

FLOODPLAIN HARVESTING REGULATION 2020 INQUIRY

SUPPLEMENTARY QUESTIONS

1. If the Regulation was needed to put in place the embargo, now that the embargo has now lapsed, should the Regulation just be repealed?

ANSWER:

The regulation is an important transitional arrangement to formally bring floodplain harvesting into the *Water Management Act 2000* framework. The need for this regulation will remain until licences are issued in accordance with the NSW Floodplain Harvesting Policy.

2. Since 2000, what Federal funding, or MDBA funding, has been provided to NSW Government to advance the cause of the MDBP under the following categories:

- a. Floodplain Harvesting - measurement, assessment, calculation, licencing, approvals, etc
- b. Metering - development, installations, telemetry systems, purchase, supply, etc
- c. Shepherding, unimplemented policy measures, pre-requisite policy measures, protection of environmental water, enhanced environmental water delivery
- d. Other water efficiency funds that have been invested
- e. Operations costs for NSW agencies involved in supporting the MDBP

ANSWER:

Funding received from the MDBA or Commonwealth Government does not relate to either the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such falls outside the Inquiry's terms of reference.

3. Please provide the above details in a format that separates each year, dollar figure, valley, program, project, public/private and whether or not those funds were invested in full/part/not yet.

ANSWER:

See answer Question 2 above.

4. Provide a list of floodplain harvesting works (separating on-farm storages and other works)*, per valley/catchment (as per WSP's), since the year 2000, that have been

- a. Approved, and the storage capacity of the assets
- b. Pending approval, and the volume of FPH water to be captured by these works
- c. Currently under consideration and the volume of FPH water to be captured by these works,
- d. Refused, and the volume of FPH water that would have been captured by these works if they had gone ahead
- e. Found to be in breach of licencing and/or approval and the nature of any such fines or "make good" orders that have been issued in conjunction with these instances

ANSWER:

The *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* does not relate to storage volumes of works or prescribe any conditions to works, and as such the question falls outside the Inquiry's terms of reference.

For the Committee's information, the Regulation exempts water users from holding a water access licence if they are using works that were constructed or subject to a pending application as at 3 July 2008. If works do not meet that criteria the exemption does not apply.

5. What is the volumes of potential floodplain harvesting take at the level of development in: 1993/94, 1999/2000, 3 July 2008 and now.

ANSWER:

This information does not relate to either the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such falls outside the Inquiry's terms of reference. However, for the Committee's information, improved information will be released as part of the Floodplain Harvesting Action Plan.

6. What is the on-farm storage capacity at 1993/94, 1999/2000, 3 July 2008 and now.

ANSWER:

See answer to Question 5.

7. Provide a summary sheet listing details of the volumes of water that are currently approved to be taken by FPH in each valley/catchment (as per WSP's)

ANSWER:

Model reports that explain the estimates and the data they rely on are being prepared and independently peer reviewed. These reports will be published in the second half of 2020. Further information about these model revisions is available at https://www.industry.nsw.gov.au/__data/assets/pdf_file/0003/179931/Floodplain-harvesting-water-modelling-overview.PDF

8. Provide explanation and detail via which FPH "take" of water is tested, measured and metered.

ANSWER:

This information does not relate to either the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such falls outside the Inquiry's terms of reference. However, for the Committee's information, this information will be released as part of the Floodplain Harvesting Measurement Policy.

9. The definition of:

- f. passive harvesting
- g. active harvesting
- h. rainfall harvesting
- i. runoff harvesting

ANSWER:

'Passive' and 'active' floodplain harvesting were terms used in the temporary floodplain harvesting restrictions applied on 7 February 2020. Those terms are defined in the temporary restriction order and fact sheet that can be found at <https://www.watarnsw.com.au/about/newsroom/2020/temporary-pump-restriction-on-floodplain-harvesting>

'Rainfall' or 'runoff' harvesting are terms used to describe the taking of overland flows on their way to a river or creek. Those terms are not defined in the *Water Management Act 2000*. Rainfall or runoff harvesting is a component of floodplain harvesting - refer to the NSW Floodplain Harvesting Policy.

10. How much water was extracted in February & March 2020, by valley by:

- j. passive harvesting

- k. active harvesting
- l. rainfall harvesting
- m. runoff harvesting

ANSWER:

Volumetric estimates of the volume held in on farm storages at this time are published at <https://www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/drought-update/managing-drought-recovery/north-west-flows-in-early-2020>

11. How much held environmental water flowed into NSW, by valley, from Queensland for each year since 2012?

ANSWER:

This information does not relate to either the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such falls outside the Inquiry's terms of reference. However, for the Committee's information, the Commonwealth Environmental Water Holder does report annual usage of their portfolio (including Queensland holdings) under Matter 9.3 which is published annually by the Murray Darling Basin Authority.

****Other works include levees, channels, pumps, etc.,***

Could you please provide:

12. Reports or calculations relating to the estimation of water extracted during February and March 2020, including:

- a. Technical memo (including drafts)
- b. Technical brief (including drafts)
- c. NRAR investigations report

ANSWER:

The Department published a comprehensive "Assessment of take and protection during first flush flows in the Northern Basin" on 23 July 2020.

NRAR did not estimate or calculate water take for this event. As the investigations are ongoing no report is available at this time; a report will be publicly released once the investigations are finalised.

13. A step-by-step explanation of the method to estimate the volume of water extracted during February and March 2020.

ANSWER:

The Department published a comprehensive “Assessment of take and protection during first flush flows in the Northern Basin” on 23 July 2020.

14. The total storage capacity of private storages by valley in the NSW northern basin.

ANSWER:

Floodplain / Valley	Number of storages	Estimated capacity (GL)
Border Rivers	132	179
Gwydir	403	553
Namoi	554	312
Macquarie	213	167
Barwon-Darling	117	239

Notes:

- Current as at 19/2/20
- Reflects storages on designated floodplains in the above valleys
- Excludes stock and domestic only dams
- In addition to floodplain harvesting, these on-farm storages are also commonly used to store:
 - water taken under unregulated river licences, regulated river licences and ground water licences
 - used irrigation water

15. The daily pumping capacity by valley in the NSW northern basin.

ANSWER:

This information does not relate to either the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such falls outside the Inquiry's terms of reference. However, for the Committee's information, daily rates of floodplain harvesting will be released through the delivery of the Floodplain Harvesting Action Plan.

16. Where is floodplain harvesting occurring in the Southern Basin?

ANSWER:

Floodplain harvesting can only occur on designated floodplains. The designated floodplains in the Southern Basin include:

Lachlan

- Lachlan River: Gooloogong to Jemalong Gap
- Lachlan River: Jemalong Gap to Condobolin
- Lachlan River: Hilston

Murray

- Edward and Wakool Rivers (Deniliquin to Moama–Moulamein railway)
- Wakool River (Moama–Moulamein railway to Gee Gee Bridge)
- Edward and Niemur River (Moama–Moulamein railway to Liewah & Mallan)
- Edward and Wakool Rivers (Noorong Road to Wakool-Murray Junction)
- Tuppal and Bullatale Creeks

Murrumbidgee

- Billabong creek
- Murrumbidgee River (Hay to Maude)

17. The number & volume of on-farm storages in northern NSW, by valley, for the following capacities: 0 – 1GL, 1 – 2GL, and in 1GL increments up to the maximum volume, for the following water years:

- a. 1993/1994
- b. 1999/2000
- c. 2007/2008
- d. 2019/2020

ANSWER:

Volumetric estimates of the volume held in on farm storages at this time are published at <https://www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/drought-update/managing-drought-recovery/north-west-flows-in-early-2020>

18. Total amount spent annually on the Healthy Floodplain project since 2000, by activity, including remote sensing.

ANSWER:

Information on the Healthy Floodplains Project Agreement can be found at <https://www.agriculture.gov.au/sites/default/files/documents/nsw-healthy-floodplains-schedule-variation-7.pdf>

19. How much has been paid for each independent review under the Healthy Floodplain project?

ANSWER:

- Licensing process probity review = \$27,719
- Independent review of NSW Floodplain Harvesting Policy implementation = \$152,140
- Independent review of modelling and environmental outcomes reports = \$210,660

20. Regarding remote sensing of on-farm storages, provide a summary of what Lidar data was obtained by area, resolution and date.

ANSWER:

The Department published a comprehensive “Assessment of take and protection during first flush flows in the Northern Basin” on 23 July 2020.

21. What response rate did DPIE receive on the ‘Irrigator behaviour questionnaires and determination of on-farm storage capacity’?

ANSWER:

The Irrigator Behaviour Questionnaires are not related to either the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such fall outside the Inquiry’s terms of reference.

22. Please provide all site inspection reports (or all site inspection reports for properties with on-farm storage capacity over say 1 or 2GL? If they did site inspections for all dams, there should be 1,000 reports.)

ANSWER:

The site inspection reports are not related to either the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such fall outside the Inquiry’s terms of reference.

23. Has NSW been able to verify the potential downstream impacts on matters of national environmental significance? (This is a requirement of Water Resource Plans - see 10.17 of the Basin Plan) It might be good to ask the Commonwealth Environmental Water Holder (Jody Swirepik) to give evidence. CEWH is Australia’s Ramsar administrative authority. See this extract from estimates in APH:

Senator HANSON-YOUNG: Mr Glyde, I don't mean to cut you off. I've got a short amount of time and I understand the process. What I want to know is whether, in doing this in relation to where flood-plain harvesting overlaps with Ramsar sites, there is any requirement under the EPBC Act. This is to whoever is best placed to answer.

Ms Swirepik: I would like to invite Mark Taylor, the Ramsar administrative authority for Australia, to answer that question.

Mr M Taylor: The Commonwealth Environmental Water Holder has made a number of submissions into state planning processes recently, including proposals around flood-plain harvesting. In that process we did highlight our concerns in relation to potential impacts of flood-plain harvesting policy and actions on Ramsar sites, including the ones that you mentioned—the Gwydir and the Macquarie. It's a matter for our colleagues in the environment department around the management of EPBC to consider the interaction between what is a state policy and the EPBC Act, but nevertheless our recommendations have been that the states should certainly consider undertaking some form of environmental impact assessment as part of its process of developing this fairly significant policy. That's our broad position.

Senator HANSON-YOUNG: You don't feel like you've got enough information at this point to satisfy knowledge as to what those impacts would be?

Mr M Taylor: That's correct.

Senator HANSON-YOUNG: Do you think the federal environment department has a satisfactory level of information?

Mr M Taylor: I couldn't answer on behalf of my colleagues in the EPBC area, but the area is complex in its nature. It goes to the extent of storages which are on farms; that's not fully known. The extent of the impact of flood-plain harvesting on an average basis isn't fully known either, so it's difficult for us to say at this stage. I'd say we would encourage as much possible assessment of the impacts to be provided, and that should support the state's action here and support any further consideration of EPBC.

Senator HANSON-YOUNG: Does anyone from government have information as to whether that's going to be a requirement? Has there been a consideration of the impacts and whether these actions—harvesting of floodwater—would trigger consideration under the EPBC Act?

Mr Thompson: No, not any further consideration that I'm aware of, apart from the fact that the minister has committed funding and there has been previous funding committed to support New South Wales as it develops its flood-plain harvesting policy, and that would have to be on the condition that it's consistent with meeting the requirements of the Basin Plan.

Mr M Taylor: If I could add, it's important to know, as I'm sure you do know, the EPBC Act requires proponents to self-assess. I know there have been

discussions between the department and state officials, but it's ultimately a matter for the state.

Senator HANSON-YOUNG: Yes. Have you raised the concerns that you have in any formal way with the department?

Mr M Taylor: Which department, Senator, sorry?

Senator HANSON-YOUNG: The environment department.

Mr Thompson: We're Agriculture—

Senator HANSON-YOUNG: I guess I'm pointing at the minister, as a representative of the government.

Mr M Taylor: We've had internal discussions and we've let our colleagues know. It's a matter for those officials managing the EPBC Act, and they're aware of it.

Senator HANSON-YOUNG: You haven't got any letters or communication that you could table for me?

Mr M Taylor: The best place is probably to look at our submission to the state. We're happy to direct you to that. That outlines the concerns, and it's a public matter.

Senator HANSON-YOUNG: Are you aware that the independent review into flood-plain harvesting in New South Wales said: ... the models for the floodplain flows and the determination of floodplain harvesting volumes do not adequately represent return flows to the rivers and cannot be used to specifically assess the impact of floodplain harvesting per se on specific downstream flows. That says to me that there is just not enough information at all, even held within New South Wales.

Mr M Taylor: We'd agree. We are concerned.

ANSWER:

This information is not related to either the impact or the implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such falls outside the Inquiry's terms of reference. However, for the Committee's information, this information will be released as part of implementing the Floodplain Harvesting Action Plan.

24. What are the different types of structures/works that can be considered 'eligible works' under the NSW Floodplain Harvesting Policy?

ANSWER:

Lift pumps, regulators, channels and pipes that intercept overland flow as well as on-farm storages.

25. Are there any 'eligible works' that will not be required to be approved before being licenced to undertake floodplain harvesting?

a. If yes, what type of works are these?

b. How many of these works exist in the five Northern Basin valleys in NSW?

ANSWER:

Any works that have an existing approval and are being operated within the terms of that approval will not require further authorisation. Almost all eligible pumps, pipes and regulators used for floodplain harvesting will require approval as water supply works. It is not possible to quantify the number of eligible works that will not require approval to operate as water supply work approvals. For clarity, unlicensed flood works including levees, storages, roads etc will not be licensed as part of floodplain harvesting.

26. Does the exemption regulation exempt any 'eligible works' without current approvals from having to obtain approvals in order to undertake floodplain harvesting?

a. If yes, what type of works are these?

b. How many of these types of works are there in each of the five Northern Basin valleys in NSW.

ANSWER:

Yes, there is a small subset of eligible works (exact numbers not available) where this regulation will provide a temporary exemption from requiring an approval. The vast majority of eligible works are either required to have a flood work approval and/or are exempt from requiring approval already under clause 37 of the *Water Management (General) Regulation 2018*.

Regarding the comments in the hearing by Mr Connor:

"What we are trying to do with the licensing process is capture that water that is used for irrigation and stored for later irrigation so water in the big storage dams, in effect. The water that is out there on the floodplains does lots of other beneficial things. It enters wetlands, it recharges groundwater, it sits on pasture land and grows crop for cattle and sheep, it is used for dry land cropping and all sorts of other things. There is a lot of water that goes out to the flood plain that does a lot of good things that will not ever make its way back to a river because it is supporting other processes."

"What we are trying to do in the floodplain harvesting licence is capture that relatively proportion of water that irrigators take from the flood plain and store in large dams for later use for irrigation"

27. What is the definition of a “big storage dam” as it relates to the NSW Floodplain Harvesting Policy?

- a. Please specify the typical volumetric capacity of a ‘big storage dam’?
- b. Please specify the number of ‘big storage dams’ in each of the five Northern Basin valleys in NSW?
- c. Of the 1450 GL of ‘on-farm storage’ in the northern basin of New South Wales referred to by the Minister in the hearings, what portion of this capacity is within ‘big storage dams’?

ANSWER:

- a. ‘Big storage dam’ in this context is any on-farm storage that holds floodplain water outside a floodplain harvesting measurement period - refer to Floodplain Harvesting Measurement Policy (due to be published in July 2020). Under this Policy, once the necessary legislation is in place, it will be an offence for any landholder:
 - to commence filling an on-farm storage or directly irrigate using floodplain harvested water without first nominating the start of a floodplain harvesting measurement period; and,
 - to end a measurement period before all water temporarily stored on farm is transferred to a measured on-farm storage.Licensing and measuring floodplain harvesting based on the volumes transferred to on-farm storage underpins all data collection, modelling and measurement consultation undertaken through the NSW Healthy Floodplains Project over the past 7 years. The QLD Government is adopting the same approach as NSW. Further information in relation to floodplain harvesting measurement is available at <https://www.industry.nsw.gov.au/water/plans-programs/healthy-floodplains-project/improvement-program-for-floodplain-harvesting-measurement-and-compliance>
- b. Please see answer to Question 14.
- c. Please see answer to Question 14.

28. Is it the position of the NSW Government that floodwaters that are diverted onto a property or with-held on a property but not stored for later irrigation is not ‘Floodplain Harvesting’ as defined under the NSW Government’s Floodplain Harvesting Policy?

ANSWER:

No. Under the proposed Floodplain Harvesting Measurement Policy (due to be published in July 2020), once the necessary legislation is in place it will be an offence for any landholder:

- to commence filling an on-farm storage or directly irrigate using floodplain harvested water without first nominating the start of a floodplain harvesting measurement period; and,
- to end a measurement period before all water temporarily stored on farm is transferred to a measured on-farm storage.

Regarding the comments in the hearing by Mr Connor:

“Again, it goes back to what is take and what are we trying to regulate under our legal limits that have been set up under New South Wales law and under the Commonwealth law, under the basin plan. It is not water that is held back behind an embankment. Those broader landscape changes are things that are more loosely termed “interception activities” under the basin plan.”

29. Given the definition of floodplain harvesting under the Government’s NSW Floodplain Harvesting Policy includes, “impoundment of water flowing across floodplains” (p3), how is water being held back behind an embankment not floodplain harvesting subject to measurement and licencing?

- a. Is an ‘embankment’ an eligible works under the Government’s ‘NSW Floodplain Harvesting Policy’?
- b. If these embankments are not able to be assessed as a Floodplain Harvesting Works, what approvals do they require?
- c. Has any analysis on the volume of water capable of being held back behind embankments been conducted in the five Northern Basin valleys in NSW?
- d. If yes, what is the assessed volume of water that can be held back behind these structures?
- e. Please list all of the types of “interception activities” that are being conducted on land within the five Northern Basin valleys in NSW.
- f. Has any analysis on the volume of water capable of being held back through ‘interception activities’ been conducted in the five Northern Basin valleys in NSW?
- g. Please explain what types of works, other than ‘embankments’ may be utilised in “interception activities” other than embankments?
- h. What type of water is with-held through interception activities that is outside the definition of floodplain harvesting.
- i. Will any water held-back through “interception activities” be required to be measured and licensed under the Floodplain Harvesting Policy, if any?
- j. Have these interception activities been considered under the risk assessments for Water Resource Plans under the Basin Plan? If not, why not?

ANSWER:

Water impounded by embankments that is transferred to on-farm storage will be licensed and measured as floodplain harvesting.

- a. An 'embankment' is an eligible work under the Government's 'NSW Floodplain Harvesting Policy' if it meets the criteria listed in the NSW Floodplain Harvesting Policy but the embankment itself will not require a water supply work approval.
- b. Embankments not able to be assessed as a Floodplain Harvesting Work require a flood work approval.
- c. Analysis on the volume of water capable of being held back behind embankments in the five Northern Basin valleys in NSW has been included as part of floodplain harvesting where this water is harvested into on-farm storages. No analysis has been done outside these circumstances.
- d. N/A
- e. The Commonwealth *Water Act 2007* defines an interception activity as 'the interception of surface water or ground water that would otherwise flow, directly or indirectly, into a watercourse, lake, wetland, aquifer, dam or reservoir that is a Basin water resource' This very broad definition could encompass roads and tracks or erosion mitigation measure for example. The interception activities specified in the Basin Plan for surface water resources are:
 - Floodplain harvesting
 - Plantation forestry
 - Run off dams (including basic rights).

NSW did not identify any additional interceptions that represent a significant risk to water resources during the development of the Basin Plan water resource plans.

- f. The estimates of the volume associated with the surface water interception activities specified in the Basin Plan are:

	Floodplain harvesting (GL)	Plantation Forestry (GL)	Runoff Dams (GL)
Border Rivers	43.6	0	95
Gwydir	143.9	1	124
Namoi	14	5	160
Macquarie-Castlereagh	28.2	44	266
Barwon-Darling	14.3	0	Not provided

Notes:

- Floodplain harvesting estimates are sourced from the baseline diversion limit estimates that were provided as part of the NSW water resource plans.
 - The floodplain harvesting estimate for the Namoi Valley is from Schedule 3 of the Basin Plan
 - Plantation forestry estimates are from Schedule 3 of the Basin Plan
 - Run off dam estimates are from Schedule 3 of the Basin Plan
- g. Types of works, other than 'embankments', that are included as "interception activities" are farm dams and other on-farm structures such as erosion and salinity mitigation measures, roads etc. that will intercept or divert the flow path of water.
- h. What type of water is with-held through interception activities that is outside the definition of floodplain harvesting is water associated with the activities identified in response to e and g:
- Plantation forestry
 - Farm dams
 - Erosion and salinity mitigation measures
 - Roads
- i. No.
- j. The interception activities specified in the Basin Plan have been considered under the risk assessments for Water Resource Plans. NSW did not identify any additional interceptions that represent a significant risk to water resources during the development of the Basin Plan water resource plans.

30. What is the definition of an 'eligible floodplain storage' as it relates to the NSW Floodplain Harvesting Policy? (Note: this term was included in emails obtained through the SO52 Call for Papers but is not included in the NSW Floodplain Harvesting Policy).

ANSWER:

An eligible floodplain storage is any storage that meets the eligibility criteria specified by the 2018 NSW Floodplain Harvesting Policy. The Policy states that works considered eligible are works capable of floodplain harvesting that, on or before 3 July 2008, were:

1. constructed on a floodplain in accordance with an approval granted pursuant to Part 2 or Part 8 of the *Water Act 1912* or the *Water Management Act 2000*,
2. subject to a pending application for an approval to construct the work on a floodplain under Part 2 or Part 8 of the *Water Act 1912* or *Water Management Act 2000*,

3. constructed on a floodplain and for which it can be established, to the satisfaction of the Minister for Water, that the department did not require an approval under Part 2 or Part 8 of the *Water Act 1912*. Evidence that the department did not require an approval for the works in question is required.

31. What are the different types of private storages (eg., farm dams, run-off dams, big dam storages, floodplain storages etc) that could be deemed eligible works under the NSW Floodplain Harvesting Policy and what is the definition of each?

- a. Please specify the typical volumetric capacity of each storage type
- b. Please specify the number of each storage or works type in each of the five Northern basin valleys

ANSWER:

This information is not related to the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such falls outside the Inquiry's terms of reference. However, for the Committee's information, this information will be released as part of the Floodplain Harvesting Measurement Policy.

32. Please provide a copy of the shape file/s that depicts known floodplain harvesting storages?

ANSWER:

This information does not relate to either the impact or implementation of the *Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020* and as such falls outside the Inquiry's terms of reference.

33. Please provide the digital elevation model/s derived from LiDAR developed under the Healthy floodplains project.

ANSWER:

Please see answer to Question 32.

34. Please provide the capacity curves for the on-farm storages identified under the Healthy floodplains project.

ANSWER:

Please see answer to Question 32.

35. Is the fact sheet - 'Healthy Floodplains Policy: Floodplain harvesting FAQs' dated June 2017 and found at http://www.water.nsw.gov.au/__data/assets/pdf_file/0003/711138/FAQs-FPH_July2017.pdf current?

- a. Have any changes been made in terms of how rainfall runoff will be treated under the Healthy Floodplains Policy since this document was released?
- b. When will the rainfall runoff exemption regulation be made?

ANSWER:

Yes.

In response to peer reviews and stakeholder consultation, it is proposed that rainfall runoff harvested from irrigation areas when there is no other overland flow being taken will not be part of floodplain harvesting. This will require regulatory change. An exposure draft of these changes will be provided to stakeholders as part of planned consultation during September 2020.

36. For each of the five valleys in NSW in the Northern Basin, what is the estimated rainfall run-off allowance?

ANSWER:

There is and will be no rainfall runoff allowance.

37. For work that is currently being undertaken to model and measure floodplain harvesting volumes in the Northern Basin, what time period is being considered as part of this modelling?

ANSWER:

Modelling assessments use the full range of climatic records i.e. 1895 to current. The impacts of various levels of development are modelled using this climatic record including 1993/94, 1999/00, 2008 and current.

38. How is 'temporary storage' going to be considered under the floodplain harvesting policy and licencing scheme?

- a. Will 'temporary storage' be licenced?
- b. Please specify the long-term average volume of 'temporary storages' in each of the five Northern basin valleys

ANSWER:

The Floodplain Harvesting Measurement Policy, due to be published during July 2020, will define the different types of storages and their measurement requirements.

39. What is the definition of 'passive take' (as envisaged in Section 324 embargoes for floodplain harvesting issued in February 2020)

ANSWER:

'Passive' and 'active' floodplain harvesting were terms used in the temporary floodplain harvesting restrictions applied on 7 February 2020. They are defined in the temporary restriction order and fact sheet that can be found at <https://www.watarnsw.com.au/about/newsroom/2020/temporary-pump-restriction-on-floodplain-harvesting>

40. How does 'passive take' relate to interception activities?

ANSWER:

'Passive' and 'active' floodplain harvesting were terms used in the temporary floodplain harvesting restrictions applied on 7 February 2020. All floodplain harvesting is considered an 'interception activity' under the Basin Plan.

41. How does 'passive take' relate to rainfall run-off?

ANSWER:

'Passive' and 'active' floodplain harvesting were terms used in the temporary floodplain harvesting restrictions applied on 7 February 2020. Passive take in this context was intended to include rainfall runoff from irrigation fields that re-entered irrigation systems through tailwater drains.

42. How does 'passive take' relate to the 10% harvestable right provisions?

ANSWER:

Water taken under basic landholder rights is not floodplain harvesting. The interaction between floodplain harvesting and harvestable rights is explained in the NSW Floodplain Harvesting Policy – implementation guidelines https://www.industry.nsw.gov.au/__data/assets/pdf_file/0007/272338/floodplain-harvesting-implementation-guidelines.pdf

43. Will any component of 'passive take' be required to be licensed under the Floodplain Harvesting Policy?

a. If not, under what part of the *Water Management Act 2000* will passive take be regulated?

ANSWER:

Yes. Although a component of the rainfall runoff from irrigation fields is not proposed to be licensed – see answer to question 35.

In regards to evidence given by Mr Cush from the New South Wales Irrigators' Council on page 3 of the transcript where he stated that:

"people applied for flood work levee banks and what have you...but after 35 years or 30 years there are some people who still have not had those applications processed"

44. What is the legal status of such a structure built before July 2008 that had an application pending with the Government that has never been decided upon?

ANSWER:

If a work falls within the definition of "flood work" in the *Water Management Act 2000*, then a flood work approval is required to use that work, unless one of the exemptions in the Act or *the Water Management (General) Regulation 2018* applies. Flood works, including banks and storages etc, will not be licensed as part of floodplain harvesting.

45. Does the Regulation provide retrospective approval, or exemption from the requirement of approval, of such works?

ANSWER:

No. The regulation relates to water supply work approvals, not flood work approvals.

46. What environmental impact assessment will be undertaken in regards to structures built before July 2008 in regards to any approval process or exemption?

ANSWER:

In relation to floodplain harvesting works, the NSW Floodplain Harvesting Policy states that "works will be assessed in relation to considerations including, but not limited to, the potential impact of floodplain extractions and changed flood flow distribution on threatened species, fish passage and breeding, groundwater connectivity, floodplain connectivity, wetlands and flood-dependent ecosystems, and other water users".

These considerations are addressed by the standard assessment requirements used by NRAR and WaterNSW for all types of water supply work approval applications in NSW. It should also be noted that DPI Fisheries undertook assessments of all works located in areas of critical fish habitat.

The standard assessment requirements also address other matters such as cultural heritage, air quality, noise and socio-economic impacts. Hence floodplain harvesting

water supply works are treated in the same way as all other applications for water supply work approvals.

47. What process is being undertaken to identify structures that should be removed because of:

- a. environmental harm, or
- b. the absence of an approval.

ANSWER:

Refer to the answer for question 46. For the Committee's information, this process relates to water supply works not flood works. Flood works including banks, storages, access roads etc will not be licensed as part of implementing the NSW Floodplain Harvesting Policy.