

STANDING COMMITTEE ON ENVIRONMENT AND PUBLIC AFFAIRS

INQUIRY INTO PETITION No 123 — SOUTHERN FORESTS IRRIGATION SCHEME



**TRANSCRIPT OF EVIDENCE
TAKEN AT PERTH
WEDNESDAY, 23 OCTOBER 2019**

Members

**Hon Matthew Swinbourn (Chairman)
Hon Colin Holt (Deputy Chairman)
Hon Tim Clifford
Hon Samantha Rowe
Hon Dr Steve Thomas**

Hearing commenced at 9.59 am**Mr MIKE ROWE****Director General, Department of Water and Environmental Regulation, examined:****Mr BEN DREW****Manager, Water Allocation Planning, Department of Water and Environmental Regulation, examined:****Mr PAUL BROWN****Executive Director, Regional Delivery, Department of Water and Environmental Regulation, examined:****Mr ADAM MASKEW****South West Regional Manager, Department of Water and Environmental Regulation, examined:**

The CHAIRMAN: On behalf of the committee, I would like to welcome you to the hearing today. Today's hearing will be broadcast. Before we go live, I would like to remind all parties that if you have any private documents with you, you need to keep them flat on the desk to avoid the cameras. Please begin the broadcast.

You will have signed a document entitled "Information for Witnesses". Have you read and understood that document?

The WITNESSES: Yes.

The CHAIRMAN: These proceedings are being recorded by Hansard and broadcast on the internet. Please note that this broadcast will be available for viewing online after this hearing. Please advise the committee if you object to the broadcast being made available in this way.

The WITNESSES: No.

The CHAIRMAN: No objections; thank you.

A transcript of your evidence will be provided to you. To assist the committee and Hansard, please quote the full title of any document you refer to during the course of the hearing for the record. Please be aware of the microphones and try to talk near them. Also, ensure that you do not cover them with any papers or make any unnecessary noises near them. I remind you that your transcript will be made public. If for some reason you wish to make a confidential statement during today's proceedings, you should request that the evidence be taken in private session. If the committee grants your request, any public and media in attendance will be excluded from the hearing. Until such time as the transcript of your public evidence is finalised, it should not be made public. I advise you that publication or disclosure of the uncorrected transcript of evidence may constitute a contempt of Parliament and may mean that material published or disclosed is not subject to parliamentary privilege.

Before I continue and ask for an opening statement, I will introduce who we are. In the far corner is our research officer, Amanda Gillingham. Next to her is Hon Tim Clifford, then Hon Sam Rowe, and Hon Colin Holt. I am the Chair of the committee; Colin is the Deputy Chair. To my left is our legal advisory officer, Alex Hickman, and at the very end is Hon Dr Steve Thomas.

We have asked you to come in today to talk about the southern forests irrigation scheme. Would you like to give us an opening statement in relation to that?

Mr ROWE: Yes, please, if I could. Firstly, thank you for the invitation and opportunity to provide information to the Standing Committee on Environment and Public Affairs inquiry into petition 123 regarding the southern forests irrigation scheme. As the committee is aware, the southern forests irrigation scheme or project was initiated by the previous government as part of the Water for Food program and led by the former Department of Water. Both the Australian and the Western Australian governments have allocated funding towards the project. Following the 2017 Western Australian general election, responsibility for leading this project and the Water for Food program was transferred to the Department of Primary Industries and Regional Development on 1 July 2017. The Department of Water and Environmental Regulation has several roles in relation to the proposed southern forests irrigation scheme. Our first role was commissioning the modelling and scientific analysis to understand the capacity of the Donnelly River to sustain the proposed abstraction from the scheme and the likely impact on the environmental flow regime. This involved measuring and modelling the current and proposed flow regime to understand the possible impact of the scheme abstraction on the Donnelly River and Record Brook. In addition, we modelled the probable water available for abstraction from the Donnelly River under various climate change scenarios.

Our second role will be to provide information to the Environmental Protection Authority as it undertakes its public environmental review under the Environmental Protection Act 1986 against the factors that the authority has requested the proponent, which is the Southern Forests Irrigation Co-operative, to address as part of that review process.

Thirdly, in the event that the EPA recommends that the project can proceed and this is approved by the Minister for Environment, under the Rights in Water and Irrigation Act 1914, we will assess the proponent's water licence application to abstract water from the river, as well as assess applications for any permits associated with interfering with the beds and banks of the Donnelly River and Record Brook, arising from the construction of any weirs or dam.

Lastly, the department will be responsible for ensuring compliance with the terms and conditions of any water licensing permits the department may issue to the proponent, as well as ensuring compliance against any conditions of a ministerial statement that may be issued by the Minister for Environment for this project under the Environment Protection Act 1986. Thank you for the opportunity to provide this statement.

The CHAIRMAN: Thank you for that. Are you able to tell us whether there are existing water licences for the growers down there?

Mr ROWE: Yes, there are a number. It is probably worth imagining a map roughly equally divided between two areas, being the Warren catchment and the Donnelly catchment. The Donnelly catchment, if you imagine in your head, is to the left, and the Warren is to the right. It is fair to say that most of the available water licences in those two catchments are in the Warren catchment as opposed to the Donnelly, which is relatively underdeveloped. If you can also imagine that map, there is still a large amount of forested or uncleared area, particularly in the Donnelly catchment. Most of the water licences that we administer are in the Warren catchment.

The CHAIRMAN: How do those licences work? How do they come about? How do people renew them and those sorts of things?

Mr ROWE: All of those are authorised under the Rights in Water and Irrigation Act 1914. That is the principle enabling legislation that gives the state the authority to manage and issue water licences

on behalf of the Crown, effectively. As the committee is probably aware, water is vested in the Crown of Western Australia under that legislation. For areas where there is competition for water, the state, through a proclamation process, authorises or establishes a proclaimed area. Almost all the groundwater in Western Australia and most of the surface water areas are already proclaimed, which means they fall into our licensing regime. Typically, we would establish, particularly in areas with high competition for water, a water allocation plan. That sets out the amount of water that we consider to be available for water extraction and the licensing policies or rules that might apply to the local area. The Warren–Donnelly surface water allocation plan was published in 2012; that is the most recent iteration of the plan. That sets out the extraction for that area and the licensing rules that will apply for that subcatchment or for the various water resources areas that flow within the subcatchment area. Within that, we have a first in, first served policy that applies. If there is water available within an area, the person is able to lodge an application for a water licence with us. We will assess that against the provisions of the legislation and, if it is found to be acceptable, we will issue that licence, sometimes with conditions. There are a large number of licences already in operation in the Warren catchment area over a number of subareas.

The CHAIRMAN: How far do some of those licences go back in time?

Mr ROWE: They would go back for a considerable period of time, but it is fair to say that we issue licences for a 10-year term and then we would reissue them typically at the end of that term period. I do not know how far back the oldest licence would go, but we have been regulating in that area for many years.

Mr BROWN: The Warren was gazetted in 1959 and the Donnelly in 1968, so we have been regulating since those times.

The CHAIRMAN: At the end of those 10-year licences, do you reassess the suitability of those licences or are they simply just that someone reapplies and they come back to them as a matter of course?

Mr ROWE: The act is not quite an obligation to renew but an expectation that the licence will be renewed, unless the licensees have done something terrible during that period or whatever. There are only certain considerations that we can take into account when we come to a reissue. It is not an automatic renewal necessarily. It is an opportunity for us to review the volume that is issued under that licence and the conditions to which the licence applies.

The CHAIRMAN: Do you take into consideration changes in water flow and the hydrology?

Mr ROWE: That would be the opportunity to do so. We have done subsequent modelling around our understanding of, say, climate—for example, how that has changed during that preceding period. That might be the opportunity to review the amount of water that is available or reissued.

The CHAIRMAN: Is it fair to say that the water levels in that area over time, the rainfall levels, have dropped considerably since it was established in 1959, I think you said?

Mr ROWE: Yes, that is right. Our modelling would suggest that that is going to continue into the future.

The CHAIRMAN: You have talked about the southern forests irrigation scheme. Can you elaborate a little bit more about why it is thought that it is needed as a response to water needs in that area?

Mr ROWE: That is probably a question better directed to the Department of Primary Industries and Regional Development as the lead agency for this project on behalf of the state government. My recollection is that it was established initially in response to the community's concerns about the

long-term water security for that area in the face of climate change and, on the back of it, particularly a drying year in 2010.

The CHAIRMAN: Are you able to break down how the scheme will work for us from a mechanical point of view?

Mr ROWE: Yes. In basic terms, the proposal—and it is only a proposal at this stage—would be that the scheme is operated by a cooperative, which has been established. The Southern Forests Irrigation Co-operative would establish the scheme. The suggestion is that on the Donnelly River there would be some form of probably—what is the best way to describe it; it is not a dam—a pumping point. A pumping point would be constructed on the Donnelly River that would allow a volume of water to be abstracted. It would then be pumped to a dam, effectively, which would be constructed on Record Brook, which is a tributary of the Donnelly. From there, the water is further pumped into holding dams and that, using gravity, is then distributed throughout a series of pipes throughout the Warren catchment area, where farmers have indicated they want to effectively be part of the scheme and buy into the scheme.

[10.10 am]

Hon COLIN HOLT: So, it is basically taken from the Donnelly catchment —

Mr ROWE: Correct.

Hon COLIN HOLT: — across the ridge into distribution near the Warren catchment —

Mr ROWE: I think Mr Maskew may be able to clarify that.

Hon COLIN HOLT: — just let me get to the end of it—because that is where most of the horticultural activity is and most of the water crisis is, or the water demand is or the lack of water?

Mr MASKEW: Through a letter of interest that was run by the cooperative, they identified the people who would like to buy in to the scheme. That was available to all of the properties within the Warren and Donnelly catchments. My understanding is that there are properties in both of the Donnelly and the Warren catchments.

Hon COLIN HOLT: Who signed up into the cooperative?

Mr MASKEW: Yes. That is correct.

The CHAIRMAN: So, the water will come from the Donnelly River, but that will also include the catchment areas and the streams and, for want of a better word, the tributaries that service the Donnelly River. Is my summation there correct?

Mr ROWE: Yes; in general terms, it is correct.

The CHAIRMAN: What are the implications of this in terms of environmental impacts, and, secondly, for the growers who currently access water and streams from those brooks and dams that feed the Donnelly?

Mr ROWE: Okay; the Environmental Protection Authority will consider the full range of environmental impacts in detail as part of their public environmental review process. For example, they will consider the impacts of the inundation if the dam was to be constructed on Record Brook. They would look at impacts on vegetation associated with any clearing for constructing the pipelines and other infrastructure. Our agency has done a whole series of modelling and measurement around the possible impact, particularly on the flow of the Donnelly River itself, and what that might mean for downstream impacts on aquatic biota that rely on environmental flow regimes to be sustained. We have done a fair bit of work that explores in some detail what the impacts to the

environmental flow regime might be downstream of both Record Brook and Donnelly Brook to try to understand what those impacts could be. What was the second part of your question?

The CHAIRMAN: It was in relation to farmers and agricultural people that rely on those flows. I am not as familiar with the area as some of the other committee members. The point at which you are taking the water in the Donnelly River, I do not know if that means that there are irrigators or farmers that rely on those water flows past that point, and therefore there will obviously be a reduction in the overall flow because you are taking water out of one system and putting it into another.

Mr ROWE: I might just make a general comment and pass it to Adam, if I can. He will have more specific knowledge. My understanding is that this scheme will not impact on existing users that are downstream from the point of take, because the water that is proposed to come into the Donnelly system is from areas that are fairly underdeveloped for agriculture and they do not have a lot of competing use for those parts of the catchment, but maybe Adam could clarify that.

Mr MASKEW: That is correct. Downstream of the take point, through the work that we did, we have not seen a need to alter the allocation limits from those subareas downstream, and so there is no effect on those current entitlements.

Hon COLIN HOLT: Do you think those people below the dam understand that there is going to be no impact on them? Because there is obviously some conflict down there about what is happening with the water allocation, service water flows, licences, spring rights, whatever. Do you think they understand that point you just made, and has that been communicated to the community and the farmers down there?

Mr ROWE: In late 2018, the department held a series of workshops around that area.

Hon COLIN HOLT: You guys?

Mr ROWE: Yes, our agency. I think well over a hundred people attended a number of different workshops between, say, September and December of 2018—around about then. That was an opportunity to explain to people our role in the scheme, but it was also an important opportunity to explain the science that sat behind it, the governance arrangements that sit around the scheme and the legislation that applies. We have endeavoured to try to explain, to the best of our ability, how we think the scheme will operate and its impact or otherwise on existing users. I guess my observation would be that what this whole process has identified is that perhaps there are some people who have either been longstanding or new in the area who have not fully understood that, particularly in the Warren part of the area, a number of those subareas that we have been managing for many years have been fully allocated for a long period of time. That means that we have not been in a position to issue new water licences, and that is quite independent of this scheme. So, what it has meant is that there are a very few people who have not got water now who probably would like water, but they have not been able to access it through our licensing regime because some parts of the system—not all of it but some parts of the system—are fully allocated. In terms of the people downstream of the Donnelly, though, Adam, I am not sure whether you want to make a particular comment in relation to those people and their knowledge of the scheme or views on that?

Mr MASKEW: It is fair to say that the number of users and, fundamentally, the number of properties downstream of the take point in the Donnelly are very few. Some of them will be more informed than others. A lot of the contention is from some of the upstream catchments—the more developed ones, such as the Manjimup Brook, and also the middle Donnelly subarea.

Hon COLIN HOLT: So, can I just pursue this a little bit further? Was December 2018 the last time you did it? We are now in October. Obviously, we have had a petition presented to Parliament since then with a whole range of concerns around it. Do you think you have got a role to play in going back to those communities and explaining in further detail about how water is allocated and your position: “It is okay; we think we can manage it”? The EPA has still got to do their stuff, but do you think you have a role to play in informing the community more?

Mr ROWE: We have indicated our willingness to keep engaging with people. In addition to doing those small group workshops, we also offered to do on-farm visits. I think we conducted in the order of 50 on-farm visits with individual landholders as well. Paul and Adam have continued to meet with local stakeholders and are going down again on Friday this week to do the same. We are very open to continuing to engage with people and trying to explain it as best we can.

Hon COLIN HOLT: You see the point I am trying to make here: the Parliament has been presented a petition that raises concerns around this whole project. I think it is beyond that—it is about water allocations everywhere. I think the community is seeking a proactive approach to it, so I would continue to encourage you guys about how you engage in that. It is clear that there is a whole heap of conflict in the community that has had a lot of conflict in the past over a number of years and a number of issues. I think there are some concerns. You probably need to play a role in addressing some of those concerns.

Hon Dr STEVE THOMAS: I was going to leave this until the end, but I think we have jumped in. Most of the discontent around this proposal is actually coming from the farming community upstream from what was originally a four-metre weir, which is now potentially a variable-take low proponent. That means that there is effectively, in my view, very little impact downstream. Most of downstream, until you get to the ocean, is a fair bit of state forest. We are talking about the west Manjimup farming group in particular, which are upstream of the Donnelly catchment. The question I was going to ask you was about the water modelling. First off, is it appropriate that you provide, or can you provide, the committee with a copy of the modelling or an executive summary of the modelling so that we can have a look at the overall catchment modelling?

The CHAIRMAN: Let them answer that.

Hon Dr STEVE THOMAS: Sorry, yes, before I move on.

Mr ROWE: Yes, I think we are close to finalising that product, so we would be in a position to do that soon.

The CHAIRMAN: What we will do is put that as question on notice 1 for you. You can obviously communicate back to the committee about the timing and availability of that.

Mr ROWE: Thanks very much.

Hon Dr STEVE THOMAS: I think that will be critical, because the question will be, ultimately, whether there is additional resource available of that water in the catchment, in particular upstream. You are probably not in a position today to say whether the Donnelly River in toto is fully allocated, under-allocated or overallocated, but that is the information that the committee will rely on then to make a decision about whether a further allocation is required. This might be question 2, or it may be part of question 1, but can you give us a brief on how you calculate the required environmental flow in the Donnelly, so that we can work out whether that is appropriate?

[10.20 am]

Mr ROWE: Ben Drew might be able to answer that in general terms today if that would help the committee to understand, in a general sense, how we go about doing that, or we could provide it as supplementary information. It is up to you.

The CHAIRMAN: There will be opportunities to provide supplementary information, but if Mr Drew can actually address it now, that might be helpful.

Mr DREW: Our approach to looking at the environment in the Donnelly River is really firstly to understand what is there. As you would know, that is a pretty standard process. We know in the Donnelly River there are a lot of state forests and national parks. We also know there are specific species that exist in that system that require levels of protection under different legislation. We firstly identify all that work. Then we identify or look through literature to understand what parts of the flow they depend on: Do they depend on pools? Do they depend on big flows? Is it vegetation that is on the riparian area—on the sides of the river—that requires certain flows to get to a certain height? By putting those values and our understanding together, we then look at the types of flows that we have seen in the river. We know over time that we have different types of flows. You have big flows in the winter, and different pulses of flows. So we try to understand all those linkages. Then we look at different scenarios and what would happen if we took certain amounts of water out of the river. A percentage of flow is a way of doing that, and you can look at it through dams and things like that as well. We then look at how that changes the profile of flow through the year. We essentially compare those scenarios and say for that species, who we believe relies on that particular flow: how is that flow going to change over time? Then, through expert opinions, the literature, through making information available to the public, through EPA processes and through our planning processes, we assess that and put that information out for consideration. That then tells us that we are able to take a certain amount out of the river but still protect those important parts of the flow to protect those values. That is the sort of volume that we set aside and say, “You can take that amount of volume out”. That is the broad process. It is obviously a lot more detailed and technical, but that is all outlined in our methods reports and things like that.

Hon Dr STEVE THOMAS: Perhaps you could make that available, at least in summary form.

Mr DREW: That report will have all the environmental stuff in it as well.

The CHAIRMAN: I think that is part of —

Hon Dr STEVE THOMAS: Can I keep going?

The CHAIRMAN: Keep going, yes.

Hon Dr STEVE THOMAS: I think the next question probably goes to the crux of the matter: for those farmers who are upstream for whom the distance probably makes it difficult to access the water that might be available in the proposal, do we have an idea of their capacity to also harvest additional water in that catchment? You are not in a position to make use of that dam, if you are further north—we are effectively talking about west Manjimup. I think we all know where we are and have the maps in our minds. I will not name names, but we have probably all spoken to the same people at some point. If we look at that west Manjimup group, what is their capacity at the moment to put in additional water storage infrastructure through the licence system, or does that still then wait on the work that is being done? Are there any applications that have been attempted in the meantime that might be, for example, in competition with the southern forests irrigation scheme proposal?

Mr ROWE: There are a few questions. We might try to break it down and paint the picture around west Manjimup in the first instance and then come back down to what their options are, if they have any, and then what is currently in play in terms of licensing.

Mr BROWN: Above the dam site there are three subareas which have their own allocational limits. Manjimup Brook has been fully allocated for some time so they cannot take more A-class water. Middle Donnelly has had water available, and some of their allocational limit was reduced during the study for the dam relating to the amount of state forest in that group. There was a little bit of water left. We have now allocated all that water in the middle Donnelly in the last year with extra applications, so they are fully allocated. Then there is upper Donnelly, which is not really horticultural; it is more broadscale agriculture. Even though we have reduced their allocation limit, there is still more water in that area. If people in Manjimup Brook and middle Donnelly want more water, then there are several things that can go on. One is that there is a thing called a spring dam, which is a dam which occurs from a spring inside your property and is not licensed. Everyone is having a look to see if they have spring-dam capabilities on their farms, which is an unlicensed dam, but we still have a look at the time to make sure that it is a spring dam. The second option is that Manjimup Brook has a variable-take scenario, so we added another gigalitre of water, which is seven licences in that, but we have now closed it because we just want to see how much that water is affecting it. They can trade and transfer water. If you have a dam and you are not using the full allocation of your dam, you could trade it to a next-door neighbour or pipe it to a next-door neighbour or let it flow down the river to a next-door neighbour. Adam's people have been actually talking to people about sharing or trading water between themselves so that they can fully utilise the water that has already been allocated.

Mr ROWE: Just to give the committee a sense of scale and the numbers of individuals that we are talking about here for those three areas that Paul spoke about, for the Manjimup Brook–Yanmah–Dixvale subarea, there are 47 water licences currently in operation, and that is a fully allocated system. Middle Donnelly, which Paul mentioned, has 18 service water licences, and that is fully allocated. The upper Donnelly had only three service water licences and there is still water available in that area.

Mr MASKEW: Manjimup Brook also had access to the scheme. One of the feeder mains for the scheme actually goes through the Manjimup Brook and the Yanmah–Dixvale subarea that is probably allocated, and they were able to participate and join into that scheme.

Hon COLIN HOLT: Some did and some did not, I suppose.

Mr MASKEW: That is correct.

Hon Dr STEVE THOMAS: This is my last question. It was said earlier that in the view of the department, the scheme itself does not impact on the water capacity or allocation further upstream. Can I get a comment, then, on how the water that would be harvested in a winter peak-flow situation with the small weir and an offtake dam, but it would have no impact further up? The people further up could not, in theory, seek to increase their water licence, put in additional crops and harvest that water further up. Why? Because it is coming from a broader catchment? Is that the position that we see?

Mr ROWE: That is my understanding, primarily, one of the reasons—essentially, the water that is available for the southern forests irrigation scheme via the Donnelly River is not the same water that is available to the other parts which are now fully allocated.

Hon Dr STEVE THOMAS: That is the bit that I wanted to get on record. Thank you.

Mr BROWN: There is a case that people in middle Donnelly could access through state forest and vacant crown land to the Donnelly River themselves, but both the lands department and biodiversity, conservation and attractions are not that keen on having multiple take points from the Donnelly River through their land. That is one possibility.

Hon COLIN HOLT: Do you think landholders understand that point you and Dr Steve Thomas made—that what is done at the offtake point in the Donnelly and under the scheme is not going to affect what they do upstream?

Mr ROWE: We have tried to explain that, I think. Adam and Paul have been —

Hon COLIN HOLT: Do you think they understand it?

Mr ROWE: I do not know. Perhaps Paul and Adam might have a view on that.

Hon COLIN HOLT: You are at the coalface.

Mr BROWN: It is quite clear that some people do not accept that argument at all. Some people strongly do not accept that argument and some people are confused about that argument.

Hon COLIN HOLT: I think you said, when you gave a bit of a description then, that there was some interaction. My language is going to be wrong here, but you can correct it. You reduced the allocation and it was fully allocated in the middle Donnelly, associated with the dam. Would that send a message to those guys in upper Donnelly: “Hang on. There’s some potential interference coming from the scheme”?

[10.30 am]

Mr ROWE: It might be useful if we go back in time and explain a bit of the time frame and the history of when some of those things happened. My observation would be that some of those things were conflated and people were a little confused about some of the things that were happening at the time. Perhaps Adam can explain, in a temporal sense, what the department was doing in terms of making those various announcements or decisions in relation to water allocation or licensing processes.

Mr MASKEW: In late 2017, as part of our evaluation process of the Warren–Donnelly surface water allocation plan, we took two steps. One was to temporarily match allocation limit to the licence entitlement so that we could do our scientific work on the proposed southern forests irrigation scheme and do all of that work, and the modelling and on-ground work. At the same time, we became concerned about the impact of the variable-take policy regime to allow low reliability of water to be taken by industry —

Hon COLIN HOLT: That is generally?

Mr MASKEW: That is across the six subareas that were available. There was one in the Donnelly River—the Manjimup Brook–Yanmah–Dixvale subarea—and five in the Warren catchment. Through the work we did, the modelling that Ben’s team did identified that in order for the scheme to supply a high reliability of water to its proposed members, we would need to look at how that water came off that upstream catchment. That led us to look at the middle Donnelly tributaries and determine that the water available to the self-supply users was not as much as we had previously thought it was. Some of that is about the amount of agricultural area there and some of that was in response to climate change, so we adjusted the allocation limit there. At the end of that, following the workshops you previously heard about, we made an announcement to maintain the allocation limits for all the downstream subareas of the area. We modified the allocation limit in the upper Donnelly, but there is still water remaining there for development. To be honest, we have not seen a lot of demand for the water in that area. We have very few licences there. We did the same process in middle Donnelly. We identified that there was still an amount above and beyond what was licensed at that point available for consumptive use, and we also determined that the allocation statement for the status for Manjimup Brook–Yanmah–Dixvale was correct and that it was fully allocated and it would remain the same.

Hon TIM CLIFFORD: This is probably more for Mr Drew with regard to modelling: when were the last climate projections taken and how far out in regard to how it would impact rainfall and the supply of water across the catchment?

Mr DREW: We have a standardised way of identifying future climate projections on our website, so it is available for everyone. We use the Intergovernmental Panel on Climate Change report No 5 information.¹ We basically picked out the climate projections in that set of modelling. That really worked well in Western Australia, so it has good skill in Western Australia. We have a good set of models from that which help to predict WA well. I think we put our policy out in around 2015—something along those lines. We have used that technique to look into the future for this work. We have done some projections out to 2030 and we have done some projections out to 2050. For both cases, we have considered a dry all the way through to a wet scenario for all and we have given that information to stakeholders to indicate a level of reliability going forward. As far as the scheme goes, our climate modelling shows that in that median-term period to 2030, there is between an 80 and 97 per cent reliability of being able to abstract the water volume they have proposed. Looking out to 2050, obviously it does get dryer and the range becomes a lot bigger, from quite low at 27 per cent under a dry scenario up to still 97 per cent if it is a wet scenario moving forward. It is important to note that that is just saying yes or no—whether they will get that 9.3 gigalitres. In terms of the actual average, if you take the water out to 2050, they will still be able to get an average of six gigalitres out to 2050, so it is still a potential volume that could be economical, subject to how they design the scheme and things like that. We have done the assessment across those two periods to give the scheme the ability to work through the economics.

Hon TIM CLIFFORD: Are they taken off the best-case scenario, where it is the wettest, or is that taken off the scenario when it is the driest?

Mr DREW: That is the average, so we provide a range, because we cannot predict the future, but just give a risk assessment. We say that if it is really dry and it keeps going really, really dry, we think you are only going to be able to get that 9.3 gigalitres 27 per cent of the time, and if it is wet, we think you will be able to get it 97 per cent of the time. We think that what will really happen will fall somewhere in that range, and then it becomes a risk decision for people investing in the scheme and things like that. We do not specify exactly how that would work, but we have provided that information.

The CHAIRMAN: Will there be enough water to fill the storage dams?

Mr DREW: Under that scenario, what I was saying there around the future average, we still think the average supply moving out to 2030 will be at its worst 8.7 gigalitres, and that is compared to their proposal, which is supplying 9.3 gigalitres, so very much close to what they are projecting. My understanding is that they have talked with their constituents and said that, over time, we might have to vary the allocations every year, so everyone is aware of that. Going out to the future, as I was saying before, the worst-case scenario under an average, under a dry, is about 6.5 gigalitres, so it is still a substantial amount of water. In that case, you might not be filling the dam all the time but you still have a substantial amount of water and a long period to recover costs, so it becomes a decision for the scheme to make about the viability of the scheme with that information.

Hon TIM CLIFFORD: And there have not been any projections put past 2050, because the viability of the dam is supposed to be—once it is built it will be there for a long period. It is only within the next 30 years that your projections are taken out to. I am guessing that it is looking like things are

¹ Correspondence from the witness clarifying this part of the transcript can be accessed on the committee webpage.

accelerating more than anything else and those impacts are looking to be a lot greater. Has that been taken into that risk assessment?

Mr DREW: For water allocation planning, for our plans, our plans are over a 10-year period in which we have a strong regulatory control, I guess you could say. We only look out typically in that 10 or 15-year period. We have done that to 2050 because we know that we have to think beyond—you cannot build a dam for just 10 years, so you have got to think longer than 2050. If we start going out beyond that, it starts to become very variable and very uncertain, and you could question the value of doing that work.

Hon TIM CLIFFORD: I guess it is telling the people who are drawing on that water downstream. Those scenarios are the things that you try to point out to the community to say that, past 10 years, this is the chances of your licences being reduced by so much. Have you told the community that those sorts of projects are quite possible in the worst-case scenario?

Mr DREW: Through our discussions with stakeholders, we have presented this information about climate. People are aware of the risks over time. They have seen it in their dams over a long period of decline. In our planning, we cannot solve every problem for the future right now; we have to take it in steps. We have plans to review the current allocation plan and we will factor in climate in that and see how we might approach the future. It is an ongoing process of putting information out there and seeing how it affects water.

Hon COLIN HOLT: As a follow-up to that: obviously, there will be a buffering system in the dam, so the dam capacity is what?

Mr DREW: It is 15 gigalitres.

Hon COLIN HOLT: So in good years it will get topped up and in lower years it gets extracted. You guys regulate the take-out of the Donnelly into the Record Brook dam. From that point on, is that the responsibility of the co-op for how they feed that water out?

The CHAIRMAN: When you respond can you make it oral?

Mr DREW: Yes, yes—sorry!

Hon COLIN HOLT: They have already indicated that there might be a variable release from the Record Brook dam based on how their water buffer system, for want of a better word, is in the dam. That is what they have indicated to their cooperative members; is that correct?

Mr DREW: In my discussions with them, they have indicated that they have put that —

Hon COLIN HOLT: Because that is their responsibility. Yours is about how much you can take out of the Donnelly, in the pump mechanism, up to the Record Brook dam.

Mr DREW: That is right.

[10.40 am]

Mr BROWN: This would be similar to the way Harvey Water, or even the Carnarvon cooperative, would allocate to their members. In really dry years—Harvey Water this year has not allocated 100 per cent of their entitlement to everywhere.

Hon COLIN HOLT: They are long-established mechanisms and I guess they would learn a fair bit from the Tasmanian example as well. So it is a yes?

Mr ROWE: Yes; so our licensing environment would be that if it is to proceed, the Southern Forests Irrigation Co-operative would have a licence from us, and that would be about the abstraction arrangements from the Donnelly, and possibly Record Brook as well. As you say, it is then up to

them to manage their relationship with the membership of the cooperative and to determine how that water is shared among its cooperative members.

Hon COLIN HOLT: And it is your responsibility to make sure that the draw-out of the Donnelly does not have adverse impacts around everything else.

Mr ROWE: That is correct.

Mr BROWN: Adam, do you want to talk about the conditions on how they take early water? That is pretty important. The water has to be to a certain level. My understanding from the work Ben has done is that the topping up of the over-summer pools, stagnated pools, is very important. The early flows are extremely important. We will have some conditions on the cooperative associated with only taking the flows once they build up; not taking those very early flows so they can replenish the pools, re-oxygenate the pools and start linking the pools.

Hon COLIN HOLT: Do you have some priorities in that anyway?

Mr BROWN: Yes, so they will be a condition under their licence.

The CHAIRMAN: Did you want to expand on that?

Mr MASKEW: That is correct; subject to the formal assessment by the EPA, our preliminary work has identified that there will be a minimum flow that needs to be bypassed at that take point on the Donnelly River. It is looking to be around the 20 megalitres per day volume. That will then scale-up non-linearly to the maximum pump rate that they have indicated would be 200 megalitres a day. We will also have some controls on the Record Brook dam site as well, because that is a tributary that we need to have consideration for. We are looking at the amount of water that would be bypassed through that dam to maintain the environmental factors below the dam before the confluence with the Donnelly River.

Hon Dr STEVE THOMAS: Just along the same lines, then, I would appreciate the input. I call that system of allocation the Murray–Darling system, and if you ever want a nightmare, go and have a play with that one—over-allocation followed by manipulation, but anyway. We do not have that particular level of manipulation here. This is going to be a variable-take process, and this follows on from Hon Tim Clifford's question. Can you give an indication of what proportion of the catchment is variable take versus consistent take? You may not have that information; you might have to follow up with it. I am interested in the hierarchy. If this dam is at the end of the hierarchy, as it were, it fills up when it can. On a hierarchy competition basis, is this the last cab off the rank, so that in a dry year it is the least likely to be taking harvest, or is that then in direct competition with others? Do we have a figure of what amount of variable take is taken versus dam walls on the system as a set take?

Mr BROWN: In a normal year, or a low year, the dams on the Manjimup Brook and the middle Donnelly will fill up in the early part of the season until they are full and they overflow to one another. But the nature of the way the system works, what we are calling A-class entitlements—the high reliability licences—would naturally take the water first above the dam and then that would overflow out of those catchments. If the flow rates at the take point for the cooperative's dam meets the 20 megalitres per day, then they can take theirs. You would say that in practical terms they are second, and the variable take only comes in when we have well above a normal year's take—so the actual farmers above the dam for their variable take. We have rules about when that is—when we have good indications above our base year and then when they can take, so they are kind of the third group of take.

Hon Dr STEVE THOMAS: I am interpreting that to say that the set take obviously goes first, just by the nature of its having highest priority. The variable take on this particular proposal is kind of the

last, apart from the odd farmer who is downstream from there—there are not many; it is mostly state forest—who really is the last cab off the rank. They are harvesting the bits that the other people were not able to. I think that is important, if that is what you said.

Mr MASKEW: That is correct.

Mr ROWE: Can I just check with my colleagues—would it be also helpful to clarify the balance that is coming from the forested areas and underdeveloped versus the developed areas?

The CHAIRMAN: I think we would like that, because the petition raises that as an issue—that it has not been proven that water flows will come from the forest rather than from cleared agriculture land above the Donnelly River weir, and when water restrictions impede opportunities to develop those properties. We did want you to respond on that.

Mr DREW: I guess the modelling we have done shows that there is plenty of water provided, purely from what is coming off those forested areas above the take point to supply to scheme. There is no impact on anything that is going on in Manjimup Brook, so their licences remain unaffected, and the volume of water that is coming off those largest forested areas in the upper Donnelly and middle Donnelly area—mainly the upper Donnelly, really—is plenty of water to supply the scheme. That is the simple story. I guess some of the perceptions around Manjimup Brook are that they often do see significant volumes of water flowing past their properties. We have had some discussions with them around their level of underuse. When you are not using water, what happens when water falls in that area is that it just keeps skipping over, and you will see large volumes of water flowing through the system because it is not being used from the dams. That is giving a perception that that is providing all the water for the scheme downstream, when in reality they are not utilising as much of the water as they could with the reliabilities we have talked about. That is something Adam's team have been working on. Do you want to comment more on that?

Mr ROWE: Maybe before we do, if you would not mind me extrapolating a little, Ben. Just to be clear then: even if people were fully using the water that they were entitled to use, which they are not currently in the Manjimup Brook area, that would not impact on the scheme because the source of the water for the southern forests irrigation scheme is predominantly from another catchment—it is not in the clear catchment in the Manjimup Brook area. Is that clear? I do appreciate that this is quite nuanced and fairly complicated.

The CHAIRMAN: Yes, you will be able to supplement your answers in any event after the hearing.

Hon TIM CLIFFORD: Just going back to the rejection process, do you have figures on how many water licences you have rejected over the years?

Mr ROWE: In this area or across the state?

Hon TIM CLIFFORD: Just in relation to the areas we have discussed today.

Mr ROWE: I am not sure whether we would have that information today. Adam, do you happen to know that off the top of your head?

Mr MASKEW: No, I do not know that off the top of my head. I will say that the number is quite low. Typically what we see is that once we have published allocation limits and people see that licences have been allocated up to that limit, they do not tend to apply for licences. It is relatively orderly in that way.

The CHAIRMAN: The information Hon Tim Clifford is seeking can be taken on notice, and that will be question on notice 2.

Mr ROWE: Can I just be clear that you are seeking some clarity on the time: is that for all time, in the past 10 years, or over what period do you want us to focus?

Hon TIM CLIFFORD: I guess since the beginning of the scheme.

Mr ROWE: So, say, in the past three years, or something like that, since the scheme was first contemplated?

Hon TIM CLIFFORD: Yes.

Mr BROWN: And for the Donnelly, or both the Donnelly and Warren?

Hon TIM CLIFFORD: Both.

Hon COLIN HOLT: You mentioned the ability for those upstream to take spring rights. You obviously must check to ensure that it is a spring and not some other way of collecting the water. Since you have been doing that investigation, have you ever gone the other way and say that that is not a spring-right dam and now needs to be licensed?

Mr BROWN: Yes.

Hon COLIN HOLT: What was the reaction to that?

Mr BROWN: I think you can imagine when you are in a place in the 1970s or 1980s when there is a lot of water around, the licensing was such that there was lots of water, so you could have another dam. Everyone now is checking all of the dams to make sure that they are licensed under the allocation limit, or they can be exempt from the licensing, meaning a spring dam. We are checking a lot of dams. For some of them that are licensed, we have determined their spring, and some of them that are spring, we have licensed. Generally, because they are long-term historical dams, we have put them into the licence category; therefore, we are slightly overallocated at the moment.

[10.50 am]

Hon COLIN HOLT: There has been a real focus in Manjimup in the last few years. You have probably done a bit more work and have discovered more of these things. Do you think those changes have added to some of the confusion and some of the angst around the whole thing that is going on around Manji?

Mr MASKEW: Yes, certainly, as the system has become more fully allocated we have gone back and tested what we understand to be an exemption from the act—what you call the spring rights dams—it is actually an exemption from licensing. As we have applied that further understanding, it has been a difficult conversation.

Hon COLIN HOLT: I guess it comes back to the whole communication and how you have communicated those changes in the midst of the southern forests irrigation scheme. People want more water upstream, downstream, the whole lot—underallocations, reducing allocations is a big challenge for you. We are at the end point of it because we get the petitions from the people who are unhappy.

The CHAIRMAN: Can you elaborate on the principle of spring rights, for those of us who do not make it out of the city limits often?

Mr ROWE: As Adam was saying, it is a longstanding provision in our legislation that spring rights are effectively exempted from licensing. It is an artefact of our legislation.

The CHAIRMAN: So is it by virtue of there being a gap in the legislation? It does not create a positive right, so there is no requirement, or is there actually a “spring right”? Is there such a thing as a right to access spring water without licence on your land?

Mr MASKEW: There is a specific point in the legislation that provides an exemption from licensing for these spring rights dams. That is typically where a watercourse starts—it is to do with the headwaters of the streams and tributaries on those properties and it is to do with the expression of

groundwater. It is to do with how the rainfall falls on the ground, which we do not licence, and as it collects. If that is on a property, that will have an exemption. Once it collects and flows off that property, that is where our licensing regime fits in under the legislation.

Mr BROWN: So your total catchment above your spring dam is on your property. The total catchment is on your property and water comes to the surface on your property. Those two things have to match.

The CHAIRMAN: Surely people are putting in new dams to catch this water. It does affect the flows into the rivers over time. You could effectively stop the flow into the river if you put in enough dams to catch your spring rights flow.

Mr MASKEW: In my experience, there are very few properties that can get exemptions and the overall impact on the water availability downstream is relatively low. Yes, it can impact on reliability of supply if they are going in now. We have had discussions with many users in our surface water proclaimed areas about whether we should regulate them and how we could regulate them.

Hon Dr STEVE THOMAS: If I could help, Chair, there are not too many places where the spring head of a creek or river lends itself to the construction of a dam.

Mr ROWE: That is right.

The CHAIRMAN: I have just a couple of other questions that arise specifically from the petition. One of those is the petition's concerns about access and equity and the claim that there is not an equitable distribution of water allocations. First, how are water allocations calculated? You might have covered some of this. What is the correct answer to that? I am leading into some other questions.

Mr ROWE: As I said before, when it comes to determining who gets access to water and how much, in areas of high competition, where there are a lot of people who want water in the state, whether it be ground or surface water, we do a water allocation plan. There is a science that underpins those plans. We take into account how we think the system is working, what the future scenario might be under various climate scenarios, the environmental values and the social values that need to be protected. We arrive at what is known as an allocation limit and then we license to that number. There may be subareas. If you can imagine a geographic area, there may be either groundwater subareas or surface water subareas, and there may be limits that apply to each of those as well. The agency sets the limits, and then we license to the allocation limit. The licence process is such that it is on a first in, first served basis, so if people need water for economic purposes, they apply to us. We determine whether water is available and under what conditions they might be able to abstract the water and issue the licence, and then we will review it every 10 years. There may be conditions associated with them having to report their usage to us, and most often that is the case. That is the broad process that we use. I guess the equity questions are not something that we grapple with through that process. It is a very public process, so people are given the opportunity to provide comment on the draft plans and they can see our rationale and our thinking. When the petitioners are raising issues around equity, it is not clear to me whether they are concerned about our process in the way that we develop a plan and issue licenses, or whether there is some bigger questions at stake about —

The CHAIRMAN: I think their point might be that some growers miss out on water and other growers get water, and they want equity.

Hon COLIN HOLT: First in, first served.

Mr ROWE: I guess the process was, as I understand it, an open expression of interest process. People were given the opportunity to bid into that scheme and say whether they wanted to participate in

it. I am not saying that that is a way of addressing equity, but there was a level of transparency around that process.

The CHAIRMAN: That is guided by the act itself; is that right?

Mr ROWE: The establishment of the southern forests irrigation scheme, the cooperative and how it operates, and the process by which the expression of interest was operated, is not something that is authorised under the Rights in Water and Irrigation Act. What is authorised under the Rights in Water and Irrigation Act is the process by which they can access the water from the environment, effectively, and how much they can take and under what conditions. A lot of this work was modelled on a process that has been undertaken in Tasmania, where similar schemes have operated, where governments—both state and commonwealth—have worked with local communities to go through a process of making water available through these sorts of schemes. Similarly, there was an expression of interest process, I understand, in those exercises. The southern forests process has been modelled on other exercises in other jurisdictions, giving horticulturalists the opportunity to express an interest in being part of a scheme. The scheme is then proved up. It is authorised and approved. People then buy into the scheme. The scheme is constructed. It then operates within the constraints of the cooperative and how it wants to operate with its membership, and trading is allowed to occur within that environment. Then the regulator—in this case, us—would be concerned about how the licence is operating in making sure that the cooperative is adhering to the condition of their water licence and any other environmental approvals they may get.

Hon Dr STEVE THOMAS: Surely there is no one scheme that would provide water for every landowner in that region or catchment. The proposal, therefore, in terms of equity—if it is not every person serviced, then nothing should occur—is obviously not one that we or the department should consider. Surely there is no option to provide every person in that catchment with additional water supply—no practical option I would have thought—unless the department is aware of one. A massive dam on the Donnelly would be quite controversial and brave.

Mr ROWE: Yes, and I think it would come to a question of scale and cost, presumably, bearing in mind that there was, as I understand, an open process and the people who were interested signalled their commitment to buy into a scheme, which was then modelled on what people told the scheme proponents they wanted, as far as I could tell. If everybody put up their hand across the entire catchment and said that they wanted to be part of it, I am not sure whether the system would be able to provide the amount of water that they were necessarily interested in. But as it stands, the volume of water that has been requested through that process is probably able to be delivered through this exercise.

Hon Dr STEVE THOMAS: I have always taken the position that just because I do not particularly get a benefit from a scheme, that does not mean that the scheme should not give benefits to somebody else. I presume that the department would work along the same lines. Would you just assess it on what is presented?

[11.00 am]

Mr ROWE: When it comes to a water licence, that is right, because it is a first in, first served proposition, but it is important to remember that the Rights in Water and Irrigation Act is as much about protecting the rights of users as it is about protecting the environment. We have a real obligation, when we are assessing licences, to think about the impact of that proposed take on other water users in the environment, so there is an obligation on us to do that. To that extent, we need to make sure that however the water is proposed to be abstracted, whether it is ground or surface water, it is not going to be unduly impacting on existing water users.

Hon Dr STEVE THOMAS: But that surely does not mean that every farmer in a district has to be provided water equally though.

Mr ROWE: No, I think they are two different things. I am just making the point that there is an obligation on us to think about impacts on other users when we are looking at that licence.

Hon COLIN HOLT: You are not the only agency playing in this space; DPIRD has some responsibility. As the Standing Committee on Environment and Public Affairs, we deal with the petitions. The petition states —

We the undersigned, request that the proposed Southern Forest Irrigation Scheme be stopped. The scheme is economically unviable, environmentally destructive, and it is inequitable with regard to water allocation for the following reasons ...

I am sure you have read it. That signals to me that there is a whole lot of stuff going on in Manjimup and the surrounds around that is driving the mode of language and the whole opposition to the scheme. That is a bit of a prelude to my questions. Do you think the extension process implemented by yourselves and DPIRD has been adequate? Do you think you should do more to address those specific concerns raised in the petition or what it is causing in terms of community angst?

Mr ROWE: As I said before, I think we did a lot of work in late 2018 to engage with people on the ground in that area. Over 100 people came to our workshops. They were small, targeted workshops—about nine or thereabouts.

Mr MASKEW: Up to 20.

Mr ROWE: Up to 20 workshops—there you go.

Mr MASKEW: Twenty people.

Mr ROWE: Since that time, we have also done 50 individual site visits, so we are doing our best to engage with people when they come to us, and we would certainly continue to do that. We are engaging obviously through our own Warren Donnelly Water Advisory Committee. We are working very closely with the shire. As I said, later this week Paul and Adam will visit stakeholders, including a number of people who are aggrieved by this scheme. We put out a newsletter through the Warren Donnelly Water Advisory Committee periodically around what is happening in this space. I guess the argument could be that we could always do more. I am reasonably happy that we are doing what we need to in response to the concerns that have been raised. As you mentioned, the Department of Primary Industries and Regional Development is the lead agency for this project now. They have a role to play in communicating the intent of the scheme as well. The Department of Water and Environmental Regulation remains very open to doing more engagement as necessary with the community, bearing in mind that our role will be to explain the process we have done and the process that will come into the future as the regulator. We are not there as the advocate for this scheme. The lead agency, with responsibility to manage that exercise, is the Department of Primary Industries and Regional Development.

Hon COLIN HOLT: Sure, I appreciate that, too, but you have to understand that there is a whole heap of other stuff happening there, including some of the roles you guys play.

Mr ROWE: Yes, sure.

The CHAIRMAN: All right, gentlemen, thank you for coming in today. We do not have any further questions for you. We appreciate the candour with which you have responded today. A transcript of this hearing will be forwarded to you for correction. If you believe that any corrections should be made because of typographical or transcription errors, please indicate these corrections on the transcript. Errors of fact or substance must be corrected in a formal letter to the committee. When

you receive your transcript of evidence, the committee will also advise you when to provide your answers to questions taken on notice. If you wish to provide additional information or elaborate on particular points, you may provide supplementary evidence to the committee for its consideration when you return your corrected transcript of evidence and your response to our questions on notice. Once again, thank you for your time today. We appreciate you coming in.

Hearing concluded at 11.04 am
