAK: I will quickly throw to you, Mayor O'Connor, because I have only got about two minutes left. To pick up on your comments from Mick earlier about how you do not think it can ever be truly measured, we just heard evidence today from Grant Barnes from NRAR where he said NRAR already has the ability to measure it now, through very clever people and satellite technology. Can you explain why NRAR seems to think they can measure it and you are obviously quite adamant that it cannot be measured accurately? If it can be measured via satellites, why is there a need for part of the regulation to have metering and measurement? It seems contradictory to his statement.

Mr O'CONNOR: That is exactly right, Mr Banasiak. Why do we need all of these meters? I am an irrigator as well and I am putting meters on my two pumps at the minute. They are only A Class; they are only small. I think exactly the same thing. If they have got all of this technology—as we heard about before the pump show on *Four Corners*, they could have done all this and found out all about what was going on in the river system with this cube data. And yet the word was that you cannot use that imagery for any prosecution. It is just a load of rot. They will never be able to measure it. If they think they can, I would like to be able to go. If they can measure a ground tank with, say, 10 megs in it and then—"Righto, we'll go and pump it out through a meter." If they are right, I will believe it.

The Hon. MARK BANASIAK: I think that is my time, but thank you.

The CHAIR: Yes, that is the buzzer. We will go to questions from the Government now. Mr Ben Franklin?

The Hon. BEN FRANKLIN: Thanks very much, Chair. Thank you all for being here today and for your service to your local communities. Obviously local government is a critically important tier; many say it is closest to the community, so we really appreciate what you do. Can I start by picking up something that Councillor MacAllister mentioned briefly, which is water now going down the Darling anabranch? To pick up on Ms Jackson's comments and her original question, which is "What negative impacts have there been from a lack of water?" can I flip that and ask what does it mean for locals, for example, that all that water is now going down the Darling anabranch? Can you give us any further information about what the recent flooding in the high rivers has meant for communities along the river? Perhaps we might start with Councillor O'Connor and then move on to Councillor MacAllister and Ms Bradbury.

Mr O'CONNOR: Thank you for the question. With how much the people of this shire really appreciate it—as you know, we have the highest percentage of Aboriginals in any shire. It is 64 per cent and, with the Census, it could be 80. They are really connected to these rivers. Over the last 12 months the river has not stopped flowing and it has just made so much difference in this area—economically, too, I suppose, downstream and upstream. As I said, we have only got two big farms here, where there used to be nine A Class farms that grew citrus, grapes, melons and pumpkins. There are none of them now operating, because they cannot, because as soon as it gets into the A Class height there is no guarantee that it will get there and stay there long enough to use it again. This water is just an absolute blessing that is going down there. Isn't it unbelievable that it has been running for that long? Is it just that someone is watching what is going on now or keeping an eye on things? I have seen a lot of rain like this over the years before, but I have not seen the river run as long as this for a hell of a long time.

Ms MacALLISTER: I agree. It has definitely been a salve for a community that has been fighting long and hard for far too long. There has been an opportunity to express a lot of grief that has been held in for very long time, which is still percolating within the community. Unfortunately, with the incidence of COVID in Wilcannia, Menindee and Broken Hill—not Menindee yet, I think, hopefully—there has been no opportunity really to get up there and see it. But I would urge members, especially those who have been there and seen it at its worst time, to come back and see the very real and impactful difference.

I had a quote today given to me that was that these pulses—the flows that will be sent down both the lower Darling and the Great Darling Anabranch—are pretty much trying to put a heartbeat back into a patient that is in a coma. We do not know yet whether the smaller native fish stocks will recover. We have had good initial signs of Murray cod breeding and of golden perch young of year fattening up and getting ready for the big swim down the anabranch. But we will not know for at least another 10 years whether those populations will survive, the lifespan of a golden perch being 15 years. There are now existing stocks which are around that 10- to 15-year-old age, but the other thing about our native fish is that they have co-evolved with the Indigenous people of this country in the flooding and drought cycles that we have. Regulating an entire—

The Hon. BEN FRANKLIN: Sorry, Ms MacAllister. I do not want to interrupt you; it is just that I only have limited time and I am going to ask a few questions about fish in a moment, if that is okay? Ms Bradbury, did you have anything to add on the social implications of the rivers running, particularly the Darling anabranch?

Ms BRADBURY: Yes, I do. Well, not necessarily particularly the Darling anabranch, and I cannot speak to local conditions and local responses because the mayor and Councillor MacAllister are much more well-placed to do that. At a basin scale, though, one thing that we have found is that since these flows have connected we are seeing a far higher level of compassion and empathy from upstream communities than I have seen in previous years. I think the really critical desperation that we saw in the previous drought, where communities not just remote and west of the divide were getting down to day zero in terms of their town water supply and availability, has created a greater level of empathy. I think that is something that needs to be explored and reflected in the legislation. We are starting to see a level of social cohesion that I think is absolutely essential to the [inaudible] and it has to be [inaudible].

The Hon. BEN FRANKLIN: Thank you very much. Councillor O'Connor, you just mentioned A Class licences. Could I ask what your view is on the increase in the commence to pump level? Do you think that was a warranted change?

Mr O'CONNOR: A worse one that happened than that was the change of the pump size. I have pushed really hard of late to get that changed back. An A Class used to be a maximum of 150 mil. That is the lowest—it is the best licence on the river, but it was only a maximum of 150 mil. They pushed and pushed—the big pump owners—to get that changed so they could extract that water out of 36-inch pumps and 42-inch pumps. Of course, when you do that the river drops so quick and the little farmers—that is why there are no farmers here now that can grow any vegetables or citrus or whatever, because it cannot stay in the A Class pump threshold for long enough to be able to use that water. In the last couple of months it has been in that height, but there is nowhere to put that water now in the storages. There are farms here that are on their third crop in 14 months because they can. You talked before about the carryover water; if you have got a 10,000-meg licence, as soon as it ticked over to 1 June you could extract 30,000. What is the use of having the extraction limit on the licence when you can triple it in the first place?

The Hon. BEN FRANKLIN: So is it your position that you think that people who own A Class licences should basically see cuts to those licences, to protect the environment and basic landholder rights during periods of low flows?

Mr O'CONNOR: Yes. If that got taken back to a maximum of six-inch for A Class licences it would make so much difference to this river system, especially here and upstream. That water on the low flows—there are so many more of them than high flows—would be protected to get down and do the job it was meant to do downstream.

The Hon. BEN FRANKLIN: Could I move on to the fish that I was just mentioning before with Councillor MacAllister? I would be interested in your views on this, Councillor MacAllister, as well as Councillor O'Connor. The Western Weirs strategy—do you think that should replace fixed crested weirs with larger gated structures with fishways in places like Pooncarie, Menindee, Wilcannia, Bourke and Collarenebri?

Ms MacALLISTER: As I was saying before, Mr Franklin—

The Hon. BEN FRANKLIN: I am sorry for cutting you off; I just knew that I was about to go there.

Ms MacALLISTER: That's great, thank you. Thank you for keeping me to time, as well. Regulating the Darling River is not going to fix the issue. As I was saying, native fish stocks, mussels and molluscs, and smaller fish—we still do not know whether they are going to actually recover—have evolved to spawning cues through pulses in the heartbeat of the river, as it were. Having larger weirs holding back more water may well provide water security for towns. It is also being used to surcharge weirs for the purpose of irrigation. Having weirs which fish can traverse is a much better environmental outcome. For example, my first reference in the submission is to a Murray-Darling Basin Authority report that refers to a report by Clayton Sharpe and Ivor Stuart that suggests 3,000 megalitres a day for at least 20 days at Mungindi to support regular local spawning cues et cetera.

It will drown out Mungindi weir, and that needs to happen. It is those low flows that have not—the data has not been collected properly, but the Darling River needs those. We cannot have our river system drying out to the extent that it takes three times as much water to reinvigorate a dead river, essentially, because losing connectivity is going to create an extinction-level event. The science is still out about whether we will have full recovery of native fish stock. They populate, we know, from the Menindee Lakes all the way up and down the Darling and the Murray rivers, throughout the entire Murray-Darling Basin. What happens in the nursery—in the

womb of the Murray-Darling Basin, as the Menindee Lakes is often referred to—does reflect health throughout the entire system. Systems must be connected for that to happen.

The Hon. BEN FRANKLIN: Would you say, Councillor MacAllister, that we need to do more to get rid of feral pests like carp and improve passage and habitat and screening, removing grazing pressure and combating thermal pollution in headwater storages? Is that an outcome that we should be looking for?

Ms MacALLISTER: We can continue tinkering around the edges, but the bottom line is we need flows. We need the flow to go all the way to the end of the system. We need end-of-system targets, and we need to make sure that the downstream environment communities and critical human needs are guaranteed before irrigation can occur in the northern part of the Basin, as per the priority of use.

The Hon. BEN FRANKLIN: Councillor O'Connor, you were going to say something?

Mr O'CONNOR: Thanks, Ben. I will use our fishway here as an example of people having no idea what they are doing whatsoever. When the idea was to put the fishway in the Brewarrina weir there were a few pollies going back in the time that said, "Brewarrina doesn't do anything with its water." It is the biggest weir pool up in this system, as everyone knows. When they put it in, they put it on the outside of the bend. They did everything wrong that they could possibly do, and we had a big protest down there to fix that. Everyone knows here that native fish swim in the channel of the river. They swim on the inside of the bend; they do not take the long road around. Fisheries seemed to have way too much say without the knowledge of the local people, and that went ahead where they put it. A lot of people say they have never seen Murray cod jump over rocks in their life yet. What they did there is just one example of that. You look at all the other weirs that are a lot bigger than Brewarrina weir in height, and no-one touched them.

I will use Bourke for an example. If you have a look at the Bourke weir, it hasn't got a fishway in it. But they went for Bre weir pool so they could lower that level—600—and take the water out of our weir pool to accommodate to another industry and take it downstream. We pushed and we got stop logs to be able to put in it, and now we do. We have got to follow protocol of the river heights upstream before we can take those logs out and put them back in. We wanted an automated, electric control on it; there wasn't enough money after the $2.3 million to build the fishway. It was about just trying to take our weir pool because we got told we do nothing with it. We were trying to look after our water and keep some here. It has just been an absolute mess. The fisheries there that pushed that—I will not say that anyone was on the take in it, but it should never have happened. Why this one weir to put the fishway in when everywhere along has not got a fishway in it yet but Bre needed to have this fishway—and it was nothing to do with the fish.

The CHAIR: Thank you very much, Mayor O'Connor. With that, unfortunately we are out of time for this session. We never have enough time to ask the questions that we want to ask, but thank you all for the work you do in your part of the world. We will stop for a short break. We will be back at 1.55 p.m., which is our final session for today, with Government witnesses. Thank you.

(The witnesses withdrew.)

(Short adjournment)

The Hon. MELINDA PAVEY, Minister for Water, Property and Housing, before the Committee

JIM BENTLEY, Deputy Secretary, Water, Department of Planning, Industry and Environment, sworn and examined

DAN CONNOR, Director, Healthy Floodplains Project, Department of Planning, Industry and Environment, sworn and examined

ANDREW BROWN, Principal Modeller, Department of Planning, Industry and Environment, affirmed and examined

The CHAIR: Minister, now is the time for your opening statement. Thank you.

Mrs MELINDA PAVEY: Thank you very much for the opportunity to address you all today. I acknowledge the enormous amount of work you have all put in over this week dealing with this issue. It is my belief that for too long we have had vested interests and paid lobbyists who have been able to muddy the waters on floodplain harvesting by disseminating and promoting misinformation and outright mistruths on this vital reform. I think the Committee seeking the legal opinion of Bret Walker, SC, has been a seminal moment in an honesty around this debate and this conversation. I hope that we can put the concerns about legality behind us and get on with the job of licensing and metering floodplain harvesting, which, I might add, has been the objective of successive governments of all persuasions for more than 20 years. The advice puts the impetus squarely back on the shoulders of the Legislative Council to remove their opposition to the Government's floodplain harvesting regulations.

Put simply, licensing will transition the historically legitimate take into the modern water licensing framework within sustainable levels, significantly improving the environmental protections for water resources and their dependent ecosystems. It is the only way to ensure more water will stay in the system to support downstream communities and the environment. For example, in the Gwydir Valley we expect to see upwards of 140 per cent improvement in some of the environmental water requirements for waterbirds in the iconic Ramsar-listed wetland area. Importantly, the reform will also allow us to maintain the economic viability of many industries that contribute to our economy and sustain us for the production of food and fibre critical to human needs. This means maintaining and supporting jobs in regional communities. Stopping floodplain harvesting would not lead to a reduction in the amount of water that could be legally taken in the northern Basin; these limits are set through water-sharing plans and the Basin plan, and it would take legislative change to amend them. However, licensing floodplain harvesting will allow us to restrict the practice where this is necessary to comply with water source legal limits and improve its measurement.

Because the floodplain harvesting regulations have been disallowed, we are unable to reduce this form of take where its growth has resulted in legal limits being exceeded. Instead, we have needed to reduce allocations to supplementary water licences to control this growth. Ironically, if the practice were to stop completely this would simply place more pressures on our rivers and creeks to supply the water historically taken from the flood plains. I trust that the members of this Committee can all agree that this would be a bad outcome for all stakeholders, especially those downstream. Northern Basin irrigators understand the need for this reform. They have accepted that in some instances their overall water take will need to be significantly reduced, yet they are prepared to install the necessary infrastructure to comply with the rules. We should be supporting these irrigators and farmers and encouraging reform for the sake of all water users across the State. Licensing is the key to improved management of our flood plains; measurement and compliance will not improve without it. I also am hopeful that the other jurisdictions of South Australia and Victoria will take our lead and take our management on this, so that all of the Basin States are complying and acting appropriately.

The CHAIR: Thank you very much, Minister. Thanks for keeping that nice and brief. We will move to questions from the Opposition. We are going with Ms Rose Jackson.

The Hon. ROSE JACKSON: Thanks, Minister and the representatives from DPIE, for coming along today and making quite a bit of time to talk to us. Minister, I just wanted to start off by clarifying—a spokeswoman for you made a comment in *The Sydney Morning Herald* on 20 September in reference to the inquiry and clearing up some of the misconceptions, as you mentioned in your opening statement. She indicated that this would put us in a position to be the first State to measure and license floodplain harvesting by the end of next week. Is it your intention to license floodplain harvesting by the end of next week? Is that an accurate statement in relation to your intentions?

Mrs MELINDA PAVEY: My intention is to continue—I would like to get the support of this Committee, to be honest.

The Hon. ROSE JACKSON: We would like to give it to you, but that time frame—well, we might be interested in giving it to you, but that time frame is not going to work in terms of the time frame of this inquiry. I am interested, if that is what you are intending, in how that does interact with our Committee's work.

Mrs MELINDA PAVEY: What I am intending is to use this legal advice by Bret Walker to get us all to a position where we can actually just get on with the job of measuring water. As I understand Grant Barnes from NRAR said earlier today, we would have actually had more water in the wetlands if this regulation and this licensing had been in place and had not been overturned by the upper House. I really just want to get on with this in a non-political and factual way. I think Bret Walker's evidence and his statement that you sought gives us clarity of purpose to get that done. I would like to see a more bipartisan approach on this.

The Hon. ROSE JACKSON: That is good to hear. I am taking from that that the members of this Committee should not expect to see licensing proceed next week or in a very short time frame. That is not consistent with the approach that you are taking.

Mrs MELINDA PAVEY: I do not think, from the evidence this week, that we need to wait an inordinate amount of time. We need to give clarity to those communities and those producers, and I think you have all given an enormous amount of your time this week. We need to move on and do this so that all stakeholders—environmental stakeholders and farmers that want the certainty—can get on with what they are doing in a way that is respected. I would be very happy to get an indication from the Committee of what your thinking is.

The Hon. ROSE JACKSON: You are absolutely right that we have received a range of evidence around people looking for certainty in this space; I think that is a really accurate assessment of a lot of the evidence we have received. One of the problems that has come up, though—even DPIE, in previous briefings to members of the Committee, has made this clear—is that there are some things over which we just do not have certainty right now. Some of that is the actual volume of water that is being taken in floodplain harvesting and where that is occurring. Because it is not currently being metered and measured, that is not something which we have certainty over right now. Another thing over which we do not have certainty is the impact of climate change on water availability into the future. We have some idea and we have some models, but that is not something over which we can have certainty.

One of the things that has been raised is this idea that over time, as we might better measure and better monitor how much water is being taken and where, as we might continue to gather more evidence and better science about the impacts of climate change, that might have an impact over the type of licensing regime that we put in place now. There has been a range of different evidence provided as to how better certainty over those things might change some of the licensing regimes. There have been suggestions of temporary or interim licences. There have been suggestions of frameworks put into the licensing regime for adaptation or amendment later on. There have been suggestions that those things are not necessary and that that can be quite easily managed through annual water allocations within the licensing framework. Do you have a view about how we might build into any model that we put in place now additional information that we might gain down the track as a result of better metering, better monitoring and better climate science, for example?

Mrs MELINDA PAVEY: Those conversations are going to go on, Rose. They are going to go on for the next five, 10, 15, 20, 30 or 40 years, but that does not mean that we are going to have lesser conversations by actually quantifying the amount of water we are taking in the flood plain within the cap. I do not disagree; those conversations will take place. But we are going to have better conversations with better information by licensing and making sure we are within the cap.

The Hon. ROSE JACKSON: Right. As I said, assume in my question that a licensing regime is put in place. Assume that is supported. There has been a lot of evidence from a range of different stakeholders that that is the way we should proceed. This is not an argument about whether we license floodplain harvesting or not, at this point. The question is how do we ensure that, built into that licensing regime, we can include that science that we get? Yes, some of it is going to be 30 or 40 years down the track. Some of it may be five years down the track. We might have a better understanding of how much water is being taken and whether that is environmentally sustainable, in fact, or whether it is not. That might be information that we have a better understanding of in a short period of time. What assurances do you think we can give people now that any regime we put in place will be properly responsive to that?

Mrs MELINDA PAVEY: A lot of what you are discussing would actually come into our water-sharing plans, when they are rewritten, and how they are arrived at. Dan Connor, I am going to pass to you to talk about the practicalities of the benefits of us having this licensing regime to understand what water we have captured, to be able to feed into future conversations.

Mr CONNOR: Thanks, Minister. Absolutely, measurement and monitoring is really important to improve management through time. One of the key sources of uncertainty I think you are alluding to, Rose, is around the data that we have got to calibrate our models. We have used multiple lines of evidence to give us the best picture in our models of current and historical floodplain harvesting. We could always have better information. Absolutely, measurement data is the cream of that crop. We probably need about five years of measurement data to really make a step change in those models and improve them, so that is one of the key sources of information that will go into improving models through time. The second key source of information that goes into improving those models is really an understanding of how much floodplain water, when you turn the tap off on floodplain harvesting or restrict it in some way, returns back to rivers and creeks.

They are two really important bits of model upgrades that we have got on the books at the moment. We have got a tender that just closed last week, for example, that we put out to the open market, to go to market to develop a method. This is world-leading work; there is no river system model in the world that represents the return of floodplain water back to rivers and creeks. We have really gone to the market to help us develop a method. We have got to collect the data. Once we have got that information, then we can start to upgrade our models. We think that is a two- to five-year work program. We made commitments to do that in the floodplain harvesting action plan and by reference to that tender process that has just closed recently in the open market. You can see the commitment from the Government to move down that path. I guess they are the two key things in terms of improving information that would come out of the licensing regime. We see a step change in our model capability and model upgrade about that five-year mark, bringing in place the measurement data that we have obtained during that period, but also that return flows information into our modelling framework as well.

The Hon. ROSE JACKSON: Minister, back to you then. Once that work has occurred and some of that better or more robust information starts to become available, we have received evidence that, as part of the assessments of what licensing regimes might look like into the future, some kind of independent or scientific or expert oversight or involvement might give greater assurance that, in fact, the take of water that is occurring is environmentally sustainable and is consistent with the priority-of-use requirements. Is that something that you are open to? I know that that is something that has started to be included in other water sharing plans. Is that something that you would consider as part of the floodplain harvesting licensing regime?

Mrs MELINDA PAVEY: Are you saying when that work gets done, once we start licensing it, is that what you mean?

The Hon. ROSE JACKSON: Yes, that is right. Once that more accurate information is—I guess the question is: Who is then receiving that information and making decisions about what it means and what its impact is? There has been a suggestion that some kind of independent, scientific or expert oversight or involvement in that would be a useful thing.

Mrs MELINDA PAVEY: Look, once we get the work done to regulate and we get some better figures and we have licensed it, that data and that information is open to the whole of New South Wales. I am into open data; I am into open accountability. It should not be held by one group or another. Once you have that information out there, the community is going to have to make some decisions. If there is a really relative impact of climate change, we are going to have to have those conversations as a community and a society about what water goes to communities to sustain jobs in communities, what goes to the environment and what do we need to do to store more water—all of those conversations need to be done on open data. Yes, of course, that will be a fundamentally good thing, once we license floodplain harvesting, that that data is captured and put into the mix so we have got better information.

The Hon. ROSE JACKSON: That is good to know and it is very important, I agree, that we have transparency over the data. Sorry if I was not clear in my question. I was referring not just to access to that data but actual decision-making and assessment about the impact of that data. So building into the licensing regime—as has been done with some other water sharing plans, for example—independent, scientific experts playing a specific role in advising, but perhaps not even advising perhaps also directing, for example, how the floodplain harvesting regime can be consistent with an environmentally sustainable level of take going forward. So it is not just about their access to the data, it is about them actually being embedded and involved in the decisions that are being made.

Mrs MELINDA PAVEY: I am not sure what you are talking about quite in terms of an independent scientific group that directs a certain amount of water. I mean, we are going to have to deal potentially with a situation where there is less water for the environment with climate change. But I am confident in the years forward, we will have those important conversations as communities, as societies, about what is sustainable and what we need to sustain ourselves as towns and communities in food and fibre, but as well we all have a desire to ensure that our environment is operating in the best way it can with a potential reduction in water.

The Hon. ROSE JACKSON: As I said, I think that part of what is important here is ensuring that when those decisions are being made they are not being compromised by things that are not relevant to assessments about, for example, what is environmentally sustainable. I think we know in the recent history of water policy in Australia that factors irrelevant to what is, for example, environmentally sustainable have influenced decisions about how much water can be taken. In evidence that we have received, people are looking for an assurance that there will not be a compromise of what is environmentally sustainable by other factors, be they political or otherwise. So what assurance can you give, built into the model, that those things will not be factors that influence the way floodplain harvesting might be licensed?

Mrs MELINDA PAVEY: Water sharing plans are really the platform for those types of conversations. They are part of our legislative framework, they are part of the Murray-Darling Basin and 2.0, so those conversations are going to happen as a matter of course and we are just going to make the ability to have those conversations better with the data we have. I again call out the desire and the need for other jurisdictions—South Australia, Victoria and Queensland—to have some of the same rules and the same evidence base and the same honesty around the conversation as what we have.

The Hon. ROSE JACKSON: I might just ask one more question now and then throw to my colleague Ms Sharpe. I wanted to ask as well about other evidence that we have received in relation to things like the use of downstream flow targets or flow triggers as a mechanism to ensure that the take of water is environmentally sustainable and consistent with priority-of-use provisions from the Water Management Act. Is that something that you consider to be a useful and important part of the licensing regime?

Mrs MELINDA PAVEY: I think as much water being connected through the Baaka into the Darling is vital, which is why we have got Menindee Lakes filling over—full to the brim—and, delightedly, we have got some water releases going down the anabranches, down the Lower Darling, which will be incredible for fish breeding. That is why as soon as I became water Minister I wanted Toorale Station to be part of that connectivity—it had not been. The Commonwealth had bought it for $23 million 13 or so years ago and we were not getting that 15 gigalitres of connectivity of water. That is why I am pushing for a change to the sustainable diversion limit program, so that we can keep more water in Menindee, keep more water in the Darling with our Western Weirs project. There are lots of ways that we can do that. I support them all and also acknowledge that, really, if we look at the analysis, look at the data—and no-one wants to believe it—but on average we would only be increasing our water into the Murray by about 1 per cent on average if we were to abolish floodplain harvesting altogether. And then, as I pointed out in my introductory comments, you put more pressures on the creeks and the rivers.

But my point is, yes, connectivity into the Baaka and the Darling is really, really important and there are some really simple things we can be doing, which I am fighting for within the Murray-Darling Basin Plan. But we also have to acknowledge that, in the history of white man, we know the Darling has been drier more times pre-1950, pre-development, than post-1950. We are never going to be able to solve that issue completely. It is up to whoever makes it rain to solve that 100 per cent. But we should all work towards better connectivity, fighting for more water to stay in Menindee Lakes, rather than rushing some of the decisions we have in the past few months from the Commonwealth Environmental Water Holder and the Murray-Darling Basin Authority down into South Australia and Lake Victoria, which is already overflowing. There are lots of things we can do and I will continue to fight for that every day of the week.

The Hon. ROSE JACKSON: Just to be clear, is one of the things that we can do put specific downstream flow targets and triggers within the floodplain harvesting licence regime? I agree that it is not the only thing we can do, but it is one of the things that we can do. So is that something that you are open to and that you would intend to include—downstream flow targets and triggers—in floodplain harvesting licence regimes?

Mrs MELINDA PAVEY: I think that is not going to solve the connectivity issue. As I have just pointed out, on average only 1 per cent of water that flows into the Murray—which goes through the Darling, down the Lower Darling and then into the Murray—comes from floodplain harvesting. I am prepared to look at whatever evidence we have and support whatever projects we can because most of the water that flows into the Darling actually comes from west of the Darling, down the Warrego, which is what you have seen. At the moment that water has not overflowed from the Gwydir. It stays in the Gwydir Wetlands; it stays in the Macquarie Marshes. Most of the water comes from the far north-west and that has got to be the target of what we can do in terms of infrastructure to keep that water in a way back that we can then put back in, like at Toorale Station.

The Hon. ROSE JACKSON: Yes, I accept that it is not going to solve the problem entirely, but there has been a range of evidence that has been provided to this Committee that access rules in relation specifically to event-based management when there are flooding events, particularly when there are smaller flooding events and particularly when there are first flush events after extended dry periods, that active access management in those

periods—to ensure that until certain downstream targets are met, water is not taken upstream—can be an important part of that connectivity work.

Mrs MELINDA PAVEY: Absolutely.

The Hon. ROSE JACKSON: I am just clarifying. You accept that and would support that being embedded in the floodplain harvesting licence regime?

Mrs MELINDA PAVEY: We accept the first flush events. We did more than accept it—we instituted the rules around it. We had a first flush event. It was the first time ever that we had actually put it into the statute books. We had a first flush event last year or the year before when we had the rains. Finally there was a first flush event—of course we support that.

The Hon. ROSE JACKSON: I might hand over to Ms Sharpe now. Although, Penny, I probably have not left you a lot of time. You can come back in the next session.

The CHAIR: Sorry, there is no time.

The Hon. PENNY SHARPE: I think we are out. I will come back next round.

The Hon. ROSE JACKSON: You can start the next block.

Mrs MELINDA PAVEY: Penny, for what it is worth, your hair is the only hair that looks good in lockdown.

The CHAIR: Thank you, Minister. Can I just clarify something that you said earlier? You indicated that climate change would mean there would be less water for the environment in the future. Could you just clarify what you mean by that?

Mrs MELINDA PAVEY: If some of the predictions are true, there could be less water in the environment for everybody. And there could be other times—

The CHAIR: So it does not mean less water allocated to the environment in terms of water sharing plans?

Mrs MELINDA PAVEY: No. Less water for the environment because there is going to be potentially less rain, but there is also going to be at other times bigger storm events. I did not mean cutting water from environmental allocations, Cate. I was referring to less water because it could be hotter and drier.

The CHAIR: That is very good to clarify. Minister, I just wanted to check on your department's and office's relationship with NRAR. I just wanted to firstly check, with communication, does your office check on communications that NRAR publishes and puts out?

Mrs MELINDA PAVEY: No, Cate. I am going to just make a statement and then I am going to pass to my officers and officials to outline. This would be something I am sure—and I have had conversations with Craig Knowles, the chair of NRAR. Grant Barnes would probably be one of the most significant and capable independent public servants I have ever worked with. I do not think a misinterpretation or any suggestion that he does not act 100 per cent in compliance with his duties and obligations is a slur. He is a first-class public official. I am going to now pass to Jim Bentley to talk about the emails that were raised earlier.

The CHAIR: I suppose the first question is: Why did your office need to approve that opinion piece that was published in *The Land* by Grant Barnes as [inaudible] NRAR?

The Hon. BEN FRANKLIN: Point of order: We do have a lot of time with the Minister and she did want a public servant to provide further information.

The CHAIR: Mr Bentley can answer it. That is fine.

Mr BENTLEY: Thank you, Chair. As the Minister says, the Minister's office does not approve media releases and announcements that NRAR make. Further, let me say that I have been in this job two years and three months and never on one occasion has Grant Barnes ever asked my approval for any decision of his that is related to a regulatory or compliance or enforcement matter. He has never asked me and, even if he did, I would not give that approval because it is not my job and it is not his job. In terms of the particular example that was being referred to earlier with the email, sometimes someone who is not as heavily involved with each of the individual parts of the agency or independent agency like NRAR can make a human error in saying that "this would need to be approved by the Minister's office" because many things do need to be approved by the Minister's office—this did not and it was not.

NRAR does not refer those things to me, to my staff or to the Minister's office. They sometimes need help from the department because their staff are employed by the department and we give services to them. We work very closely together with them. Grant and I work very closely together because I need to resource him. So when IPART decided not to fund them completely, I had to advise the Minister on what recommendations to make to the Expenditure Review Committee [ERC] about their funding. I have to understand how they work. That is why we work very closely together. Never once have I interfered in, and nor has the Minister to my knowledge interfered in, their decision-making and never once have they asked me to review it.

The CHAIR: What about your departmental officials, then?

Mr BENTLEY: What about them, Chair? What is the question?

The CHAIR: The email I have in front of me, which I assume is from a comms person at NRAR, does say—and it is sent to people within DPIE as well as NRAR—and it says, "Please see attached final copy of *The Land* op-ed to be pitched today after approval. I have actioned all feedback but"—the person's name, this person is within DPIE—"please give it a read and let me know of any further changes as this is my first op-ed, so still learning." So "please let me know of any further changes" and then it comes back from DPIE with further changes: "Re Danielle's response, happy to discuss with yourselves and Grant her advice that Minister's office would need to approve an NRAR op-ed." This is from somebody within DPIE, that the Minister's office needs to approve an op-ed. It was also sent by NRAR staff. So it is not just one staff that does not know the ropes; there are quite a few staff within DPIE, it seems, that believe that anything issued by NRAR needs to go through the Minister's office.

Mr BENTLEY: As I said before, Chair, that did not go to the Minister's office for approval. The Minister's office does not approve, does not expect to approve and is not asked to approve those things, but sometimes there is human error in what gets written into an email. They were just wrong in that case. And as the individual who you were quoting said, "This is my first op-ed." So they were seeking a comms professional's advice about how to do an op-ed and all that sort of thing. It is perfectly reasonable to say, "It is my first op-ed, can you help me with this?" That is not saying, "Can you improve the message that NRAR wants to put out?" That is an entirely different thing.

The CHAIR: Mr Bentley, with respect, I think it was because it also came back. This email trail really does imply that there are several hands within DPIE that at least think that the Minister's office needed to approve this opinion piece by NRAR that was going in *The Land*, which was specifically, let's remember, something that referred to the disallowance by the New South Wales upper House in that there was now regulatory uncertainty because of that—a very political message, actually. So it is not just one person. Are you going to talk to the officials in this email and say that they stepped over the line, or is it actually a protocol and a policy that this takes place—that, indeed, NRAR has to have its public messages approved by the Minister?

Mr BENTLEY: Chair, as I said before, that is not protocol, that is not policy. The Minister's office does not approve or review such statements. I do not agree that it was a political statement. I know you questioned Mr Barnes this morning about that. He was trying to explain that there was—I believe what he was trying to explain, certainly when I listened to the question—uncertainty in the past, but regulations were put in place with the intent of removing uncertainty. The disallowance of the regulations then put it back into the situation of the same uncertainty that existed before. I do not believe that is a political statement; I think that is a statement of fact. Nevertheless, it is not policy, it is not protocol and it does not happen that the Minister's office reviews the media releases of NRAR—nor do I.

The CHAIR: Minister, did you or your office have anything to do—did you see that op-ed or did that come to your office? Because it does seem to say it did.

Mrs MELINDA PAVEY: It did not come through me, Cate. In respect to questions that you might want to put on notice for my staff, feel free to do so. I do not have answers on their behalf. But I concur with what Mr Bentley just said: We do not see NRAR press releases; we do not approve them. That is just a matter of fact. It is not the protocol. That was essentially your answer. Is this the protocol? No, it's not.

Mr BENTLEY: Could I add, Chair? Sorry, Minister, I hope I have not spoken over you. If I could just clarify, Chair, that the DPIE staff member was spoken to after that event to clarify that, in the case of NRAR media releases, they do not go to the Minister's office for approval. So that conversation has already happened and it was a one-off error that has been rectified. But the error was in the email, not in what happened to the media release.

The CHAIR: I just wanted to get your response in relation to the modelling now. I was wondering if you could just explain why is the department pursuing a cap scenario and trying to get away from what is the legislated Murray-Darling Basin Cap for each valley, Minister?

Mrs MELINDA PAVEY: I am going to pass over to the modelling experts to go to the detail of that question, but we are operating within the cap. Floodplain harvesting is included in the estimates of the cap and the baseline diversion limit. I am going to hand it over to Andrew to talk to the issues of that question, Cate.

Mr BROWN: I am going to hand it to Dan.

Mrs MELINDA PAVEY: Sorry!

Mr BROWN: It is alright.

Mr CONNOR: Thanks, Andrew; thanks, Minister; and thanks, Cate, for the question. There is a bit in that, and I appreciate you have heard lots of different advice, but I guess I would start by saying: The cap is the oldest, the first and the least stringent of all of the legal limits that are in place across the State at the moment. I think the strongest piece of evidence for that is if you look at the formal cap accounting arrangements. We have got cap credits which, for those that are not familiar with the cap accounting arrangements, are an annual comparison of the observed versions versus what should happen in the model in that given year. There are 10,000 gigalitres of cap credits; in other words, since cap accounting started in 1995 we have taken across New South Wales 10,000 gigalitres less water than what those limits intended would be delivered according to the accredited cap models at that time. I just wanted to make that point clear up-front.

I think the second really important point that we want to make out of this is that accredited cap models give diversion volumes that are nearly 100 gigalitres larger than the models that we are putting forward as part of this process—the revised modelling process. So across the three valleys that we are looking at—Gwydir, Border Rivers and Macquarie, where we have got results out in the public domain—tabling those three sets of results up, the published accredited cap model volumes are 100 gigalitres larger than the models that we are proposing be established as new estimates of baseline diversion limits. There is absolutely a process that we need to go through to get those limits to be properly reconciled, if you like, or accepted by the authority. The process happens as part of the submission of water resource plans. So, as I said in the initial statements, cap is the oldest, least stringent, first limit that was put in place in New South Wales. It is being replaced by BDLs and SDLs under the Basin Plan.

In fact, once SDLs are in place across all basin States, the cap limits themselves and the cap arrangements in schedule 1 to the Commonwealth Water Act will be repealed. That is the intention; that is what is happening. So, like was explained, as part of the process of bringing forward those new limits, we submit them as part of a water resource plan, as every other basin State has done, the Commonwealth accepts or reviews, comes back to us if necessary, asks for changes. The process is very similar to the cap audit process that was set up originally for those cap models—so, at arm's length from the authority, they commission an assessment of what the States have put forward, they conduct their own assessment and they ultimately accept or reject what the basin States have put forward. This is a process that, unfortunately, New South Wales is last in the line of all of the basin States to put forward and have their water resource plans accredited. This is a process that every other basin State that has gone before us has been through. What we are doing in New South Wales is not unique to New South Wales and it is definitely not unique to floodplain harvesting.

The CHAIR: We will go to questions from Mr Mark Banasiak now.

The Hon. MARK BANASIAK: We heard evidence today, Minister, that both the MDBA and the New South Wales Government were aware that the cap had to accommodate floodplain harvesting since at least 2002. My initial question is: Why has it taken 19 years to get to this point where we are making that accommodation?

Mrs MELINDA PAVEY: Oh, Mark! I have been there two and we are nearly there. I could spend the whole hearing talking about why we have not been able to do that, but let's just focus on what we can do. Bret Walker's advice I think is a big set of advice for all people in this debate and these conversations. It has really hurt New South Wales, too. I think this north-versus-south debate is very parochial and at times has been very febrile. It is not helpful. You have a united State of Victoria working together fighting for their people, you have got South Australia fighting for their people, Queenslanders fighting and then our people, we are divided in two. That has been the most painful thing to watch and witness.

That is why I was so exuberant when I saw that advice on Monday morning because somebody that maybe seemed to be aligned with a certain way of thinking has actually come forward and said, "No, it is legal, and it is an important tool in water management and being able to measure and manage it"—all of those things. I do hope that we can move quickly to give certainty to our producers, our farmers and we can move on to the next set of challenges, and that is maybe keeping some more water in Menindee by readjusting some of the Murray-Darling Basin Plan rules, working off what we saw in January 2019—that terrible event. That is what I would like to be spending more of my time focusing on and New South Wales, as one, working towards that.

The Hon. MARK BANASIAK: Let's hope that does not take 19 years, Minister. Do you think that divide would have been eased if you waived your legal privilege and passed on the Crown Solicitor's advice earlier?

Mrs MELINDA PAVEY: Look, I think nothing was going to make—the moment in time where this whole debate's changed I think is Bret Walker's advice to the Committee that the Chair asked for. That is the moment in time. We can rewrite history, we can do whatever we want, but let's move forward and look at that moment in time.

The Hon. MARK BANASIAK: Grant Barnes from NRAR today said he has the ability to measure through satellite technology and very clever people quite accurately floodplain harvesting. Now this was disputed by the Brewarrina mayor but, that aside, do you understand Mr Barnes' statement to be accurate—that NRAR has the ability to measure floodplain harvesting with satellite technology accurately?

Mrs MELINDA PAVEY: I did not listen to Mr Barnes today, but if that is his evidence, yes, I do believe—I would stand by whatever evidence he gave.

The Hon. MARK BANASIAK: If that is the case, why hasn't this data been used to improve the modelling and why wasn't this data used to accommodate floodplain harvesting into the cap quicker?

Mrs MELINDA PAVEY: I think a lot of this technology is quite new, Mark, but I might pass—

The Hon. MARK BANASIAK: We have had satellites for years, Minister.

Mrs MELINDA PAVEY: A lot of the ability around it is quite new to management processes. Dan, would you have a better answer to answer Mr Banasiak?

Mr CONNOR: Yes, thanks, Minister. I might start and Andrew has his hand up, too. He might be able to add to what I am going to say. The detail to get that really rich information on the ground is really resource intensive. You can get out there, you can put measurement equipment in storages in situ and you can determine with a high degree of accuracy what is in there. Certainly as a first pass, that is certainly what we have done across this program, is to look at the remote sensing analysis using Landsat first to see when storages were constructed, but then also lidar information, which looks in more detail about the storages themselves and their capability. That is definitely the data that we have used. Unfortunately, that data does have a reasonably large error band on it. It is about plus or minus 30 per cent. That is quite different.

That would be the first thing that NRAR, speaking on their behalf, would use to detect whether there has been any water taken into storage. They would then deploy more accurate technology, which is site based, to have a look at exactly how much water that storage is holding. So what Grant was saying is technology that is really resource intensive, that you have to run literally people around every property every time it rains continuously to have a look at what is in there. That is why metering and measurement for us is really important. That is the technology that we will be employing on individual properties—so real-time, accurate, reliable, verifiable data being supplied back that is within a centimetre accuracy. That is why measurement is really important for us because it gets it on the scale if we need to. Andrew, did you have anything to add to that?

Mr BROWN: No, I think that is pretty close. I just wanted to make the point that lidar is the key technology they are talking about here, and that is not 20 years old. Well, the technology is 20 years old but the accessibility of lidar sets is quite recent and the capacity to do the kind of detailed analysis with it is also recent. I think Mr Barnes was talking more about detection of presence or absence of water; so, in a compliance sense, he can tell quite accurately if somebody has water when they should not have water, but it is another thing to put however many megalitres of water in the storage. That has an error band on it that is quite distinct.

The Hon. MARK BANASIAK: Minister, I know you said you do not really want to dwell on the past, but in hindsight do you think that it may have been better to get this regulatory machinery in place first, get it bedded down, before your department started transferring these 1912 part 8 renewals over and trying to convert that common law right into a statutory licence? Do you think we should have got the regulatory machinery in place first and then started making the transfers, rather than sticking them in, essentially, a regulatory warehouse?

Mrs MELINDA PAVEY: Mark, you are right: I do not want to dwell on the past. It would have been perfect if the upper House had not voted to disallow the regulation. We would have had more water in the wetlands this year. That is my answer.

The Hon. MARK BANASIAK: We have heard evidence in this hearing about the environmentally sustainable level of take and SDL and how they are linked under the Commonwealth Act, but we have also heard that this ESLT is just a policy and is not legislated. I am just wondering: What is your understanding of it? Is it

just a policy? And, if it is just a policy, what actual protections are there to ensure that States actually adhere to that?

Mrs MELINDA PAVEY: Did you say ESL?

The Hon. MARK BANASIAK: Sorry, ESLT—environmentally sustainable level of take.

Mrs MELINDA PAVEY: We are trying to regulate it. That is what we have been trying to do. I have been trying to do it for two years. By regulating it, we understand it, we are able to measure all forms of take, we sit in the cap, we follow the rules that are there that we are operating under at State law coupled with the Murray-Darling Basin Plan and our obligations and responsibilities there. But, you know, it—

The Hon. MARK BANASIAK: But what is your understanding of ESLT's relationship with SDL? Is it actually legislated or is it just a policy that hangs there?

Mrs MELINDA PAVEY: It is part of the framework that we operate in. Andrew, you might be able to better give information.

The Hon. MARK BANASIAK: Yes, feel free to defer.

Mrs MELINDA PAVEY: They are all important aspects of how we come to these decisions and work within the caps that we need to. Andrew?

Mr BROWN: My understanding is that the ESLT is an objective of either the Commonwealth Act or the Basin Plan and the SDL is the legislated mechanism for achieving an environmentally sustainable level of take.

The Hon. MARK BANASIAK: I think that is pretty much my time up, so I will pass to the Government, I think. I will pass to the Chair. She can sort it out.

The CHAIR: Your time has expired now, so we will go to the Government—sorry, no.

The Hon. BEN FRANKLIN: Chair, I was under the impression we were going to do the Government at the end.

The CHAIR: Sorry, yes. Is it you, Penny?

The Hon. PENNY SHARPE: Yes. Minister, does New South Wales remain committed to the Murray-Darling Basin Plan?

Mrs MELINDA PAVEY: We are still committed to the objectives of the Murray-Darling Basin Plan, but we would also argue as a State that not everything is set in stone. We need to be able to use the latest evidence, the latest information. We should be able to change some of how that plan works if we have evidence that things could be better achieved. I am very certainly looking at what we can do to make our own river system healthier, with less carp, keeping more water in New South Wales, and particularly in Menindee. I think from your Committee's visit out to that part of the world, that would be something that would be supported by the New South Wales Parliament.

The Hon. PENNY SHARPE: Minister, that is great. What happens if the changes that you want are not agreed to?

Mrs MELINDA PAVEY: I have a productive relationship with the other States. The Victorian Minister for Water—

The Hon. PENNY SHARPE: No, sorry, Minister. I am asking you very specifically about the Murray-Darling Basin Plan and New South Wales' commitment to it. I think you gave a qualified commitment and I am trying to explore what the limits of your commitment to the plan are.

Mrs MELINDA PAVEY: You cut me off from the point where I was going to explain that I am working cooperatively with other States and jurisdictions to be able to potentially get commonsense changes to the plan that benefit New South Wales, and I will continue to do that. I will continue to ensure we keep as much water in the Menindee Lakes, that we continue to deal with the Barmah Choke issue—the amount of water that is racing through that part of the river system on the Murray. I am going to continue to get whatever investment I can, of the $4 billion or so sitting in the authority, to fix up infrastructure, to get better environmental outcomes, to get bigger anabranch overflows in New South Wales like we are seeing on the Lower Darling today—thank goodness. That was after some meetings that we had in Canberra recently with the authority—

The Hon. PENNY SHARPE: Minister, thank you. I do not have a lot of time and I would note the anabranch is getting water because it is flooded. It is very good that it is getting water, we are very pleased about that, but I think I would argue that the flood—

Mrs MELINDA PAVEY: [Inaudible.]

The Hon. PENNY SHARPE: —is more important than the meetings that you have had.

Mrs MELINDA PAVEY: We released water today—that is why.

The Hon. PENNY SHARPE: We have had a lot of evidence—and it might be a question for Mr Connor—and there has been a lot of discussion in the hearings this week about the cap scenario versus the cap and whether the cap scenario is actually accredited and approved by the Murray-Darling Basin Authority. Are you able to give us some clarity around that issue?

Mrs MELINDA PAVEY: Were you asking Dan that or myself?

The Hon. PENNY SHARPE: I am happy for it to go to whoever. I suspect it is a Mr Connor answer—he touched on it before—but I am happy for anyone to answer it.

Mr CONNOR: Thanks, Penny.

Mrs MELINDA PAVEY: It is so outside the range of floodplain harvesting, but I am sure Mr Connor might be very happy to help and assist in that answer.

The Hon. PENNY SHARPE: Sorry, did you just say that the cap scenario that this entire thing is modelled on is outside the floodplain harvesting question?

Mrs MELINDA PAVEY: We are here to talk about floodplain harvesting and the regulations and wanting to move forward with that. That is what we are here today to talk about.

The Hon. PENNY SHARPE: Yes, and the cap and the modelling that is used for cap and the cap scenario is fairly central to that, Minister. Mr Connor?

Mr CONNOR: Yes, thanks for the question. I think I touched on it before—if not, then I will definitely expand on it here. The original cap models that were accredited gave a volume which is 100 gigalitres bigger than the proposed models and limits that we are putting forward now. As I explained, the cap is the first introduced and the least stringent limits in place across New South Wales and, in fact, the basin and it will be appealed shortly, as soon as SDLs are in place. We are putting forward a new model that is lower than the accredited cap model. That is the key point.

It needs to go through an accreditation process, absolutely. That is the process that happens as part of the State's submission of a water resource plan for accreditation. That is the process that the MDBA have advised they would like us to go through. That is the process that every other basin State has gone through. We are not there yet, but I think we are pretty clear that the assertion that the caps are going up is incorrect. Our new estimates are lower than those old, original cap model estimates, but there is a process yet to go through, I absolutely accept that.

The Hon. PENNY SHARPE: So it is not accredited yet but you expect that it will be. What assurances have you got that the cap scenario model is consistent with the obligations that we have under the Federal Water Act? There has been some contention about that.

Mr CONNOR: We are really confident. We have been through a process. As I described before, certainly in our original briefing session, the caps are a definition. They are essentially the volume of water that can be taken over the long term given 1993-94 development and management conditions. They were replicated in a model early on—that was accredited. We have tried to replicate or improve our representation of those conditions in this latest round of modelling. As I said, it is indicating diversions overall that are lower now than what we estimated in the past, about 10 years ago, so the trajectory is going down. There is a process to follow, absolutely, but we are confident that we are on the right trajectory here.

The reason, I guess, that we are confident—three key reasons. The models are giving results that are not significantly different to the old models. I guess that is the first thing. We have implemented an independent peer review process throughout the development of this reform, which is above and beyond the requirements, to give us confidence that we are on the right path with this work. That is something that no other basin State has done. The level of transparency, the level of documentation and the independent review that we have subjected this process to, ahead of submitting models to the basin State, really sets a new standard for all river system models across the basin. That gives us the confidence that we are definitely heading in the right direction with this reform.

The Hon. PENNY SHARPE: But no guarantees at this point?

Mr CONNOR: That is right.

The Hon. PENNY SHARPE: Minister, again, one of the very contentious issues in relation to this inquiry has been that the licensing regime will make the water take compensatable and there has been some toing and froing in relation to how much that is or under what circumstances that will happen. Have you been required and can you provide to the Committee the amount of money that you believe these licences will then be worth?

Mrs MELINDA PAVEY: No, I do not have information into particular licences or floodplain licences.

The Hon. PENNY SHARPE: I am not asking for individual ones; I am asking for a global figure. We have been told $2 billion, for example.

Mrs MELINDA PAVEY: Dan or Andrew, do you have a total figure on what the department estimates the licence value to be?

Mr BROWN: I think in the absence of a trade market it is impossible to put a real number on any of that. We have seen extensively with the enabling of trade through the southern systems particularly that it is not realistic to judge these things in an office somewhere. You have to wait and see what a market thinks a product is worth.

The Hon. PENNY SHARPE: Surely through this process Treasury has required you to put a number on that?

Mr BROWN: It is not clear to me why anybody thinks that there is a compensation risk here. Water sharing plans have a growth-in-use provision. If it turns out that we have issued too much licence, then the growth-in-use provisions will cut in. There is one for cap and there is also one for SDL compliance. Making an AWD adjustment for those rules is never compensatable.

The Hon. PENNY SHARPE: That leads to my next question, which I think is a policy question, so I think it is one for you, Minister. What is your view about the licensing regime not being tradeable?

Mrs MELINDA PAVEY: In terms of floodplain harvesting? Yes, because it is falling on those plains where it is being harvested and, as you know, aside from the Murray and the Murrumbidgee those are the only areas where we actually allow inter-valley trades. But in terms of the policy of trading those licences, that has not fully been addressed because we have not had a licensing regime to allow that to happen.

The Hon. PENNY SHARPE: Sorry, Minister, are you saying that the licences will or will not be tradeable if it is put in place?

Mrs MELINDA PAVEY: Limited trading is required under the National Water Initiative. It is going to be a part of the process that falls under that National Water Initiative, but it will not be outside of valleys; it will be within those valleys. Dan, did you want to further give some information on that?

Mr CONNOR: Yes, thanks, Minister. This is a really important point that I noticed has come up a few times in the inquiry so far. We are obligated under the Basin Plan trade requirements to have trade for all surface water entitlements. It is a requirement of the Basin Plan; we have to have some trade. There are obviously good reasons why you would restrict trade in floodplain harvesting. We have definitely proposed the most constrained trading regime that exists for surface water entitlements just for all the reasons, I guess, that have come up in the inquiry.

There are a couple of key points that I would like to make. The proposed rules, as the Minister said, you cannot trade between any valleys. We have got quite complex trading arrangements that mean you cannot aggregate or clump entitlements within any particular area, particularly those in environmentally sensitive areas within the landscape. And the third type of rule that we have got is a rule that relates to the capacity of works, and the intent is really to control the rate of take from those environmentally sensitive areas. For those that are familiar with our floodplain management plans in the northern Basin management zones A and D, which are the culturally and environmentally sensitive areas that carry most of our flood-flow distribution, those are the areas of the landscape that we have got really quite restrictive trade rules on. The intention there is to make sure that we do not increase the rate of take from those areas.

There is a need to have a trading market, not just because we are obligated to but because we are, through this reform, reducing water take quite significantly. It is important that people have the opportunity to enter the market and re-establish that, but it is very important that we make sure that any trading framework that we design avoids those third-party and environmental impacts. The trading regime that we have proposed, as I said, is the

most constrained type of trading regime for that reason and because floodplain harvesting is quite unique in its access characteristics as well. Hopefully that answers the question.

The Hon. PENNY SHARPE: That was helpful, thank you. It leads to some of the evidence that we have had this week and the issue of unapproved works. The fact is that within the licensing regime that you are proposing the take from unapproved works is factored into those works. Even if there was a plan to remove those works over time actually the take is still there, so therefore tradable. Are you able to clarify how that would operate?

Mrs MELINDA PAVEY: In terms of some of those structures there are some challenges and I do note that the Nature Conservation Council have raised some of those issues. There are some fair points there. We will continue to explore and do what we need to do to ensure that take is fair and appropriate. But some of those structures do include roads and railway lines. So it is complicated. It is town infrastructure.

The Hon. PENNY SHARPE: Sure, that is great, Minister, but my question is actually very clear. The unapproved works that are currently there, no matter what they are or how they are operating, whether they are levee banks or large dams or whether they are railway lines—it is my understanding and it has been put to us that the licensing regime factors in the take from those. What I am trying to say is that if they are currently not approved and at some point in the future they are removed, the problem with the licensing regime is that it has actually factored in that water. Within that licence, if that structure was removed, that water would still be there and therefore becomes tradable. I am trying to understand the link to how unapproved works are going to operate within the licensing regime, given that people will have been licensed factoring in take that perhaps they are not actually entitled to into the future.

Mrs MELINDA PAVEY: Okay, I am going to pass the details of that question to Jim Bentley to answer in terms of those works and how it may impact that licence. Over to you, Jim.

Mr BENTLEY: Thank you, Minister. I think Dan Connor is best placed to answer that. So you start, Dan.

Mr CONNOR: Thanks, Mr Bentley. It is not quite like that, Penny. It is a little complex. I will try my best to really simplify it and make it clear. So the legal limits define the size of the pie. If you think of it that way it is a good analogy, I think. We cut up the pieces in the pie according to what our policy describes are eligible works. These are typically works that were approved and constructed as at 3 July 2008. There are some other criteria that relate to works that did not require approval at that time. Given that flood work approvals in particular—and these are the structures that you are really talking about—have had requirements to be approved since 1994, it is not the storages definitely that are in place in the landscape that will count to the capability that need to be removed.

I guess really importantly, the size of the pie is based on infrastructure in place under the plan limit conditions. We cut up the pieces in that pie in terms of entitlements based on eligible works, which are in the main approved and constructed works as at 3 July 2008. As has been said before, this is a new reform program across the northern Basin. It has almost been $60 million of Commonwealth and State investment over a series of seven or eight years. It involves floodplain management planning and floodplain harvesting: the structures in the landscape as well as the volumes that those structures can take. We have got new floodplain management plans. The last one of them commenced today, fortuitously, for the Macquarie Valley. Those things set rules and criteria for the types of things that you can build in landscapes.

The overall objective is unimpeded flood flow passage across the landscape. There are some works that we know that are not compliant with that floodplain management plan. In fact, we have identified some priority sites and the regulator has this on their radar. They are absolutely working through—it is one of their compliance priorities at the moment, if you look at their compliance priorities. It is really targeting those high-priority flood works in the landscape and bringing them into compliance. It is one of the really important arms of this reform. Whether there is a structure in the way of water getting to where it needs to be or somebody is taking it out as an extraction, it is still having the same impact. They are two complementary arms of the reform.

The Hon. PENNY SHARPE: Thank you for that. I have many more questions, but I am going to hand to Mr Searle.

The Hon. ADAM SEARLE: Minister, you have been extolling the virtues of Mr Walker's advice to the Committee. You are aware that Mr Walker only was asked whether or not floodplain harvesting constituted various offences under the Water Management Act and various other pieces of legislation?

Mrs MELINDA PAVEY: I read the questions the Committee put to him and I read his answers back that his opinion was that floodplain harvesting in New South Wales is not illegal.

The Hon. ADAM SEARLE: That was in the context of his answer where it says:

> Yes, it appears floodplain harvesting was a not unlawful (ie was a lawful) activity while the Water Act 1912 governed the position.

That is at paragraph 15 of his advice. The Water Management Act has now repealed most of the operation of the Water Act. Under the Water Management Act all common law rights to water have been abolished and vested in the Government and the Crown. Unless the Crown provides some kind of lawful permission there do seem to be, and Mr Walker agreed this morning, legal consequences of unlicensed and unregulated floodplain harvesting. What those consequences are is complicated and entirely fact dependent. He nevertheless was very clear that floodplain harvesting may not constitute or does not constitute an offence under legislation, but there is still legal uncertainty and question marks about what happens when people do engage in floodplain harvesting without licensing. Under the Water Act 1912 licensing was permitted, but it is the case isn't it—maybe Mr Bentley can tell us—that no such licences were ever issued for floodplain harvesting; is that correct?

Mrs MELINDA PAVEY: I think he made it very clear that lawyers are not great people to set policy either.

The Hon. ADAM SEARLE: He made that point. We are just dealing with what is the case at the moment.

Mrs MELINDA PAVEY: And we are dealing with very simple advice from him, that it is legal—

The Hon. ADAM SEARLE: That it was not an offence.

Mrs MELINDA PAVEY: —and we should be able to regulate and licence it so that we can get more water to the environment.

The Hon. ADAM SEARLE: Just on that issue, Minister, you were saying a little while ago that floodplain harvesting would be included within the cap. Given the lack of historical information about how much water is being taken through floodplain harvesting, how can you assure the Committee that your regulation of floodplain harvesting will make sure that it is within the cap?

Mrs MELINDA PAVEY: I am going to the evidence of the advice I am getting from people like NRAR, from Jim Bentley, Dan Connor and Andrew Brown, who are on our call today. We are within cap and with the licensing and the ability to actually take less water there will be less water available in the Gwydir and in the Border Rivers—and with work yet to do in the Barwon, Darling and the Namoi—it will be the environment that will benefit. That is the advice I am taking and that is the advice we are trying to move forward on.

The Hon. ADAM SEARLE: With the evidence that the Committee has at the moment—

The CHAIR: Thank you. I am sorry, Mr Searle. We are out of time. We need to go to the crossbench. I have a couple of questions. I have a question for Mr Connor. Let us go back to the accredited cap model. Were floodplain harvesting volumes contained in the accredited cap models?

Mr CONNOR: Yes. Sorry, what was the question?

The CHAIR: Were floodplain harvesting volumes contained in the accredited cap models?

Mr CONNOR: Absolutely. Absolutely. I think the question or the nuance that you are trying to draw out there was there is an accredited cap model and there is a volume that we use for reporting under schedule E, because we did not have a licensing framework for floodplain harvesting up at that time. This is the same for all of them. The cap accounting, the cap credits that I spoke to before that play out as a positive 10,000 GL cap credit since 1995 did not include estimates for floodplain harvesting. The models themselves did, the accredited models did. They did not appear in the cap accounts because to compare observed diversion to the expected model take under that particular time you need a licensing regime for that to play out. So the cap was clearly about trying to compare apples with apples. The cap accounting was about trying to compare apples with apples. It is very different from my proposition. If you go back and have a look at the cap audit reports that are all on the MDBA's website, floodplain harvesting and the estimates that we are talking about were part of those accredited models at the time that they were accredited.

The CHAIR: The New South Wales Government is potentially changing the BDLs, revising the BDLs. Does that mean that the SDLs are changing as well?

Mr CONNOR: That is the current construct of the Basin Plan, the Basin Plan set-up. I guess the question you are going to is do we expect that there is a fixed relationship between the BDL and the SDL. That is the current construct of the Basin Plan. The Commonwealth, I guess, have the pen on that piece of legislation. That is how they have described the relationship between BDLs and SDLs. Obviously New South Wales, as all basin States, is going through the process now of implementing the Basin Plan as it currently exists.

Mr BROWN: We should be clear—

The CHAIR: Can I just check on this. So you have to go back, therefore, and do a reassessment then of all of the environmentally sustainable levels of take as well in all of the valleys. Is that happening as well?

Mr BROWN: I think we need to draw out that the SDL is the definition. The thing that Dan Connor is talking about is just a numerical estimate of that definition. The numerical estimate can change over time. The definition cannot be changed without changing the Water Act and the Basin Plan.

The CHAIR: You are saying that you are changing the BDL, potentially changing the BDL. You are saying that it is fixed and you are going to change the SDL. I am asking you whether that means the New South Wales Government is undertaking a new assessment of the environmentally sustainable levels of take at all in any valley?

Mr CONNOR: Can I be clear on that, Chair. New South Wales does not decide about what the BDL should be and what the SDL should be. That is a function of the Commonwealth. To the extent that the Basin Plan, as it is currently written, describes a fixed relationship between BDLs and SDLs, that is the process that we understand will happen at the Commonwealth's end. It is not a process for New South Wales. To be really clear, we do not have the remit to revise SDLs. That is in the ballpark of the Commonwealth.

The CHAIR: Yes, but you are revising how much you are taking. For example, let's take the Gwydir valley. The official cap model for the Gwydir valley lists the cap as 346 gigalitres, but DPIE is stating that the extraction limit in the cap scenario model is 431.4 gigalitres. It is 81.4 gigalitres higher than the official cap model. Does that mean that there is a higher SDL? Firstly, why is it higher?

Mr CONNOR: This goes to the point that I was making before. The estimate that you just quoted is the estimate of all of the components in that cap model, excise floodplain harvesting. The actual accredited model made estimates of floodplain harvesting and the volumes totalled 447 GLs. The revised numbers for the Gwydir that we are proposing are 16 GLs less than the total volume that came from the accredited cap model, which when you compare apples with apples is a 16 GL decrease.

The CHAIR: [Inaudible]. Mr Connor, isn't it the fact that back in 1994 there just wasn't the level of floodplain harvesting? Right. There was not the level of floodplain harvesting.

Mr CONNOR: I agree with you, yes.

The CHAIR: How much more floodplain harvesting, in terms of storages, is there now compared to what there was in 1994?

Mr CONNOR: The point that you are trying to make, I think—and it goes down to something that I have heard others say in this submission already. Certainly Andrew has said it and Jim has said it. The cap is set at the water source scale. There is no such thing as a cap for floodplain harvesting. There is no such thing as a cap for general security. There is no such thing as a cap for supplementary. There is just a cap for the Gwydir regulated river water source, just to use that as an example. Yes, there has been a change in the floodplain diversions. In most of our valleys we also see a consequent change in some of the other diversion types as well. It is really important to note that diversions are a function of three things. They are a function of development conditions, absolutely; they are a function of the management arrangements that are in place at that particular time; and they are also a function of water user behaviour.

All of those things have changed radically since 1993 and 1994. In particular, in the early 2000s New South Wales introduced all of our water sharing plans [WSPs]. Those plans were intended to return water back to the environment by having up to a 10 per cent impact on diversions. So, in the Gwydir example, because it is front of mind for me, I can tell you that there was 100 GLs worth of storage capacity increase just in the Gwydir alone between 1993 to 1994 and 1999 to 2000, which are the conditions that reflect our plan limit. But there was also very, very significant changes in management arrangements. We had a new water sharing plan that for the first time created an environmental contingency allowance. We had new supplementary flow sharing arrangements that were introduced. All of those things really suppressed diversions. You need to consider all of those three things, not just changes in infrastructure.

The CHAIR: Can I just jump in, Mr Connor. I just really want to press you on this accredited cap model. You are talking about the old model as though you have this kind of new world's best practice model, but it is actually the same accredited model. There is only one accredited model.

Mr CONNOR: Absolutely, yes.

The CHAIR: So your new best model that you are talking about to this Committee is not accredited. The accredited model, in terms of the lawful legal model, is the one that you are no longer dealing with and you are using a model to justify an enormous increase in the take of floodplain harvesting.

Mr CONNOR: As I have described a couple of times now, the new models that we are putting forward here—and cap is the oldest of the limit. We have moved on from that.

The CHAIR: [Disorder].

Mr CONNOR: We have got BDLs.

The CHAIR: Mr Connor, you are calling it an old model. It is the lawful, accredited model. We are a Committee that is looking into the legality of floodplain harvesting, looking at what you are doing. We are trying to ask you questions about whether what you are doing, and the Minister and her department, is actually lawful under the Murray-Darling Basin Agreement. This is the accredited cap model. So are you just throwing it out—what is the legal model—and you are making it up?

Mr CONNOR: I will make two points. If we were to license according to the old accredited cap models, we would be licensing a volume that is across those three valleys 100 GLs bigger than what we are proposing. That is the first point I want to make. The second point is there is a process. New South Wales is no different to any other basin State and we are implementing the process that the Commonwealth has asked us to implement, and that is that we bring forward these new model estimates as part of the process of assessing and accrediting a water resource plan. The minute that we get on with licensing this program we will be submitting those new models to the Commonwealth as part of our updated WSP, and that is the process where they will be reviewed, accepted and changed. As Mr Brown pointed out before, changing models is nothing new. Definitely once you have a licensing regime in place and you get a better improved estimate of those legal limits you make the changes up and down according to the allocations, which are all permitted by our water sharing plans.

Mrs MELINDA PAVEY: Chair, can we just go to Mr Brown. I think Mr Brown has something important to clarify.

The CHAIR: Mr Brown, thank you.

Mr BROWN: I would just like to point out I think it might be important that we understand that the accredited cap model will continue to be used for cap compliance until a new model is in place. Right now at the moment there is modelling staff that are preparing the annual updates in terms of the climate inputs to the accredited Gwydir cap model, and that will continue until a new model may or may not be accredited in the future. So nothing changes until a new model is accredited.

The CHAIR: Thank you. My time has expired. We will go to questions from Mr Mark Banasiak.

The Hon. MARK BANASIAK: [Inaudible].

The CHAIR: Sorry, Mr Banasiak, you are on mute.

The Hon. MARK BANASIAK: Sorry about that. We heard evidence on Wednesday by Murray water users. They said that 720 gigalitres, essentially, was lost to the Murray because of floodplain harvesting. Obviously DPIE's evidence is only 1 per cent, which clearly could not equal 720 gigalitres. Do you have any understanding where or how they have arrived at this 720 gigalitres figure?

Mrs MELINDA PAVEY: Mark, I do not. Well, I have some ideas but I think this question is going to be better answered by technocrats. That is the appropriate way to try and explain why there is this misinformation out there.

Mr CONNOR: I might handle it in two parts, if that is okay, Minister. Andrew Brown, if you would like to take that question and talk about the 39 per cent or the 700 GLs and where that came from? I can definitely answer the question about our analysis of the 1 per cent. To you first, Andrew.

Mr BROWN: Okay. So the MDBA had a consultant who produced a report and it quoted 39 per cent of northern flows contribute to I think it is the South Australian entitlement flow commitment. When we went through an exercise to try to work out where that number came from, it appears that what they have done is they have counted—they have assumed that the contributions of flow from the Barwon-Darling are accounted first in terms of contributing to South Australia's entitlement flow. So they have effectively ignored the ongoing contributions from the Upper Murray. I believe there is published material now that talks about this in detail. But essentially their assumption is wrong. The long-term average, I believe, was 14 per cent of the Murray's or South Australia's entitlement flow comes from the Barwon-Darling. We worked out if we change all of the—if we switched all the floodplain harvesting off that made a 1 per cent difference to Murray inflows.

The Hon. MARK BANASIAK: I think that probably covers it. I might move on to some other questioning. Minister, the Committee secretariat emailed you a document from the Irrigators' Council around barriers to metering. My questions are about, obviously, the issues that we are having with metering presented in this report and how the Committee can possibly have confidence in the metering of floodplain harvesting. Have you been emailed that report; I just want to check?

Mrs MELINDA PAVEY: Can you see it?

The CHAIR: I think that is a yes. The Minister is holding it up to the camera.

The Hon. MARK BANASIAK: Yes, that is it. Excellent, thank you.

Mrs MELINDA PAVEY: Have I had time to read it? No.

The Hon. MARK BANASIAK: That is totally understandable, Minister. I will give you some leeway there. In our briefing with DPIE earlier on in this process, I think it was the Hon. Penny Sharpe raised questions about metering. There was the impression given that everything was going along swimmingly. But NRAR then put out a statement saying that only 45 per cent of tranche one were compliant and there was like a 36 per cent error rate in WaterNSW data that they were essentially utilising. There was 36 per cent of these sites or these work approvals that they could not actually find. Does that concern you, Minister, where NRAR, who is going to be enforcing this regime, is working on a database that has a 36 per cent error rate?

Mrs MELINDA PAVEY: Mark, I am concerned about where we are at in terms of those first timetables and things that I am hearing out on the paddock and the things I am hearing from the New South Wales Irrigators' Council. Whilst I have not had a chance to read the report that they tabled today, I am in constant conversations with the agency trying to ensure that all points of view are being listened to and respected. We have got some big time commitments to meet for 1 December for those pipes over 500 MLs. It has been complicated a little in terms of getting some of the pumping equipment or the metering equipment from overseas landing in our ports. Coupled with those issues—and I've heard the issues about the technicians able to go out and actually go on to paddock, and that is not even to mention some of the difficulties with being the only State looking at stock and domestic. I have had representations from a lot of people and I have asked the agency to look at that as well.

That is always part of the tension when you are leading the charge with the most groundbreaking reforms in terms of water measurement and management in Australia. There is going to be some tensions. I am aware that those tensions are there. At this point I am going to ask Jim Bentley, as the Deputy Secretary for Water, to actually deal with some of those issues. It is good that we are ventilating them and it is good that we are discussing them and to realise it is not an easy task and it is quite a mammoth task for all involved. We are getting there. That is the important part.

The Hon. MARK BANASIAK: If we are struggling at tranche one and tranche one is a smaller number than tranche two, which you are looking at between 7,000 and 8,000 smaller works that have to have these meters put on and accredited et cetera, are you worried that actually this is going to compound the issue that we are having with the smaller tranche one? If we cannot even manage to get this basic tranche right, how are we going to deal with tranche two and tranche three where the situation is going to be compounded?

Mrs MELINDA PAVEY: [Disorder].

The Hon. MARK BANASIAK: We cannot even get duly qualified people. There is not enough duly qualified people at the moment to deal with tranche one and we are going to up the ante with tranche two.

Mrs MELINDA PAVEY: When you are pioneering new reform that puts us way out ahead of every other State in terms of managing water—look, I talk to people who have put the pumps in and it has been not a problem and they have worked through it. This is going to be a difficult process because there is change for some, while others have already been doing it. On that basis I am going to hand over to Jim Bentley to talk about some of those challenges that we are facing and accept. But water management metering as part of the 2018 reforms—we need to do it to restore respect and confidence in the sector. It is a good thing to happen and these businesses are major investors in equipment themselves and this is part of the business now of being in water in New South Wales, that sort of compliance and that regulatory process.

The Hon. MARK BANASIAK: No-one is denying the need to do it, Minister. But I think there is concerns about whether we are going to have it ready. I will allow Mr Bentley to add anything if he wants.

Mr BENTLEY: Thank you, I will not take up too much time. I have just a couple of points. The duly qualified persons: There are 160 duly qualified persons, 129 of whom are available to do commercial work and their order books are not full. The evidence that we have—I might say, as the Minister said, this is a massive reform. I welcome the New South Wales Irrigators' Council report because it gives us a lot of things that I need

to look into and follow up on, and indeed we are doing. However, one of the things from following up I know to be the case is that order books are not full for those who employ duly qualified persons. There have been lots of approach by water users to those people, but until orders are formed, until orders are placed, those that employ those duly qualified persons are not going to increase the number of people that they employ.

However, that having been said, the order books are not full, so there are resources available. There are 19 more duly qualified persons in training as we speak. There is more training arranged. The numbers of duly qualified persons will grow, and as I say there is capacity in their order books. Now, the other thing to say on how much is this going to be a compounding problem, I think what we are actually doing is ironing out the number of the problems. For example, a couple of months ago 12 weeks was the average time for placing an order to getting your pump. The average time now is down to about six weeks. So there are quite a few areas where good progress is being made. Nevertheless, there is things in here that as the manager I need to follow up with quite closely and make sure that we continue to iron out those problems. The other thing I would say, sorry, if I just could—I think at the start of your questioning you were saying if we can't get this right how can we rely on the metering of floodplain harvesting. It is quite a different type of metering. That measurement system is quite different to this measurement system. If you want, Mr Connor could speak to that.

The Hon. MARK BANASIAK: Mr Connor, do you want to add to that? Do you see any problems with the floodplain harvesting metering?

Mr CONNOR: Thanks for the question, Mark, and thanks, Mr Bentley, for referring it on. In terms of size and scale it is definitely a much easier proposition. We have got in the order of 1,000 storages needing storage equipment. We know that many of those storages—there are quite a number of things those individuals need to get. The first is a storage curve by a registered surveyor so they understand the storage itself and its dimensions, how much volume it can hold, et cetera. They need a benchmark installed on the site, which is how you tie that into the Australian Height Datum. That is the survey reference mark across Australia. Then you need to make sure that you have the equipment itself. I think we have 13 devices currently available to people, which range in price with different specifications.

We have got a single—at this point in time, with a bunch more in testing—local intelligence device. That is the device that is the data logging and telemetry. That is the smarts to the on-ground meter. It is a much smaller proposition from our market research so far. We do not expect that there will be any problems with the rollout of that framework. That is the advice we are getting back from industry as well, that this is a much constrained program of works that we do not think will suffer the same type of challenges that a broadscale metering rollout program would suffer.

The Hon. MARK BANASIAK: Thank you. That is my time, so I will throw it back to the Chair.

The CHAIR: Great. I just wanted to check whether Government members have any questions at this stage—Mr Franklin?

The Hon. BEN FRANKLIN: Actually, Chair, I think Mr Amato is going to start the session.

The Hon. LOU AMATO: Good afternoon, Minister. Thank you for taking the time out of your busy schedule to attend this inquiry. I also extend our welcome to the representatives of DPIE. Minister, water is going down the Darling Anabranch as we sit here today. What does this mean for locals?

Mrs MELINDA PAVEY: Lou, it is just extraordinary. When I was out there in April and we opened some of the big gates and the water went into the main lakes—to see this supercharged event. That was one of the reasons I went to Canberra about six or four or five weeks ago, to talk to the Commonwealth environmental water holder and the Murray-Darling Basin Authority to say we need to be sharing some of that water to get the native fish habitat operating in those anabranches. Coincidentally, today there are decisions being made by WaterNSW for that overflow event. I think that is 30 gigalitres. Just in case there was not enough water, the Commonwealth Environmental Water Holder will do a supplementary surge of water as well to ensure that anabranch flow will go down to the Lower Darling. That is something that means a hell of a lot to the people of Broken Hill, Menindee and the Lower Darling. These rainfall events have just been extraordinary after the northern Basin facing its driest three-year period ever. Now to have these inflows that have been going down for about 12 months is really exciting.

The Hon. LOU AMATO: Thank you, Minister. It certainly has been a blessing. Minister, I have another question. Would more water have gone to the environment if the floodplain harvesting regulations had not been disallowed?

Mrs MELINDA PAVEY: Yes, there would have. The advice I have from the agency is that we will be reducing floodplain harvesting in the Gwydir by 30 per cent and in the Border Rivers by 13 per cent. That is a

decrease. Mr Barnes, I have been advised, gave evidence earlier today that we would have actually had bigger inflows into those wetlands around the Gwydir and Border Rivers quite significantly if the regulations had have been in place.

The Hon. LOU AMATO: Thank you very much, Minister. I will pass on to the Hon. Ben Franklin.

The Hon. BEN FRANKLIN: Thank you very much, Mr Amato. If I could move on to, as the Minister referred to them, the technocrats. Probably Mr Brown, but I am very happy for whoever is appropriate to answer these questions. If we assume through licensing that you start collecting and measuring individual farm water take, I guess my first question is can you see any other areas where measurement will need improvement? What can be done in that space?

Mr BROWN: I do not think you will ever get a modeller who will argue about collecting more data. For this particular purpose the measurement of the water entering the storages is key. That gives us a much more solid means for estimating or understanding the flow balances or the water balances on individual farms. I think if we were in a no budgetary restrictions sort of world I think we would probably put a lot more flow gauges on some of these flood-runners, where some of this floodplain accessing water is coming from. I admit probably also, if I had a Christmas wish list, I would put in some more high-quality climate measurement stations. Typically the further west you go the less dense it is that you have automatic weather stations, essentially. So more of those is always nice.

The Hon. BEN FRANKLIN: If you did not licence and meter, do you think that there are ways that the flow models across floodplains can be improved in any real way?

Mr BROWN: Not in the near term. I think we have largely tapped out the data that we are able to get hold of. We have radically upped the amount of data that we were using already. But I am not aware of anything else that we have left on the table in a systematic way.

The Hon. BEN FRANKLIN: For the department to start modelling the full water balance, does that imply that licensing and metering would have to occur first?

Mr BROWN: We have already tried a model for water balance. What we are really talking about is improving the resolution and being able to break down that water balance into finer components. If we want to go further we need to measure more stuff, yes.

The Hon. BEN FRANKLIN: Can I move on to a different issue. The Wentworth Group claimed in a report last year that 2,000 gigs was missing from the Murray-Darling Basin. I would just be interested in your comments as to the veracity of that claim.

Mr BROWN: I think they made some fairly serious errors in how they assumed that those numbers should be created. The one that really stood out to me was they effectively assumed that the Basin Plan was in place, and it wasn't over the period that they were collecting the data from. So you cannot really expect a plan that isn't in place to deliver the objectives of that plan. The other part was they made an assumption that the recovered water should appear in the river, and that is absolutely not a requirement of the Basin Plan at all. So the recovered water is at the behest of environmental water holders and they have some legislated requirements to deliver environmental outcomes. Those outcomes do not need to be increased flows.

The Hon. BEN FRANKLIN: Thank you. We have obviously had a lot of discussion and there has been contention about what happens if you completely remove floodplain harvesting from the northern Basin and what that will mean for total inflows into the Murray River. It has been contested as to what the numbers are. It has been suggested by you, by the Government, that those inflows, if they were removed, would increase by less than 1 per cent on average. I know that we have discussed this a little today, but my question is if you could point to the substantive evidence that shows that. If you want to take that on notice then you are very welcome to.

Mr BROWN: I think I might take it on notice. Or Mr Connor?

Mr CONNOR: I can elucidate the Committee with some detail. Just a simple example because I think it is easy to understand. We know that the northern Basin inflow, if you look at published information under baseline diversion limits conditions, which are all the baseline diversion limit models supplied by the basin States and that is the starting premise for the Basin Plan —if you look at that report, it is freely available. I can certainly provide the link. You can see that the northern Basin contributes to the southern Basin about 1,700 GLs a year, on average. We know that the flows at Wentworth are 12,400 a year on average. We know that of that 12,400, 10,700 from that water balance that was done using those baseline diversion limits conditions actually comes from the southern Basin. That is where that 14 per cent statistic comes from.

As has already been mentioned, I think by the New South Wales Irrigators' Council, if you have a look at our IPART determination, we have put some estimates of what we expect floodplain harvesting to be. That you can back calculate, it is about 250 GLs of floodplain harvesting licences long-term average. If hypothetically you took all of that water, put it in a bucket and ran it down to Menindee Lakes and tipped it in Menindee Lakes—which we know is not the case. This water supports a range of really important ecosystem functions across the northern Basin, like recharging groundwater and wetlands. It is fulfilling the soil moisture profiles for cropping farmers, and it is supporting the environment as it moves down the system. But hypothetically, pick it up and put it in a bucket and tip it in Menindee Lakes. We know that is about a 14 per cent increase in inflows into the Menindee Lakes. Using those same statistics you arrive at about a 2 per cent increase in flows at Wentworth.

Just really simple maths with some really radical out there assumptions—like picking the water up off the floodplain, taking it down in a bucket and putting it in Menindee Lakes—you can arrive at a figure of 2 per cent. We definitely have analysis to back it up. But I think it is so starkly obvious from just published information that is available to anybody to calculate that statistic. But I thought it was worthwhile sharing that with you.

The Hon. BEN FRANKLIN: If you did want to put any further information on notice you would be very welcome to do so. If these rules and these changes are brought into effect, you have suggested that it will reduce the water taken from the Gwydir by about 30 per cent and by about 13 per cent from the Border Rivers. Where will that water actually end up going to? It would have been used for irrigation but where will it go to if that does not happen under this new plan?

Mr BROWN: This relates to return flows, doesn't it, Mr Connor? We cannot put an exact figure on exactly where the water ends up. We are aware that quite a lot of the water stays on the floodplain and services environmental functions on the floodplain. Some more of it will end up back in the river and it will head down through the system, through Menindee, through South Australia and on. I do not think it is possible to put an exact number on it, but I believe Mr Connor can talk about the investments that we are making.

Mr CONNOR: Yes. Thanks, Mr Brown, and thanks for the question. We know that this is a practice, when it is restricted, that is going to have immense local benefits. But the benefits will dissipate as it moves downstream, as I have said. It is not going to affect the southern connected Basin in a material sense. It is possibly going to have some beneficial impact on the Barwon-Darling, principally during the times that the framework will restrict floodplain harvesting, which is obviously in those wetter periods. But we have definitely looked at how that additional water on the floodplain improves some of the basic ecosystem functions. So we have looked at—in the case of the Gwydir, or in the case of all of the valleys actually—requirements for waterbirds, requirements for native vegetation and requirements for native fish. These requirements are based on the environmental watering requirements for those species and the long-term environmental watering plans.

We have essentially looked at what that increase in the volume of water on the floodplain would do to the frequency in which those environmental requirements are being met. I think the Minister has already talked to one of the headline statistics in the Gwydir, which is 142 per cent improvement in some of the metrics around requirements for waterbirds. Just some of the others are a 99 per cent maximum improvement for some of the metrics around native vegetation and a 70 per cent improvement around some of the metrics that relate to native fish—just to give you a snapshot as well. Just to be really clear, the benefits of policy are most significant where we have had significant growth above those water source legal limits. The Gwydir is definitely the case where we have seen the most substantial growth, and obviously where we expect to see the greatest benefits as a result of licensing. Those will be mostly within valley and really concentrated around those iconic sites, the Ramsar-listed wetlands within the Gwydir itself.

The Hon. BEN FRANKLIN: Thank you, Mr Connor. My final question—a statement which will probably get a bipartisan cheer, I suspect—is this: There has obviously been an enormous amount of effort from both Commonwealth and State governments over the last eight years or so. They have invested an enormous amount of money, over $17 million on research modelling and consultation, to develop and to implement the floodplain licensing policy. Clearly a regulation was made, it was disallowed and we are now at an impasse. My question is this: Can this policy be introduced without regulations? Could we go ahead and do it anyway without the will of the Parliament?

Mrs MELINDA PAVEY: I want to do it, preferably, with the will of the Parliament, Ben. I think any fair person watching the evidence of this week will see that there still is a lack of understanding that this is actually about also containing the amount of take, and ensuring that we have more water flowing through to the wetlands. I do want to move forward with this with the support of the Parliament.

The Hon. BEN FRANKLIN: Those are all my questions, Madam Chair. Thank you.

The CHAIR: Just checking that is it for Government questions, Mr Farraway? Excellent. That is the end of this session and the final hearing for this Committee. Thank you very much for appearing and for making time, as I think some people said, in your busy schedule, Minister. We appreciate it. That is the end of the live stream as well. Thank you very much.

(The witnesses withdrew.)

The Committee adjourned at 15:35.