



Dr Paul Paterson
Chair
Review of WaterNSW's Rural Bulk Water Prices
Independent Pricing and Regulatory Tribunal
PO Box K35, Haymarket Post Shop
SYDNEY NSW 1240

Dear Dr Paterson

Review of WaterNSW's Rural Bulk Water Prices and IPART Draft Determination

Thank you for the opportunity to provide feedback on the Independent Pricing and Regulatory Tribunal's (IPART) Review of WaterNSW's Rural Bulk Water Prices from 1 July 2021 to 30 June 2025.

The Department of Primary Industries (DPI) Fisheries is responsible for the sustainable management of native fish species, including listed threatened fish species, populations and ecological communities and their associated habitats throughout NSW. This outcome is partially achieved by ensuring developments and activities within NSW are consistent with the objectives and requirements of the *Fisheries Management Act 1994* (FM Act) and associated regulations.

As the major bulk water provider across NSW, the activities and operations of WaterNSW regularly intersect with the FM Act. This includes, but is not limited to, the provisions under Parts 7 and 7A of the FM Act relating to the protection and restoration of fish habitats, the provision of adequate fish passage throughout the state's waterways and the recovery of threatened fish species, populations and ecological communities. Following the recent severe drought, there is heightened concern about the recovery of native fish in NSW.

DPI Fisheries has routinely provided advice direct to WaterNSW and IPART with respect to the regulatory requirements of WaterNSW activities. These requirements ensure that WaterNSW operations are undertaken in a sustainable manner and are consistent with the requirements of the FM Act and regulations.

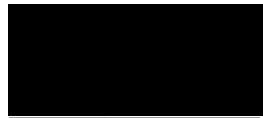
I note IPART's Draft Determination Report that summarises WaterNSW's costs and prices for the 2021 Rural Bulk Water Determination Period; and IPART's request for stakeholder feedback on key issues for consideration prior to issuing the final determination in June. DPI Fisheries welcomes the progress for DSU fishways in the proposed schedule; however, notes that it will not allow the full obligations of the DSU Fishway Offsets Program to be completed in the 2021 Determination Period. The potential 20-year delay between the initial statutory determination and the completion of DSU fishway offsets is a significant concern, particularly in light of the current heightened concerns over native fish populations.



Department of Primary Industries

To address these concerns, I am pleased to provide the DPI Fisheries response to the Draft Determination Report (Attachment A). If you require a meeting to discuss our response or require further information, please contact Cameron Lay, Director Freshwater Environment,

Yours sincerely



Sean Sloan
Deputy Director General
Fisheries and Game Licensing
Date: 12 April 2021

Enc.

ATTACHMENT A – DPI Fisheries response to IPART’s Draft Determination Report

WATERNSW DAM SAFETY UPGRADE FISHWAY OFFSETS

Native fish in the Murray-Darling Basin have experienced unprecedented pressures in the past two years from prolonged drought, extensive fish kills in multiple valleys, bushfires and water quality impacts following rainfall and associated runoff from fire-affected landscapes. Commonwealth and state inquiries, and responses to these events have all included recommendations to boost efforts to restore native fish populations and their resilience to extreme climatic events, including the need for greater river connectivity through restoration of fish passage¹²³.

Over the past decade, WaterNSW has undertaken significant Dam Safety Upgrade (DSU) works at five (5) major dams - Copeton, Keepit, Split Rock, Burrendong, and Wyangala. The DSU works invoked provisions under S218(5) of the *Fisheries Management Act 1994* (FM Act) whereby WaterNSW was required to construct fishways at the five (5) dams at a cost estimate of \$285 million (in 2009). Noting the high costs, DPI Fisheries and WaterNSW collaboratively agreed to the DSU Fishway Offsets Program, whereby WaterNSW would forego installing fishways at the five (5) dams, and instead construct thirteen (13) fishways at smaller weirs located lower in the catchment at a cost estimate of \$60 million (in 2009). **Eleven (11) fishways are still outstanding and remain a legislative requirement** for WaterNSW to deliver in the 2021 Determination Period.

For the 2014 – 2017 Determination Period, WaterNSW requested funding for completion of the remaining eleven (11) DSU fishways. Following concerns raised by the respective Customer Service Committees and WaterNSW over the increasing cost of fishways, DPI Fisheries agreed to a conditional temporary hold on the DSU Fishway Offsets Program, which saw the draft determination funding reduced from \$45.5 M to a final determination of \$16.5 M to fund the Gunidgera Weir fishway and a fishway cost-optimisation assessment. WaterNSW subsequently reallocated the majority of the DSU Fishway Offsets Program funding to alternative capital works. The proposed fishway cost-optimisation assessment was not initiated in the 2014 – 2017 Determination Period.

DPI Fisheries wrote to IPART during the 2017 – 2021 WaterNSW Rural Bulk Water Determination process confirming WaterNSW’s legislative obligation to complete the DSU Fishway Offsets Program in full during the respective determination period (DGPO17/24). IPART acknowledged DPI Fisheries’ letter, however responded that the prudence and efficiency of the DSU Fishway Offsets Program still needed to be demonstrated, and instead allocated \$3 M towards the WaterNSW Strategic Fishway Implementation Program (SFIP).

Following the completion of the SFIP in 2020, WaterNSW requested **\$71.6 million** of capital expenditure for DSU Fishway Offsets Program over the 2021 determination period, with the following schedule proposed by WNSW:

- Development of concept designs for the eleven (11) DSU Fishways in FY21 and FY22.
- Construction of two (2) pilot fishways at Gunidgera Weir and Tyreel Weir – dates not specified.
- Progression of remaining nine (9) fishways – dates not specified.

DPI Fisheries welcomes the progress for DSU fishways in the proposed schedule; however, notes that it will not allow the full obligations of the DSU Fishway Offsets Program to be completed in the 2021 Determination Period. The potential 20-year delay between the initial statutory determination and the completion of DSU fishway offsets is a significant concern.

¹ <https://www.mdba.gov.au/issues-murray-darling-basin/fish-deaths/key-recommendations-independent-assessment>

² <https://www.mdba.gov.au/issues-murray-darling-basin/fish-deaths/native-fish-recovery-strategy>

³ <https://www.dpi.nsw.gov.au/fishing/habitat/threats/fish-kills>

In the draft determination, IPART acknowledged that WaterNSW's compliance with the DSU fishway requirement is overdue; however, IPART determined that WaterNSW did not adequately "*justify the scale, timing and deliverability of the program.*" Specifically, IPART determined that the timeframes for completing the pilot projects would not allow WaterNSW to progress with the remaining nine (9) fishways in the 2021 Determination Period, and raised concerns about the capacity of WaterNSW to deliver the DSU Fishway Offsets Program in a single determination period.

Based on these determinations and concerns, IPART has recommended \$15.2 M of capital expenditure be allocated for the two (2) pilot DSU fishways only. Following this, the remaining nine (9) DSU fishways would be delivered in the 2025 – 2029 Determination Period. DPI Fisheries' notes and welcomes IPART's recommendation that should WaterNSW be able to commence more DSU fishway projects in the 2021 Determination Period, then it should do so. If deemed efficient at the 2025 pricing review, the capital expenditure would be added to the regulatory asset base and future capital costs recovered.

DPI Fisheries considers that WaterNSW is well placed to deliver all eleven (11) DSU fishways within the upcoming determination period and could forgo the proposed pilot approach. However, noting concerns raised by WaterNSW and IPART, DPI Fisheries proposes that seven (7) DSU fishways could be delivered in a prudent and efficient manner between 2021 – 2025 based on the following reasons:

- Low-head weirs (< 4 m) – Five (5) DSU weirs are low-head structures where a JFCS fishway is proposed. The low-head nature of the weirs means that the fishway design is relatively simple and low-cost compared to the high-head weirs. While the construction approach is novel (i.e. prefabricated components), the biological design criteria are grounded in existing contemporary principles that are proven to effectively pass native fish. DPI Fisheries recommends that two JFCS fishways be designed and constructed in the 2021/22 and 2022/23 FYs, and that lessons learned are applied to the remaining three (3) JFCS fishways in the 2023/24 and 2024/25 FYs.
- High-head weirs (> 4 m) – Six (6) DSU weirs are high-head structures, with lock fishways proposed at most sites. Biologically, lock fishways are highly effective at passing large numbers of native fish; however, this design is inherently more expensive and complex compared to the JFCS and vertical slot fishways. DPI Fisheries recommends the design and construction of one (1) lock fishway in the 2021/22 and 2022/23 FYs, with lessons learned being applied to a second lock fishway in the 2023/24 and 2024/25 FYs.
- Construction of the remaining four (4) fishways, which are the most complex, would occur early in the 2025 – 2029 Determination Period, with work to progress planning and design phases progressed during the 2021 – 2025 period.

DPI Fisheries believes that the above proposal is achievable based on the following reasons:

- Over a five year period from 2009 - 2014, WaterNSW (formally Sydney Catchment Authority and State Water) project managed or was involved in the delivery of 25 technical fishways; thereby demonstrating the capacity to deliver large scale fishway infrastructure projects within a short timeframe.
 - WaterNSW delivered the Nepean Fishways Program over a three year period from 2009 - 2011, whereby eleven (11) vertical slot fishways were designed and constructed.
 - Over a five year period from 2009 – 2014, WaterNSW project managed or was involved in the delivery of thirteen (13) fishways in the Murray-Darling Basin that included nine (9) vertical slot fishways and two (2) fish locks.
- By 2014, WaterNSW had completed detailed site assessments and developed designs and costings for all DSU fishways. These included detailed biological, hydrologic, hydraulic, and geotechnical site assessments that are still relevant today and do not

need replication. Concept and/or detailed designs were developed for all DSU fishways at the time, which would allow WaterNSW to proceed quickly to the detailed design stage for all sites recommended.

- Since 2014, WaterNSW has been conducting investigations to identify fishway cost sensitivities while developing cost-effective approaches to designing, procuring, and constructing fishways. This culminated in 2020 when WaterNSW finalised the Strategic Fishway Implementation Program (SFIP), which included the development of the JFCS fishway design, as well as Concept Level designs for eight (8) DSU fishways. WaterNSW has conducted background investigations that will enable detailed designs to be initiated early in the determination period.
- The establishment of Water Infrastructure NSW provides a viable program delivery partner that can assist WaterNSW in the efficient delivery of the DSU Fishway Offsets Program.

The test of prudence for the DSU Fishway Offsets Program has been met as the fishways are a legislative requirement under S218(5) of the FM Act and are overdue for delivery. Additionally, since 2014, DPI Fisheries has worked collaboratively with WaterNSW to determine the lowest whole-of-life approach to construct fishways in NSW via the SFIP and related programs, thereby meeting the efficiency requirement.

DPI Fisheries welcomes the consideration of the information provided above in the Final Determination, and looks forward to working with IPART and WaterNSW to deliver the program as effectively and efficiently as possible during the 2021 Determination Period.

COST SHARES APPLIED TO FISHWAY EXPENDITURE

In 2018, IPART reviewed how future operating and capital expenditure is shared between rural water users (via Water NSW's bulk water prices) and the NSW Government. Based on this cost share review (and a subsequent review in 2019), IPART adopted the 'impactor pays' principle to allocate the efficient costs of rural bulk water services between water customers and the NSW Government. That is, those that create the need to incur the costs should pay the costs. For *Environmental Planning and Protection* activities (which includes fishway construction), the cost share for water customers increased from 50 % in 2009 (when WaterNSW initially agreed to the DSU Fishway Offsets Program) to 80 % in 2018.

In response to IPART's Issues Paper, stakeholders questioned the increase in the user share ratio applied to the regulatory requirement for WaterNSW to construct and operate fishways, particularly given WaterNSW's request to delay the DSU Fishway Offsets Program in 2014 in order to reduce overall program costs to water customers. For the 2021 Draft Determination, IPART reviewed the cost share arrangement and determined that the 80 % user share remains appropriate regardless of when the projects were committed to under legislation.

DPI Fisheries notes that changes to the cost share ratios will financially impact water customers for the delivery of the DSU Fishway Offsets Program. It is also noted that proposed financial benefits to water customers resulting from the WaterNSW SFIP process via a reduced whole-of-life cost for fishways may not be realised due to the increase in the user share ratio.

WATERNSW'S OVERALL LEVEL OF CAPITAL AND OPERATING EXPENDITURE OVER THE 2021 DETERMINATION PERIOD

In the rural area of operation covered by this pricing proposal, WaterNSW owns and operates 20 dams and more than 280 weirs and regulators to deliver bulk water. WaterNSW's "Renewals and Replacement Program" aims to maintain waterway infrastructure reliability and capability for assets that collect, store and deliver raw water to customers in line with current service and expenditure levels. The proposed capital and

operating expenditure requirements are based on the strategic directions in WaterNSW's long term capital investment plan. DPI Fisheries requests IPART give proper consideration to the regulatory costs that would be incurred by WaterNSW to meet its regulatory obligations under Part 7 and 7A of the *Fisheries Management Act 1994* (FM Act) during the 2021 Determination Period, in particular Section 218 (Fishways to be provided in construction of dams and weirs).

Fishways

With respect to WaterNSW fishways, which total 34 sites, S218(2) of the FM Act requires WaterNSW to carry out repairs and maintenance in order to keep fishways operating as per the original design criteria. While maintenance is generally not onerous, it is essential that it is regular and ongoing to ensure that issues that may affect fishway performance are not allowed to progress to the point of impeding fish passage or affecting the structural integrity of the fishway. Additionally, how the fishway is operated can determine whether the fishway enables effective passage of native fish.

There is no mention of operating or maintenance costs for existing fishways in IPART's Draft Determination. DPI Fisheries therefore requests that IPART give proper consideration to existing fishway operating and maintenance costs in the 2021 Determination, including the development and implementation of Operating and Maintenance Planning for all fishways within WaterNSW asset registry.

Multi-Level Offtakes and Cold Water Pollution

WaterNSW owns and operates several Multi-Level Offtakes (MLO) at their large storage dams. MLOs allow WaterNSW to draw water from multiple locations within the water column depending upon the reservoir storage level. One benefit of MLOs is the ability to target the release of water from the warmer surface waters to avoid the release of cold water from the bottom of the storage. Cold Water Pollution (CWP) has significant deleterious impacts on the biology and ecology of downstream receiving waterways, in particular fish populations, while also having negative social impacts due to cold water temperatures limiting recreational activities during summer. Most WaterNSW MLOs do not have current Operational Plans for CWP mitigation.

There is no mention of Cold Water Pollution in IPART's Draft Determination. Funding is required to allow WaterNSW, in collaboration with DPI Fisheries and other partner agencies, to develop and implement suitable Operation and Maintenance Planning for CWP mitigation at all MLOs within the WaterNSW asset registry, meeting requirements of Water Supply Works Approvals associated with these assets.