

Submission to the Independent Pricing and Regulatory Tribunal

**Response to the 15 September 2020 IPART Issues Paper on the
Review of WaterNSW Rural Bulk Water Prices from 1 July 2021**

16 October 2020

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Contents

1. Introduction	4
1.1 Background – WaterNSW Pricing Proposal.....	4
1.2 Process – IPART Issues Paper.....	6
1.3 Purpose – WaterNSW response.....	6
2. Length of determination period	8
2.1 Requirements under the WCR.....	8
2.2 Minimising bill impacts for customers under the WCR.....	9
2.3 Additional reasons in support of a one-year determination period.....	9
3. Operating expenditure	12
3.1 Operating expenditure over the 2017 Determination period.....	13
3.2 Operating expenditure over the 2021 Determination period.....	17
3.2.1 Insurance costs.....	17
3.2.2 Risk Transfer Product.....	17
3.3 Updated operating expenditure forecast for 2022-24.....	21
3.3.1 Dam Safety Levy.....	22
3.3.2 Electrical safety improvement.....	23
3.3.3 Rural Bridges Program.....	24
3.3.4 Dam Safety Compliance.....	24
3.3.5 Regulatory team FTEs.....	26
3.3.6 Land Tax.....	26
3.3.7 Long-term Transformational Strategy.....	27
4. Capital expenditure	27
4.1 Capital expenditure during the 2017 Determination period.....	27
4.2 Capital expenditure for the 2021 Determination period.....	28
4.2.1 Large drought-related capital works.....	29
4.3 Updated capital expenditure forecasts for 2022-24.....	29
4.3.1 Rural Bridges Program.....	30
4.3.2 Dam Safety Compliance.....	30
4.4 MDBA and BRC costs.....	31
5. Revenue requirement and price setting	32
5.1 Revenue requirement.....	32
5.2 Fixed and variable charges.....	32
5.3 Indicative prices for the 2021 Determination period.....	33
5.4 Indicative bill impacts.....	35
6. Metering reform	36
6.1 Background.....	36
6.2 Implementation and ongoing management activities.....	37
6.3 Metering process.....	39
6.3.1 Metering Compliance Process.....	39
6.3.2 Reporting and Recording Process.....	40
6.3.3 General Enquiries and Education Process.....	41
6.4 Key metering complexities.....	42
7. Responses to IPART’s 16 Questions	43
Appendix 1 – WCR considerations re length of determination period	48
Appendix 2 – Dam safety requirements	53

1. Introduction

WaterNSW is pleased to submit this response (“**Response**”) to the Independent Pricing and Regulatory Tribunal’s (“**IPART**”) *Issues Paper: Review of Water NSW’s rural bulk water prices from July 2021, September 2020* (“**Issues Paper**”). The Issues Paper outlines key issues identified by IPART for stakeholder consideration in its ongoing review of WaterNSW’s rural bulk water prices which will apply to New South Wales (“**NSW**”) water customers for the regulatory period 1 July 2021 to 20 June 2022.

WaterNSW was formed on 1 January 2015 under the WaterNSW Act 2014 (NSW), effecting a merger of the former Sydney Catchment Authority and the former State Water Corporation. WaterNSW is Australia’s largest water supplier and is the major supplier of raw water in NSW, delivering raw water from 42 large dams, pipelines and the State’s rivers.

In rural NSW, WaterNSW maintains, manages and operates major infrastructure to deliver bulk water to licensed water users on the State’s regulated rivers. There are approximately 6,300 customers in 14 regulated river systems. WaterNSW owns and operates 20 dams and more than 280 weirs and regulators to deliver water for town water supplies, industry, irrigation, stock and domestic use, riparian and environmental flows. WaterNSW ensures that the water supplied is reliable and, where that water is to be used by end-use customers for drinking, that it is safe. We plan, investigate and develop water infrastructure solutions to water security and reliability issues and then operate and maintain that infrastructure.

The 2017 Determination made by IPART was the first determination for rural bulk water services supplied by the new amalgamated WaterNSW. The 2017 Determination covered the period from 1 July 2017 to June 2021.

WaterNSW’s Pricing Proposal for the 2021 Determination period lodged on 30 June 2020 (“**Pricing Proposal**”),¹ is governed under the following:

- The regulated charges for certain rural bulk water services supplied by WaterNSW in the Murray-Darling Basin Valleys are set under the Water Charge (Infrastructure) Rules 2010 (Cth) (“**WCIR**”). The accreditation requirements under Part 9 of the WCIR (as it was then known) are given effect by the transitional provisions in the new Water Charge Rules 2010 (“**WCR**”); and
- The maximum prices for the remaining rural bulk water services supplied by WaterNSW are set under the Independent Pricing and Regulatory Tribunal Act 1992 (“**IPART Act**”).

1.1 Background – WaterNSW Pricing Proposal

On 30 June 2020, WaterNSW submitted its Pricing Proposal to IPART for bulk water services for the period 1 July 2021 to 30 June 2022 (“**2021 Determination period**”). There are three broad categories of prices to be set through the Pricing Proposal process:

- Bulk water charges – annual prices to recover customers’ share of efficient costs to deliver WaterNSW’s rural bulk water services. This generally comprises a two-part tariff: fixed entitlement charges (\$ per megalitre of licensed entitlement) and variable usage charges (\$ per ML of water used);

¹ WaterNSW, *WaterNSW Pricing Proposal to the Independent Pricing and Regulatory Tribunal*, June 2020.

- Murray–Darling Basin Authority (“**MDBA**”) and Dumaresq-Barwon Border Rivers Commission (“**BRC**”) charges – which relates to licence holders in the MDBA and BRC valleys and aims to recover costs of services delivered by the MDBA and BRC; and
- Miscellaneous charges – which includes a range of charges for meter services and other miscellaneous activities.

IPART aims to set prices to allow WaterNSW to recover only water customers’ share of the efficient costs of its monopoly services. This provides an incentive for us to enhance our efficiency over time.

WaterNSW’s Pricing Proposal is aligned to our ongoing commitment to be recognised and valued by our customers for excellence in efficiently delivering their water needs to help make our communities healthy and prosperous. We are committed to be a modern, efficient and highly customer centric organisation.

Our Pricing Proposal detailed our proposal to keep our current user share revenue requirement constant in real terms for the one-year determination period from 1 July 2021 to 30 June 2022. WaterNSW is only proposing to update prices to reflect external factors outside of our control – i.e. for volume changes due to drought and changes to IPART’s cost sharing arrangements. This is to reduce pressure on our customers at a time of heightened uncertainty, due to the drought and the global pandemic.

Further, we are proposing to maintain the approach from the 2017 Determination to separately pass through the costs of Government charges for the MDBA and BRC that are outside of our control and which are proposed to increase.

The information on actual and proposed operating expenditures we put forward highlights that the costs of providing services to Rural Valley customers have increased and are not adequately reflected in the current regulatory allowances. Accordingly, we are seeking a higher operating expenditure allowance than that provided in the current period.

A key factor driving the increase in costs compared to the regulatory allowances relates to under-forecasting by WaterNSW at the 2017 Determination. This was highlighted by IPART’s consultant at the time (Aither) as reproduced below:

“This information provides a high level indication that WaterNSW has developed its operating expenditure forecasts in a way that may potentially be too low. There are specific examples that look to be overly ambitious - for example, in relation to flood operations ...

On face value, this is likely to indicate that WaterNSW’s basis for adjusting its operating expenditure forecasts over the regulatory period, may potentially be too low.”²

The under-forecasting of operating expenditure in 2017 as highlighted above and management’s view of potential efficiencies that were not able to be realised over the determination period have contributed significantly to operating cost increases relative to the regulatory allowance.

² See Aither’s February 2017 *Review of capital and operating expenditure for the WaterNSW rural bulk water services expenditure review – Final Report* prepared for IPART. Page 86.

For capital expenditure, the reprioritisation of our renewals programs and expenditures on emergency drought-related projects at the request of the NSW Government have led to increased costs over and above the regulatory allowance provided in the 2017 Determination.

Despite these cost increases, WaterNSW proposed to keep the 2021-22 revenue requirement constant in real terms for factors within our control and adjust prices only for factors outside our control, such as changes in water sales. Our Pricing Proposal sought proposed increases in operating expenditure and core capital expenditure by 37% and 38% respectively, compared with the allowances used to set prices for the 2017 Determination period.

We also propose higher expenditure to deliver several large drought-related capital projects, primarily in the Border, Peel and Lachlan valleys, which is proposed to be recovered from the NSW Government through IPART's cost sharing arrangements and not through customer charges.

Finally, the pass-through prices to reflect higher MDBA and BRC costs allocated to Rural Valley customers WaterNSW results in a 57% increase in customer MDBA and BRC bills in the relevant valleys.³

1.2 Process – IPART Issues Paper

In response to the Pricing Proposal, IPART published its Rural Valleys Issues Paper on 15 September 2020. This document forms WaterNSW's response to IPART's Issues Paper.

IPART's approach in assessing WaterNSW's Pricing Proposal involves reviewing, analysing and making decisions in relation to:

- The scope of WaterNSW's rural bulk water monopoly services and the length of the determination period;
- The total efficient costs to provide these services over the determination period;
- The distribution of efficient costs between customers and the NSW Government (on behalf of the broader community) based on the 'impactor pays' principle;
- Allocating the customer share of total efficient costs by water sources; and
- Setting WaterNSW's rural bulk water prices to recover the customer share of efficient costs.⁴

Submissions on the Issues Paper are to be provided to IPART on 16 October 2020. A public hearing will then be held on 17 November 2020. A draft decision will then be issued and final decision in June 2021. New prices will apply from 1 July 2021.

1.3 Purpose – WaterNSW response

WaterNSW's response provides specific comments and additional detail on a number of issues raised by IPART for stakeholder comment. Our response should be read in conjunction with WaterNSW's Pricing Proposal.

³ IPART, *Issues Paper: Review of Water NSW's rural bulk water prices from July 2021*, September 2020, p.3

⁴ IPART, *Issues Paper: Review of Water NSW's rural bulk water prices from July 2021*, September 2020, p.3

Our response focuses on:

- The length of the determination period;
- Actual operating and capital expenditure during the 2017 Determination period;
- Forecast operating and capital expenditure over the 2021 Determination period, including issues associated with metering reforms and MDBA and BRC costs; and
- Fixed and variable cost structures.

Our 30 June 2020 proposal for a one-year determination period was compliant with the information requirements of the WCR. We engaged with ACCC and IPART staff on the reasoning and legislative basis for the one-year determination period throughout 2019-20 when preparing our Pricing Proposal.

WaterNSW also on 30 June 2020 provided IPART with estimated costs for the subsequent four years based on a request by IPART for five years of data. While information on our forward capital and operating programs did not form part of our proposal and therefore was not required under the WCR, we nonetheless provided the information to IPART to assist in its deliberations. IPART and its consultants have been reviewing this additional information over the past few months as part of the technical review of our proposed expenditure programs.

We note that IPART's preliminary view on the length of determination period as outlined in the Issues Paper is to not support our proposal for a one-year determination period and instead to adopt a four-year determination period.

So that customers have visibility of our forward costs, and following the Issues Paper release on 15 September 2020, IPART requested WaterNSW to provide an updated cost estimate for Years 2-4 in response to the Issues Paper on 16 October 2020. IPART indicates that it will use this information in forming its pricing decisions.

To assist IPART, WaterNSW has provided updated expenditures and other key information for the full four-year period as part of our response to the Issues Paper and in our update to the Annual Information Return ("**AIR**") and Special Information Return ("**SIR**") that will accompany this response.

In our Pricing Proposal, we proposed that a one-year determination period be implemented for our rural bulk water services from 1 July 2021 to 30 June 2022. A one year period would provide short-term pricing relief for our customers, who are experiencing the impacts of drought intensified by bushfires and the COVID-19 global pandemic. It will also allow us the opportunity to undertake extensive customer engagement to better understand the practical impacts for our customers of these uncertainties and challenges and inform the subsequent Pricing Proposal for the following four years.

In addition, setting a one-year period will allow for the outcomes from NSW Government reform of the water sector to be determined before locking in a longer revenue period. A better understanding of these implications will avoid the risk of having to seek an early determination and will provide WaterNSW, the shareholder and IPART with improved certainty of financeability considerations.

While WaterNSW respects IPART's preliminary view to adopt a four-year determination period, we provide information in this response that outlines the basis for our one-year determination period that we proposed in June 2020. We also provide IPART with additional

information on our forward expenditure programs to assist IPART in its deliberations and to fully assess our proposal.

Our response to the Issues Paper does not represent a revised proposal under the relevant legislation and is instead the provision of additional information to IPART for its consideration as part of the 2021 Determination.

We will continue to provide further information to IPART for its assessment; however, we note that the information in some circumstances may not be readily available due to uncertainties outside of our control (such as policy reforms). We also understand that some customers may wish to see the information in Years 2 to 4 based on IPART's proposal and so we have presented information on these expenditures in this response and we will provide IPART's consultant's with more detailed information for their review.

In addition, we have prepared indicative pricing outcomes based on our updated forecasts as requested by IPART. Due to IPART's support for a four-year period, rather than a one-year period as we proposed, we have not had the opportunity to consult on the pricing outcomes with customers.

2. Length of determination period

In our Pricing Proposal, WaterNSW proposed a one-year determination period, from 1 July 2021 to 30 June 2022. We maintain our support for a one-year determination period, but note IPART's preference for a four-year period for the reasons outlined in the Issues Paper.

Our original Pricing Proposal was compliant with the requirements of the WCR, which is Commonwealth legislation that applies to the Murray Darling Basin ("**MDB**") valleys. IPART regulates the pricing arrangements for the MBD valleys under accreditation arrangements administered by the Australian Competition and Consumer Commission ("**ACCC**"). Under these accreditation arrangements, IPART is required to meet certain requirements, including the application of the ACCC's Pricing Guidelines that specifies, amongst other things, the approach to calculating the rate of return on capital based on an 'on the day' approach to the weighted average cost of capital ("**WACC**").

2.1 Requirements under the WCR

WaterNSW's application for a one-year determination period is compliant with the WCR and we request IPART to give due consideration to the merits of setting charges under a one-year determination period, consistent with WaterNSW's proposal.

On 23 September 2015, IPART was accredited under Part 9 of the WCIR to determine or approve pricing applications for NSW MDB large bulk water providers.

As set out in Appendix 1, WaterNSW submits that IPART must give due consideration to the merits of setting charges under a one-year determination period, consistent with WaterNSW's compliant proposal. A rejection of our one-year determination proposal could be seen as inconsistent with the intention of Rule 24 of the WCR i.e. to align, wherever possible the regulatory period of an MDB determination with that of an approval or determination in respect of an urban water service under section 91 (3) of the Water Act 2007 (Cth).

2.2 Minimising bill impacts for customers under the WCR

In order to approve or determine charges, WaterNSW notes that IPART must be satisfied that the total forecast revenue for each year of the regulatory period recovers the prudent and efficient costs of providing the service in line with Rule 29 of the WCR, including the costs incurred by WaterNSW in complying with regulatory obligations and requirements as stated in the ACCC Pricing Principles.

Importantly, IPART must be satisfied that the forecast revenue from regulated charges is reasonably likely to meet that part of the prudent and efficient cost of providing infrastructure services *that is not met from other revenue*.

This matter is set out in more detail in Appendix 1. In summary:

- IPART must have regard to whether the charges contribute to achieving the Basin water charging objectives and principles set out in Schedule 2 of the Water Act; and
- IPART is bound by the requirements of the ACCC accreditation regarding the one-year determination proposal.

For example, any reduction in forecast user revenue must be offset by a proportional increase in revenue from other sources, including the Government share of revenue, provided that the total forecast revenue from all sources is sufficient to recover the prudent and efficient cost of providing bulk water services.

WaterNSW submits that IPART can assess whether the existing cost share ratios should be modified.

For example, IPART can consider any changes in obligations, activities and responsibilities that were not contemplated during the 2018 IPART Rural Valley Cost Share Review. For example:

- Proposed scope increases due to changes in obligations, service standards, operating context (e.g. drought), or government requirements and stakeholder expectations; and
- Current period allowances are insufficient to fund the significant operating expenditure required to provide bulk water services, as highlighted in our Pricing Proposal.

WaterNSW will continue to support the IPART consultants in their assessment of whether the existing cost share ratios are appropriate.

2.3 Additional reasons in support of a one-year determination period

The unprecedented combination of bushfires and a global pandemic also motivated our proposal for a one-year determination period. Additionally, a one-year determination period will give us additional time to undertake a consultation process with our customers about the impacts of current events and to examine customers' longer-term views of the sustainable cost of delivering water in rural valleys and how provides should be structured.

Under our proposal, customer engagement in the lead up to a subsequent four-year determination period that starts on 1 July 2022 would empower us and our customers with the information and data necessary to actively respond to our customers' longer-term service delivery needs, while also better understanding customers' willingness and ability to pay.

In the Issues Paper, IPART stated that most stakeholders did not support WaterNSW's proposal for a one-year determination period, including noting that customers may prefer certainty, predictability and transparency of a four-year process.

WaterNSW notes that IPART's view of customer support for a four-year determination period was based on a limited number of responses to IPART's Fact Sheet (i.e. four) that supported the four-year period).

WaterNSW is committed to meaningful engagement with our customers and stakeholders.

In considering whether customers were supportive of the key elements of our Rural Valleys Pricing Proposal, including a one-year determination period, we consulted with customers over the past twelve months primarily through our Customer Advisory Group ("**CAG**") process. The support from these groups for our proposal has been strong in recognition of the impacts of drought on the community. Our consultation on Rural Valleys activities commenced as part of the February 2019 CAG round presentations, totaling forty meetings (four meeting rounds with ten valleys per round).

Our engagement with customers through the CAG process at the time suggests that customers were supportive of our approach of a shorter regulatory period to address the uncertainty associated with drought and, more recently, the COVID-19 pandemic.

WaterNSW considers that the findings of the CAG engagement process, whereby overall support for a shorter determination period was expressed, is far more representative of overall customers' views on this matter compared to four submissions lodged in response to IPART's engagement through the Fact Sheet process.

Moving to a four-year determination period as proposed by IPART introduces considerable risk and uncertainty. In particular, it would bring forward the need to address the gap between the costs of providing bulk water services in the Rural Valleys and IPART's allowances in the 2017 Determination into the 2021 Determination.

In summary, **WaterNSW supports maintaining the one-year determination period** as it provides additional time to better assess and engage with customers on the associated impacts of:

- **Water sector reform** – the costs and responsibilities of potential sector reform, as signaled by the NSW Government will be more clearly identified over the next 12 months and will be better able to be incorporated in a separate four-year proposal to be lodged with IPART in 2021.
- **Non-urban metering reform** – changes in policy and WaterNSW responsibilities regarding meter ownership and compliance requirements have recently occurred, requiring time to assess the associated costs and pricing arrangements. This information will not be complete in mid-October therefore, is not included fully in responding to the Issues Papers. A one-year determination period provides a more reasonable opportunity to address these costs that are driven by policy decisions outside of our direct control.
- **Three major dam projects** – uncertainty over the funding (i.e. RAB / debt vs grant) of dam projects will provide significant challenges if included in a four-year determination. A one-year determination with a subsequent four-year Pricing Proposal in approximately nine months' time (30 June 2021) would provide materially more accurate and better informed forecasts.

- **More accurate expenditure forecasts** – opportunity to better understand the future capital and operating expenditure requirements of the business in Years 2-4 that reflect the long-term sustainable costs of the businesses. A one-year determination period will also provide additional time to assess potential efficiency improvements to be shared with customers.
- **Impact of drought** – Rural NSW is still recovering from a record-breaking drought, with water supply in many of our dams at critical levels. At the time of preparing this submission, 12 of our 19 dams (63%) across rural NSW are at storage levels below 50%. For many valleys, there is no expected respite in predicted rainfall. Our rural customers therefore face, and will continue to face, considerable uncertainty and hardship due to this recent drought. With a one year determination period and a cap to our revenue requirement from the current determination in real terms, we will be able to provide short-term pricing relief to our customers.
- **Cost Share price impacts** – A one-year Determination provides a shorter assessment period to determine the relative balance of user and government changes, and importantly the ability to pay impact on specific customer groups.
- **COVID-19** – uncertainty continues over the economic impacts, domestically and globally, from the COVID-19 pandemic. A one-year regulatory period will provide the additional time necessary to improve the accuracy of forecasts for the following regulatory period.
- **IPART Regulating Water Businesses Special Review** – IPART is undertaking a review of the framework under which it determines prices, and licence conditions, for the water businesses it regulates. The three key areas for the review, as set out in IPART’s recently released Issues Paper, will be lifting the performance of the sector, encouraging innovation and promoting a customer focus.⁵

Given this special review, a one-year determination period is appropriate as it may provide the potential for any significant changes stemming from this review to be taken into account sooner. A four-year determination period as proposed by IPART on the other hand would ‘lock in’ prices for our customers under an old regulatory framework that may no longer be fit for purposes.

- **Customer consultation** – a one-year determination provides the opportunity to engage with customers on our price-service offerings for the subsequent four-year determination, including:
 - Assessing whether customers are getting value for money and that the price / service offering meets their needs;
 - Identifying and addressing affordability concerns, and
 - Reviewing tariff structures and future bill impacts.

A four-year determination period as proposed by IPART constrains the ability for customers’ views to be included in our plans and investment programs in Years 2-4.

A four-year determination period would also result in a change to our plans for customer engagement, which we had intended on undertaking over the next few

⁵ IPART, *Regulating Water Businesses Special Review Position Paper*, 29 September 2020, <<https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/investigation-administrative-how-we-regulate-the-water-businesses/legislative-requirements/position-paper-regulating-water-businesses-september-2020.pdf>>.

months to discuss our price and service offering from 2022-23. Early visibility of IPART's final decision on the length of determination period is requested to ensure we are able to engage effectively with our customers to meet their longer term needs.

- **Meets the requirements of the WCIR** – while IPART has asked for (and WaterNSW has provided) future forecasts over a five-year period, our one-year proposal meets the information requirements of the WCIR. We will aim to provide as much information as possible in our response to the Issues Paper to assist IPART in its deliberations, noting that some information may not be available due to the uncertainties noted above.

WaterNSW notes and respects IPART's preliminary view of a four-year determination period, should that be what IPART ultimately approves, and we will work within this preference to provide value for money for our customers. Notwithstanding IPART's ability to approve a different length of determination period, we wanted to highlight to stakeholders that our decision to move away from a 'standard' four-year period to a one-year period was not taken lightly and was proposed to address the significant uncertainty facing customers at the time due to drought (and subsequently bushfires and COVID-19 as well as due to the impacts of various reforms).

If a four-year regulatory period is approved, there is the potential for significant uncertainty due to drought and the outcome of policy reforms and other events during the regulatory period. We acknowledge, however, in the interest of lowest and efficient costs for customers, the ability to include allowances for policy changes not known with certainty at the Pricing Proposal stage within a four-year determination period is limited.

We therefore request that IPART consider incorporating appropriate provisions for managing uncertainty within the regulatory period if IPART adopts a four-year determination. WaterNSW looks forward to working with IPART to address how these potential uncertainties could be addressed within the upcoming determination period.

3. Operating expenditure

This section outlines issues related to WaterNSW's historical and forecast operating expenditure for the 2021 Determination period.

WaterNSW is a business that has undergone a substantial transition over the current regulatory period, settling processes and systems from its initial formation following the merger in 2015, and incorporating the functions to provide new WAMC services from 2016. WaterNSW now has four separate business functions, with four separate regulatory periods and pricing submission processes.

WaterNSW's regulatory periods are staggered to enable separate consideration of the issues and pricing for each function; however, decisions that are made concerning shared costs and their incorporation in each separate regulatory process have flow-on impacts for the other processes.

This creates significant complexity, unique to WaterNSW among its peers.

Some of the changes that have occurred in the treatment of shared costs (due to new business functions, or changes in allocators between them) have contributed to the operating expenditure variance between the IPART allowance and actual expenditure.

3.1 Operating expenditure over the 2017 Determination period

Our Pricing Proposal stated WaterNSW's forecast operating expenditure over the 2017 Determination period as \$208.3 million, which is \$51.4 million (33%) more than the allowance set in 2017.⁶

There are six main drivers for the increased operating expenditure during the current period:

- **Under forecasting costs in the 2017 Determination period:** WaterNSW has identified that it under-forecast several categories of operating expenditure, which were excluded from our 2017 Pricing Proposal. These categories included:
 - Scheduled overtime;
 - Land tax liabilities, associated with land that WaterNSW inherited from State Water in 2015, which was previously treated as controlled land (and not owned land) and therefore no tax liabilities were assumed (approximately \$2.2 million). WaterNSW's annual land tax liabilities are forecast to increase further by approximately \$0.6m million starting in 2021-22;
 - Flood operations expenditure; and
 - Labour costs, including necessary actuarial adjustments for superannuation and redundancy payments, direct labour costs relating to actuarial adjustments for long-service leave and short-term incentive payments, which form a component of the salary package for contract employees.
- **New EBA Agreement:** at the time of the 2017 Determination, WaterNSW employees were party to three different employment agreements. As WaterNSW was in the process of consolidating these agreements, our 2017 Pricing Proposal assumed annual wage growth equivalent to CPI; however, the EBA which was entered into during the current regulatory period (in line with the National Wage Determinations) contained higher wage growth assumptions. The transition to a single EBA has therefore resulted in some labour cost increases across our employees.
- **Corporate labour costs:** which includes additional FTEs to respond to increased legal, governance and risk requirements and increased HR requirements.

The need for additional FTEs in the Legal and Governance team has been driven by:

- The Independent Investigation into New South Wales Water Management and Compliance (the Matthews' Inquiry) and associated changes to compliance, enforcement and water management practices;
- Organisational changes (e.g. the Legal and Governance function moving in-house to support Operating Licence compliance and assurance activities, corporate risk management, assurance and compliance functions, legislative compliance and procurement contracts); and
- Various licensing, approval and regulatory functions being transferred from DPIE to WaterNSW's Operating Licence (e.g. WaterNSW is now required to gather and provide evidence to support NRAR in the prosecution of alleged offences).

Similarly, additional FTE in the HR team have been required as a result of organisational changes and new functions including coverage of additional

⁶ Ibid, above n 1.

employees when WAMC transferred to WaterNSW and the Talent function moved in-house.

- **ICT costs:** WaterNSW inherited legacy IT systems through the merger. Many of these systems were at the end of their economic or useful life and in some cases were no longer supported by the vendor. This resulted in the review and implementation of a new ICT strategy and environment, the need to upgrade numerous systems and increases in software licensing costs. The shift to cloud-based hosting environments has also resulted in shifts in the allocation of these costs from capital to operating.
- **Other external drivers:** this includes drought projects being undertaken in financial year 2021 which were not foreseen, travel costs associated with increased consultation carried out as part of our regional drought strategies (e.g. customer engagement workshops), Risk Transfer Product (“RTP”) insurance premium increases and energy and chemical costs in Fish River (due to higher volumes than forecast from a key customer).
- **Changes in cost treatment:** three changes occurred during the 2017 Determination period that impacted the proportion of shared costs and the balance between shared and direct costs:
 - Capitalisation changes to better reflect accounting standards and industry practice, which have reduced overhead operating expenditure;
 - Cost allocation changes, where we have moved from applying a fixed 45/55 split to allocate common costs between Rural Valleys and Greater Sydney, to using total expenditure (i.e. capital and operating expenditure) as the allocator between business units. This has reduced the Rural Valleys business’s proportion of total overheads; and
 - Cost treatment changes, including general maintenance labour costs, insurance, motor vehicle and energy costs being recorded as direct costs rather than as overhead, which have increased direct costs relative to overhead.

These three changes have masked the contribution of the overall increase in our operating expenditure overheads to the overspend in the 2017 Determination period and need to be considered when assessing the variance categories.

The variance of actual expenditure to the operating expenditure allowance has fluctuated over the 2017 Determination period, as changes to capitalisation policy, cost allocation and business practices occurred.

Table 1 - Current period operating expenditure – allowance compared to actuals (\$million)*

	2017-18	2018-19	2019-20	2020-21	Total
IPART Allowance	41	39	39	37	157
Actual/forecast	46	49	55	58	208
Variance (\$)	5	9	16	21	51
Variance (%)	12%	24%	42%	55%	33%

* These forecasts are as per our Pricing Proposal which included forecast values for FY20 and FY21. Actual FY20 expenditure is \$59M, and our forecast for FY21 has been updated to be \$56M. The total variance over the period remains at 33% after these updates.

WaterNSW did acknowledge in the process for the 2017 Determination that there may have been some cost categories that were not included in the forecast at the time. However, WaterNSW expressed its intention to IPART to challenge itself to meet the lower forecasts through other organisational efficiencies, with a view to placing downward pressure on water prices for our customers.

Although WaterNSW has taken measures to realise new efficiencies, the combination of circumstances that would have allowed WaterNSW to operate within its forecast operating expenditure did not eventuate, as the business incorporated new functions and responded to new challenges, including multiple industry reviews. Concurrently, WaterNSW's operating environment has continued to change, increasing the range of regulatory and administrative obligations that it is required to undertake.

This significant change within our business and the broader industry has meant that the anticipated cost reductions from efficiency initiatives have not been fully realised. For example, significant efficiencies were expected to be delivered over the 2017 Determination period following investment in our new enterprise resource platform (CIMs). While the platform did result in lower increases in headcount than would otherwise have been the case had it not been implemented, this has been offset by increases in headcount driven by a range of other factors.

As a result, WaterNSW has not been able to realise efficiencies of a quantum that offsets the items that were not included in our forecast and our operating expenditure has therefore exceeded the allowance.

A summary of the operating expenditure variance categories is set out in the following table. Further detail on each category is provided in the following sections.

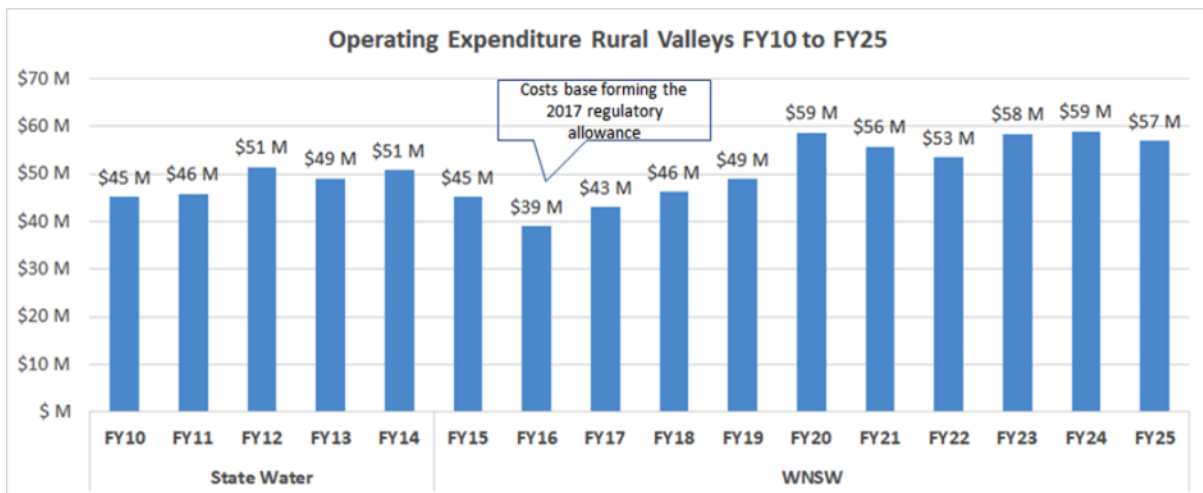
Table 2 - Current period operating expenditure – Allowance vs to actuals FY18 -FY21 (\$million)

IPART Allowance	\$156.90
Labour and General Costs	\$34.70
IT Costs*	\$2.70
Cost allocation/treatment changes	\$2.50
Costs driven by external factors (e.g. drought projects, land tax and insurance)	\$9.10
Reduction in FY21 forecast (since Pricing Proposal submission)	\$2.60
Actual/forecast	\$208.30
Variance (\$)	\$51.40
Variance (%)	33%

* Consisting of software licensing and network and telephony cost.

WaterNSW wishes to highlight that our proposed operating costs are broadly consistent with the longer term trend of operating expenditures for the Rural Valleys. The figure below tracks operating expenditure since 2019-10 when the assets were managed by State Water Corporation, and provides forecast information from 2020-21.

Figure 1- Current period operating expenditure – Allowance vs to actuals FY18 -FY21 (\$million)



As illustrated above, the operating cost forecast for the 2017 regulatory allowance was based on the lowest expenditure over the past eleven years that occurred around the time of the merger of State Water and the Sydney Catchment Authority in 2015. We do not consider these cost to be representative of the long term sustainable costs of meeting our service level requirements in the Rural Valleys. WaterNSW is actively participating with IPART and its technical advisors in the assessment of the efficient operating costs for rural bulk water services for the upcoming determination period.

3.2 Operating expenditure over the 2021 Determination period

WaterNSW maintains that the operating expenditure program for the 2021 Determination period as outlined in Section 6 of the Pricing Proposal and as summarised below is prudent and efficient.

WaterNSW notes that IPART has not formed a preliminary view on WaterNSW's proposed operating expenditure for the 2021 Determination period and that it has engaged a technical consultants to review and make recommendations to IPART on the efficiency of WaterNSW's proposed operating expenditure.

WaterNSW adopts a 'bottom up' costs build accounting for anticipated changes in obligations, service delivery, additional functions, and operations. WaterNSW proposes \$228 million in operating expenditure over the next four years. This is 9% higher than actual operating expenditure over the 2017 Determination period.

Routine and Corrective maintenance - to maintain the capability of WaterNSW assets - represents the largest operating expenditure item. To ensure efficient expenditure, our maintenance works program is delivered using a combination of our internal workforce, external suppliers, and contractors to ensure that efficient and lowest sustainable cost activities, projects and work program resources are maintained over the long-term.

3.2.1 Insurance costs

WaterNSW has proposed insurance costs of \$3.6 million in 2021-22. Of this, approximately two-thirds will be spent on the RTP, and one-third on self-insurance of physical assets through the Treasury Managed Fund.

IPART's Issues Paper noted that WaterNSW's direct insurance costs were forecast to fall over 2022-24. WaterNSW confirms that its forecast for direct insurance costs is stable over 2021-24 and has communicated the necessary adjustments to IPART's technical consultants.

3.2.2 Risk Transfer Product

2017 Determination

In its 2014 Decision, the ACCC introduced an unders and overs mechanism ("**UOM**") for most of the MDB valleys, to address WaterNSW's revenue volatility risk. This risk arises because WaterNSW's tariff structure (which is mostly 40:60 fixed to variable) does not match our cost structure (which is largely fixed), and water sales volumes can be volatile and difficult to forecast. This fixed cost to variable tariff structure is a core subject we wish to engage with customers on in a detailed engagement process to understand the outcomes customers may accept. We understand that IPART intends on initiating a separate review of this matter.

For the 2017 Determination, IPART decided to discontinue the UOM as it considered that a revenue volatility allowance was a better approach to mitigating revenue volatility risk. To address the existing UOM balance, IPART incorporated a UOM payback amount in prices so that the balances can be recovered over a 12-year period (potentially three determination periods).

WaterNSW's costs are largely fixed, whereas around 60% of our revenue in most valleys is raised through usage charges and 40% of our revenue is raised through fixed charges. This difference between our cost structure and our tariff structure, combined with the difficulty in

accurately forecasting water extractions (particularly under IPART's use of the 20-year rolling average), means that WaterNSW is exposed to revenue volatility and hence significant financial risk.

In light of IPART's decision to move away from the UOM in the 2017 Determination, WaterNSW proposed the inclusion of an RTP.

WaterNSW proposed that the RTP apply to valleys that are at cost recovery and with fixed-to-variable tariff structure ratios of less than 80%. We also proposed to allocate the cost to the nine valleys, based on their relative revenue volatility. The RTP:

- Was in addition to our proposal to continue the UOM. WaterNSW contended that the UOM does not materially address the year-to-year volatility in revenues;
- Involved WaterNSW entering into a financial arrangement with a third party to mimic an 80:20 tariff structure to address its year-to-year revenue volatility issue. For valleys that have a tariff structure of 40:60, the third party would receive two-thirds of actual usage revenue and in exchange provide WaterNSW with two-thirds of expected usage revenue. This means that WaterNSW would receive 80% of its expected user notional revenue requirement each year; and
- Would not be charged to a particular valley if the tariff structure for that valley were to be switched to an 80:20 tariff structure. WaterNSW considered it appropriate that we bear some revenue volatility risk, as business revenues are generally not guaranteed in markets (and not in regulated utility sectors with price caps).

WaterNSW proposed that a revenue risk management product could achieve a 'win-win' for customers, WaterNSW and capital providers because:

- Customers expressed a desire for a higher proportion of their charges to be comprised of variable charges to provide increased alignment between their revenues and costs;
- WaterNSW's costs are largely fixed, and its return on equity allowance provided by IPART is based on the business having relatively low revenue risk; and
- WaterNSW and its capital providers considered that a consistent 80:20 revenue structure across both Greater Sydney and Rural Valleys was desirable and achieved greater alignment with the risk compensation being provided in revenue.

In response to IPART's 2017 draft decision, stakeholders reiterated their support for continuing the UOM and opposed providing WaterNSW with a volatility allowance⁷ and WaterNSW provided an updated market quote of \$1.3 million per year for the RTP.

In making its final Determination in 2017, IPART noted that WaterNSW had undertaken a competitive tender process for its RTP and received quotes from several providers. IPART also noted that the RTP would give WaterNSW greater certainty in cashflows each year, compared with undertaking self-insurance, which would be the case if its valleys had an 80:20 fixed to variable tariff structure. Therefore, IPART considered an RTP allowance was more reasonable for this greater level of certainty as opposed to about \$1 million per year under a self-insurance option.

The volatility allowance IPART incorporated into prices was \$1.3 million in 2017-18 and then \$1.274 million each year thereafter, based on WaterNSW's updated market quote, adjusted for IPART's decision to adopt an 80:20 tariff structure in the Peel valley from the second year of the

⁷ See IPART 2017 Determination for WaterNSW's rural bulk water charges, page 93.

determination period (i.e. in 2017-18 the tariff structure in the Peel valley to be maintained at 40:60 but from 2018-19 onwards the tariff structure will be 80:20 fixed to variable).

Actual outcomes during the 2017 Determination period

In November 2017, it was determined that the actual cost of the revenue volatility product was higher than originally quoted by WaterNSW third party provider iCare – namely, it increased from \$1.3 million per annum to \$2.3 million per annum.

This premium change was a result of several key factors:

- A desire by WaterNSW to have the product terms consistent with those included in other insurance contracts, to ensure that it could be accounted for under AASB-4 Insurance and not AASB-139 Financial Instruments;
- Removal of the no-claim discount; and
- Change in period of cover from 4 years to 3 years.

In framing the risk management product, in the first instance WaterNSW sought a product from the market that was set up either as an insurance product or a fixed-for-variable revenue swap product.

Importantly, it was determined that the swap product was not something that could be offered by iCare as it is a re-insurer and not involved in financial products. Therefore, the product was re-structured to be an insurance product which provided that WaterNSW would keep any upside revenue benefit but would be insured against any downside revenue risk.

WaterNSW notes that a swap market does not currently exist for the RTP and any suggestion of a lower price for such a product that doesn't exist is purely speculative.

As a result of the change in the actual premium relative to forecast, the operating expenditure overspend related to the risk transfer product is \$1.6 million over the 2017 Determination Period. This amount represents the three years of difference between the actual and forecast premium, less the allowance provided for the one year that no insurance product was in place.

As outlined in our Pricing Proposal, WaterNSW proposes \$2.3 million of expenditure per annum from 2021-22, in line with our current premiums.

Approach to volume risk management moving forward

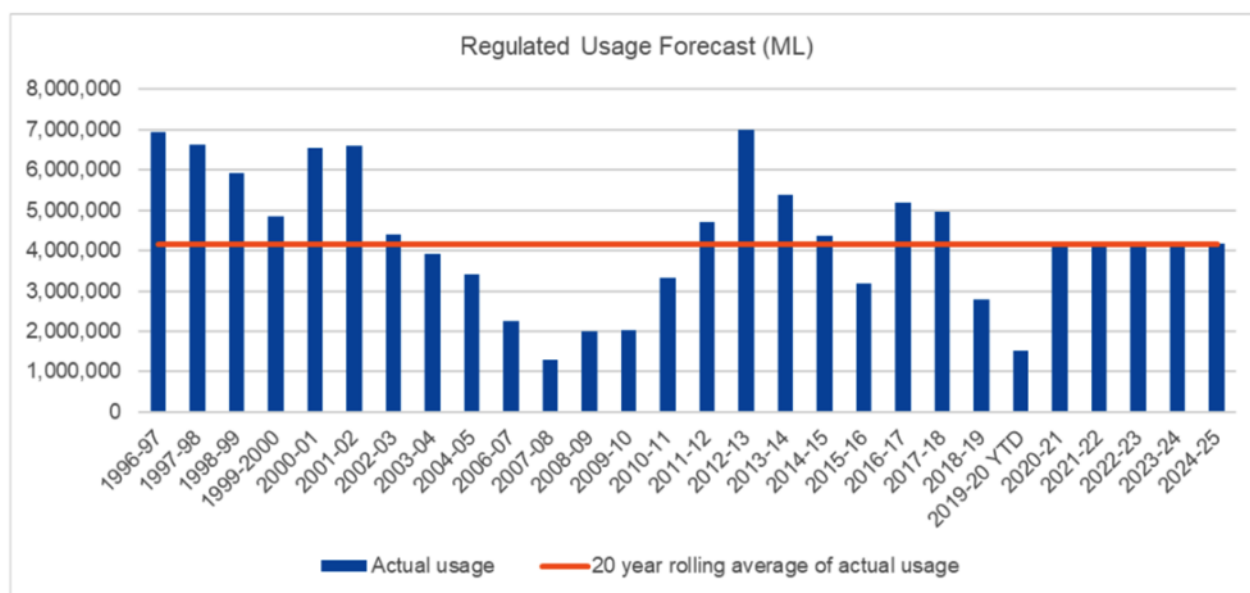
WaterNSW notes that regulation of the MDB valleys has historically contained a range of approaches to managing the financial and pricing impacts associated with volume risk. For instance:

- In its 2010 determination for State Water, IPART approved an annual allowance for revenue volatility of **\$2.2 million per annum**. This reflected IPART's view on the holding costs required for State Water to borrow funds in years of revenue shortfalls. It was based on the average of the absolute differences between the 20-year average of extractions, and actual extractions in each of the previous 20 years (1990 to 2010).
- In 2014, the ACCC introduced a UOM for most of the MDB valleys, to address WaterNSW's revenue volatility risk associated with a largely variable tariff structure; and
- In 2017, IPART decided to discontinue the UOM as it considered that a revenue volatility allowance was a better approach to mitigating revenue volatility risk. The existing UOM balances to be recovered over a 12-year period (potentially three determination periods).

WaterNSW supports the need to incorporate mechanisms for managing volume variations into the determination to enable us to recover the efficient costs determined by IPART and the corresponding impacts on our financeability if volumes are significantly below IPART’s forecasts that underpin variable charges.

As illustrated in the following Figure 7 reproduced from our Pricing Proposal, the significant volume reductions experienced over the past few years would have had an extreme impact on our financeability without some form of volatility risk mitigation. This can be seen in the figure below where forecast volumes for FY20 were 66% below the 20-year average that was used for price setting purposes.

Figure 7 – 20-year rolling average of water sales



Drought has led to reduced volumes compared with regulatory allowances, with the 20-year rolling average for water usage falling by 7.4% since the 2017 Determination (4,165 GL vs 4,473 GL set by IPART), with actual / forecast volumes being significantly below the average in 2018-19 and 2019-20 as illustrated above. When constant revenues are applied to a lower volume base, this results in a higher price in order to recover our efficient costs.

As implied from Figure 7 above, and based on the operation of the RTP, during the current regulatory period, WaterNSW has made two claims on the insurance policy to date.

As the RTP is aligned to the duration of the determination period, WaterNSW is currently engaging with external insurance providers to obtain updated market quotes for potentially extending the RTP. As noted above and given the relatively large claims made in the first two years of the product’s life, there is uncertainty as to the level of premium moving forward. WaterNSW will provide this updated market information on potential RTP premium on a confidential basis as this information becomes available.

We note, however, that the current premium is approximately \$1 million per annum higher than IPART’s RTP allowance from the 2017 Determination (although in line with IPART’s previous allowance for State Water in 2010), with the likelihood of the premium increasing further in recognition of recent claims and expectations of future water use. This raises some significant uncertainty as to the role of the RTP moving forward and whether it remains a cost-effective approach to managing volume risk in its current form.

In recognition of the various approaches to volume risk management from previous determinations and potential costs of cost-effective solutions, we outlined our preferred approach to managing volume risk.

1. Align the fixed to variable structure of our tariffs to our underlying cost structure (i.e. approximately 80% fixed).

WaterNSW notes that options around tariff structure changes were not canvassed with our customers as part of our one-year regulatory proposal, but this should form a key part of IPART's consultation on a four-year determination period. Previous customer engagement identified concerns over moving to a higher fixed proportion of our tariffs, particularly during drought, although it is questionable whether the additional cost impacts associated with the RTP or other products (and the impact of changing tariff structures) have been fully contemplated. Moving to a higher proportion of fixed charges would necessarily reduce the need for, and cost of, providing a revenue volatility allowance, and therefore should be considered in any four-year determination.

A revenue cap would also address the volume risk, although this is outside the current price setting requirements of the IPART Act and as such is not being considered or proposed for this review.

2. Incorporate the market-tested cost of the RTP in IPART's allowances moving forward.

This effectively represents the status quo, updated for expected efficient costs. As noted above, this would require an uplift to reflect the current actual costs of the product that are above IPART's allowance plus a potential increase to RTP premiums based on market-tested quotes from insurers. We reject IPART's proposition that a lower cost could be provided via the swap market, since (as noted above) such a product does not exist and therefore providing a reduced premium would be speculative.

3. Re-introduce the UOM. This mechanism, while suffering from implementation risk (i.e. if the UOM balances are sufficiently large, they become impractical to resolve due to issues of affordability and or pricing stability). That said, a UOM is the lowest cost option that has previously been supported by customers and regulators and one that IPART should not discount if the cost of other volume risk mitigation tools becomes prohibitive.

WaterNSW looks forward to continuing to assist IPART in addressing volume variability in a cost-effective manner and notes that the optimal outcome may be one that balances the level of fixed to variable tariff structures (which IPART is seeking stakeholder comments) with the acceptable costs of an RTP product. Failing this balance, re-introducing the UOM may be an attractive and low-cost solution to managing volume risk.

Irrespective of the approach to managing volume risk adopted by IPART as outlined above, WaterNSW notes that IPART must satisfy itself that the continued use of the 20-year rolling average reflects the best forecast of water sales for the upcoming regulatory period so that expected volume volatility is minimised in the first instance.

3.3 Updated operating expenditure forecast for 2022-24

Since WaterNSW submitted its Pricing Proposal, including high level forecasts for 2022-24 consistent with our Statement of Corporate Intent, several changes have occurred within our regulatory environment, which require updates to our costs for these years.

This further highlights the benefit of a one-year regulatory submission in an uncertain regulatory and policy environment.

Our updated operating expenditure forecasts for 2021-25 are summarised below.

Table 3 - Updated operating expenditure forecast for 2021-25 (\$'000)

Our updated operating expenditure for 2021-25 (\$'000s)					
	2021-22	2022-23	2023-24	2024-25	Total
Asset Management Planning and Maintenance					
Routine Maintenance	16,892	16,674	17,809	18,263	69,638
Corrective Maintenance	4,108	4,048	4,332	4,227	16,715
Asset management planning	2,176	4,532	3,135	2,532	12,374
Renewal and Replacement	25	841	20	16	902
Sub total	23,201	26,095	25,295	25,037	99,629
Water Delivery and Other Operations					
Water Delivery and Other Operations	9,068	8,162	8,492	8,065	33,786
Flood Operations	921	1,077	1,058	1,010	4,066
Sub total	9,988	9,239	9,549	9,075	37,852
Direct Insurances					
Sub total	3,622	3,622	3,622	3,622	14,488
Hydrometric and Water Quality Monitoring					
Hydrometric Monitoring	4,214	4,144	4,534	4,387	17,279
Water Quality Monitoring	813	800	856	835	3,305
Sub total	5,027	4,945	5,390	5,222	20,584
Dam Safety Compliance					
Sub total	4,128	5,618	5,836	5,155	20,738
Customer Support, Compliance and Other					
Customer Support	2,095	2,021	2,092	2,045	8,253
Customer Billing	589	561	564	545	2,259
Metering and Compliance	2,067	1,902	1,854	1,708	7,532
New Metering and Compliance	0	0	0	0	0
Corporate Systems	0	0	0	0	0
Internal	2,054	3,828	3,979	3,907	13,768
Structural and other enhancements	0	0	0	0	0
Sub total	6,805	8,312	8,489	8,205	31,811
Environmental Planning, Protection and Delivery					
Environmental Planning and Protection	536	464	641	551	2,192
Environmental Delivery	78	77	83	81	320
Sub total	614	541	724	633	2,512
Total	53,387	58,372	58,905	56,950	227,615

3.3.1 Dam Safety Levy

Dams Safety NSW has recently proposed an amendment to the *Dams Safety Act 2015*, which would result in the introduction of a dams safety levy to be paid by declared dam owners from 1 July 2021. The levy payable would be calculated by reference to a levy unit, and the number of levy units payable would depend on the risk classification of declared dams. Dams Safety NSW is currently consulting with dam owners on the proposal.

WaterNSW has estimated the impact of this proposed dams safety levy on its opex requirements, based on the Consequence Category for each dam and the levy unit cost proposed. In total, the levy would result in an estimated \$226,000 of additional operating expenditure per annum in Rural Valleys. The table below presents the allocation of the levy across valleys, based on a mapping of each dam to a valley.

Table 4 - Dam Safety Levy Opex – forecast costs per valley (\$)

	2021-22	2022-23	2023-24	2024-25
Border	10,499	10,499	10,499	10,499
Fish River	20,998	20,998	20,998	20,998
Gwydir	11,842	11,842	11,842	11,842
Hunter	34183	34183	34183	34183
Lachlan	23,685	23,685	23,685	23,685
Macquarie	23,685	23,685	23,685	23,685
Murray	22341	22,341	22,341	22,341
Murrumbidgee	23,685	23,685	23,685	23,685
Namoi	22,341	22,341	22,341	22,341
North Coast	10,499	10,499	10,499	10,499
Peel	11842	11842	11842	11842
South Coast	10,499	10,499	10,499	10,499
Total – all valleys		226,099	226,099	226,099

3.3.2 Electrical safety improvement

WaterNSW has identified that it will incur an additional \$2.3 million of opex associated with improving electrical safety across Rural Valleys over 2022-24, to be incurred in 2022-23, in addition to the original forecast provided to IPART on request.⁸

The annual breakdown of additional expenditure across for electrical safety improvements over 2022-25 is detailed below and has been included in the 'Asset management planning' activity category.

The primary objective for this project is to identify and manage reasonably foreseeable hazards that could give rise to risks to health and safety as mandated in the Work Health and Safety Act and Regulation. The additional objectives for undertaking this project include:

- Improved plant reliability through the identification of assets at immediate risk of failure;
- Ensuring accurate and up-to-date asset information and register for Water NSW electrical distribution assets enabling improved record of maintenance history and continued compliance with ISO 55001;
- Increased understanding of WaterNSW asset base risk exposure;
- Evaluating, identifying and prioritising risks requiring immediate, medium- and long-term treatment to an acceptable level (as low as reasonably practicable); and
- Providing factual foundation to future risk mitigation and remediation works.

⁸ The total cost is \$3.7 million across the WaterNSW portfolio – the balance of the project relates Greater Sydney and MDBA assets, and therefore is not subject of this submission.

While developing electrical asset class strategies, gaps had been identified in availability of critical electrical asset information and reliable means of hazard identification for electrical distribution assets. These strategies have been developed recently, hence recommendations to manage these risks to an acceptable level, could not be included in the recent Pricing Proposal submission.

The alternative 'Do Nothing' option regarding electrical safety improvements creates an unacceptable risk profile for WaterNSW.

3.3.3 Rural Bridges Program

After reviewing its earlier forecast for 2022-24 which was provided to IPART, WaterNSW has identified that it will incur an additional \$0.8 million of operating expenditure in 2022-23 associated with the removal of an operationally redundant bridge identified in the Lachlan Valley.

The removal is required to reduce risks to operational personnel and to ensure public safety. In the interim, measures have been put in place to ensure temporary isolation of the structure can be maintained until the works are scheduled.

The breakdown of additional operating expenditure across the 2021 Determination Period for the Rural Bridges Program is detailed below and has been included in the 'Renewal and Replacement' activity category.

This expenditure is required to ensure safe access for WaterNSW personnel, contractors and the public. It is also part of the broader Rural Bridges Program, the purpose of which is described in more detail below.

3.3.4 Dam Safety Compliance

Following an Independent Review of the Dams Safety Act 1978 and the Dams Safety Committee in 2013, new dams safety legislation, the Dams Safety Act 2015, received assent in September 2015. The Dams Safety Regulations 2019 triggered the commencement of the new regulatory framework on 1 November 2019, including the Dams Safety Act 2015, the regulations themselves. However, the accompanying standards and guidelines are yet to be prepared and/or finalised.

WaterNSW has undertaken a comprehensive review of the regulatory implications whilst developing and implementing a change management plan to ensure compliance with the regulatory obligations. There are opex and capex implications for WaterNSW. The opex impact include the direct costs to implement the changes and then and recurring costs thereafter. The net decrease or increase in capital expenditure that will be realised will depend upon the business positions to be adopted regarding the extent and timing of risk reduction measures for each dam.

The new legislation has significantly increased penalties for non-compliance up to \$1.1 million for corporations and \$250,000 for individuals. However, there are some ambiguities and lack of clarity in the regulatory requirements resulting from contradictions in the regulations, absence of enforceable standards and meaningful guidelines. WaterNSW is working with Dam Safety NSW in a constructive manner to resolve these issues and provide greater clarity to all Dam owners within NSW.

After reviewing its earlier forecast for 2022-24 provided to IPART, WaterNSW has identified that it will incur an additional \$2.8 million of operating expenditure required to meet our regulatory and business compliance obligations. The \$2.8 million increase in operating expenditure will meet the following objectives:

- Regulatory compliance - costs for the prescribed additional dam safety studies;
- Knowledge required to optimise future non-structural asset investment decisions - including the Annual Exceedance Probability (AEP) of the Probable Maximum Precipitation (PMP) studies and
- Asset knowledge to inform future capital investment decisions for non-declared business critical water retaining structures – WaterNSW Weir Portfolio Risk Assessment.

The breakdown of Dam Safety Compliance operating expenditure is shown below.

Table 5 - Dam Safety Compliance Opex – Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Dam safety review & associated studies	-	0.48	0.24	0.04	0.75
Spillway Chute, Outlet works and OPT testing and surveillance	-	0.22	0.22	0.08	0.52
Risk mitigation plans & options	-	0.10	-	-	0.10
Annual Exceedance Probability (AEP) of the Probable Maximum Precipitation (PMP) studies	-	0.29	0.17	0.02	0.48
Weir Safety Review	-	0.27	0.40	0.24	0.91
Total	-	1.35	1.02	0.38	2.76

Annual Exceedance Probability of the Probable Maximum Precipitation studies

An important consideration of dam safety is ensuring that a dam can store or pass the water associated with very rare rainfall events. Often these events are significantly more severe than any on the historical record; a climatically homogenized region based statistical analysis is required to estimate the likelihood of very severe events. These statistical forecasts are supported by site specific research of historical storms and their transposition and transportation in a similar region.

An Annual Exceedance Probability (“AEP”) of Probable Maximum Precipitation (“PMP”) study will forecast the severe rainfall events directly affecting the probability of loading conditions. These costs fall under IPART Activity 27 - Dam Safety Compliance.

The timing of these studies are determined by our regulatory obligations, the dam’s current risk position and the likely impact on dam management based on likely results. The activities associated with higher risk dams are prioritised.

The forecasts costs for each study are based on recent similar studies WaterNSW has undertaken.

Weir Safety Review

WaterNSW relies on non-declared water retaining structures to deliver water to its customers. Some of these structures are business-critical as their failure would result in significant consequence including environmental, social, reputational and customer impacts.

These assets are managed in accordance with our Dams Safety Management System. It is imperative that a risk-based assessment of these structures is undertaken to ensure the business understands the current risk profile. This information will be used to develop prudent risk informed asset lifecycle investment decisions.

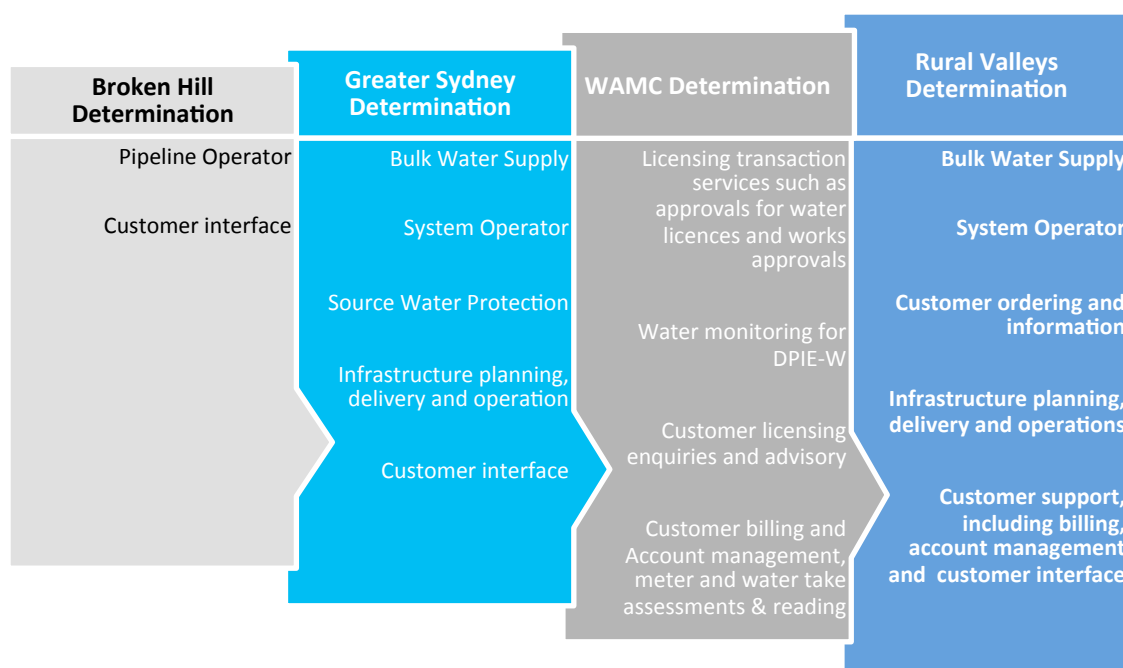
The timing of these studies is determined based on the river system in which the structures operate. This will enable a system based approach to prioritising investments within a river system.

The forecast costs for each study are based on recent studies WaterNSW has undertaken requiring similar effort.

3.3.5 Regulatory team FTEs

WaterNSW is currently participating in two concurrent regulatory determination processes (Rural Valleys and WAMC) with IPART and is subject to four regulatory pricing determinations as outlined below:

Figure 2 – Regulatory determinations applicable to WaterNSW



Relative to other water utilities, the number and complexity of the various determinations WaterNSW is subject to requires a significant resourcing effort by WaterNSW.

During the current review process and interactions with IPART and its technical consultants, it has been identified that WaterNSW’s regulatory team (3 FTEs) is significantly smaller than that of its peers. While the quality of outputs has been high, there have been challenges in providing timely responses to IPART’s information requests (including approximately 300 requests for information by IPART’s technical consultants).

In recognition of the complex regulatory environment we face, and to ensure that WaterNSW meets or exceeds IPART’s expectations regarding the regulatory information we are required to provide, including through four regulatory determination processes, WaterNSW has updated its future expenditure forecasts to include an additional 3 FTEs.

3.3.6 Land Tax

WaterNSW included in its Pricing Proposal a forecast of its land tax liability over the period. Land tax liability is calculated using Valuer General land valuations. These valuations were unavailable

at the time of forming the forecasts in our proposal, and the fair value of land was used as a proxy.

In late June 2020, information on our Valuer General land valuation became available to WaterNSW. This has resulted in an increased forecast of our land tax liabilities.

WaterNSW is continuing to work with external consultants in relation to its land tax liability.

3.3.7 Long-term Transformational Strategy

WaterNSW is requesting additional funding for the development of a long-term transformational strategy. The project will be aimed at identifying and implementing efficiencies for the WaterNSW business over time.

We consider that dedicated funding for such a project will materially improve our ability to reduce costs in the long run. Over time this will provide significant and lasting benefits to our customers.

4. Capital expenditure

4.1 Capital expenditure during the 2017 Determination period

WaterNSW notes that the efficiency of our current capital expenditure program is the subject of a detailed technical review by IPART's consultants. We are actively participating in the consultants' review and have worked diligently to respond to over 300 requests for information as part of the technical review in order to demonstrate the prudence and efficiency of our proposed program.

We are confident that our proposal represents the prudent and efficient capital expenditure to provide required services to our customers. WaterNSW's capital expenditure is based upon the assessed requirement to meet customer service levels at an acceptable level of reliability, while maintaining compliance with our regulatory obligations.

As outlined in our Pricing Proposal (Section 4), total actual capital expenditure over the 2017 Determination period was \$234.2 million, which is \$69.6 million (42%) more than the allowance set in 2017.

During the 2017 Determination period, WaterNSW had been directed by the NSW Government to implement several large drought-related capital works, driven by the exceptional circumstances of the current drought. Specifically, in 2018-19, this included planning and preliminary works for three dam projects (raising the Wyangala Dam wall, replacing the Dungowan Dam, and a new dam on the Mole River), as well as emergency drought works in the Peel, Border and Macquarie catchments to protect town water supplies.

In addition to assisting with water security and supply issues associated with the drought, these projects will help to stimulate their local economies and provide jobs in the near future to aid the recovery following COVID-19.

WaterNSW has incurred the costs of these drought-related capital works, contributing to the capital expenditure variation from allowance over the 2017 Determination period. As outlined in our Pricing Proposal, WaterNSW considers that given these projects have been undertaken based on a NSW Government direction, it is appropriate that these costs be borne directly by the NSW Government. This is proposed to occur via allocations to the Government cost sharing arrangements.

Excluding the unforeseen drought resilience projects, actual capital expenditure above IPART allowance was primarily driven by:

- The need to update key corporate systems (e.g. information technology systems) that had reached the end of their useful life in order to streamline delivery and operational decisions;
- Dam safety upgrades that were necessary to address new and emerging risks (at Lake Cargelligo and Lake Pamamaroo) under the newly implemented Dam Safety Regulations 2019; and
- Higher expenditure for Renewals and Replacement, which reflects our view that the historical allowance from IPART was insufficient to allow us to appropriately replace our assets and meet our regulatory and customer obligations.

4.2 Capital expenditure for the 2021 Determination period

Our capital expenditure requirements in the 2021 Determination period comprise four high level categories which reflect “capability” drivers. The four investment categories are:

- Maintaining capability – Renewals and replacement, corporate systems and asset management and planning;
- Augmenting capability – Dam expansions and corporate systems improvements;
- New capability – Water delivery and other operations and drought response projects (e.g. new dams); and
- Regulatory compliance activities – Dam safety compliance and environmental planning and protection.

WaterNSW maintains that the capital expenditure program for the upcoming determination period as outlined in Section 4 of our Pricing Proposal, with the adjustments outlined in this response, is prudent and efficient.

WaterNSW prioritises capital works according to a number of core principles to ensure the effective and efficient management of risks and benefits for customers and community. The intent is to ensure that WaterNSW has the right asset capability to meet our obligations to customers, delivering service at the required level. These core principles apply to the identification, prioritisation and scheduling of capital works:

- All investment is justified against ‘do nothing’ and alternative options. This means that capital investment projects are required to ‘pay their way’;
- Investment analyses consider whether an asset is still needed. Retirement or disposal is always a possibility;
- WaterNSW adopts a policy of “latest responsible intervention” whilst being sensitive to asset criticality, regulatory compliance requirements, and life-cycle costing considerations; and
- Customer interests are always considered - ‘should our customers be paying for this?’ and ‘what is the likely bill impact of this decision?’ are both core considerations in the capital planning process.

These processes aim to deliver an appropriate level of service to our customers for the least possible cost, while managing the risk to the organisation, customers and stakeholders to an acceptable level and maintaining regulatory compliance.

WaterNSW forecasts \$260 million in capital expenditure over the next four years. This is higher (11%) than actual capital expenditure over the 2017 Determination Period. The forecast has been developed with regard to uncertainties our customers face in terms of drought and COVID-19.

4.2.1 Large drought-related capital works

WaterNSW will incur capital expenditure associated with large drought-related capital works during the 2021 Determination Period.

While there is anticipated to be variation in expenditure on major drought-related projects over time, WaterNSW considers expenditure will be significant as the Dungowan and Wyangala Dam projects are finalised. Currently, NSW Government has publicly announced a 50:50 mix of NSW Government and Commonwealth Government funding for the Wyangala and Dungowan Dam projects, however no formal funding agreement is in place with WaterNSW.

WaterNSW maintains the position outlined in the Pricing Proposal (section 5) to recover the 'net' costs of these dam projects (i.e. less any grant funding from Government) via the Government RAB for the 2021 Determination Period and not through user charges.

Specifically, WaterNSW is proposing the introduction of a cost category 'Drought Response' as prolonged periods of drought are expected to become increasingly common. This category will cover costs related to the delivery of works for critical drought infrastructure including asset renewals and upgrades). It will allow IPART to apply the cost share framework and allocate efficient costs of drought.

WaterNSW proposed 0% customer share for 2021-22 given these projects are incurred based on a direction from Government that the NSW Government, as the impactor, should fund these investments. This has yet to be confirmed for subsequent years.

4.3 Updated capital expenditure forecasts for 2022-24

Our updated capital expenditure forecasts for 2021-25 are summarised below.

Table 6 - Updated Capex Forecast for 2021-25 – Rural Valleys (\$'000)

Our updated capital expenditure for 2021-25 (\$'000s)					
	2021-22	2022-23	2023-24	2024-25	Total
Renewals and Replacement	19,800	35,479	26,606	20,169	102,054
Corporate Systems	7,872	6,969	12,171	8,752	35,765
Environmental Planning & Protection	3,312	3,239	32,857	32,382	71,790
Water Delivery & Other Operations	2,384	1,894	0	0	4,278
Corrective Maintenance	1,070	673	0	0	1,742
Routine Maintenance	229	236	240	317	1,022
Asset Management and Planning	1,224	1,039	1,328	1,191	4,783
Dam safety compliance	12,300	14,805	6,977	4,861	38,943
Total	48,192	64,335	80,179	67,673	260,378

The following investments were not included in our one-year Pricing Proposal or the original expenditure estimates provided to IPART for subsequent years, but are necessary if IPART introduces a four-year determination period.

4.3.1 Rural Bridges Program

WaterNSW has identified that it will incur an additional \$7.1 million of capital expenditure associated with renewing and maintaining deteriorated Bridges across Rural Valleys over the four-year determination compared to the original forecast provided to IPART for a one-year period.

The breakdown of additional expenditure across the 2021 Determination Period for the Rural Bridges Program is detailed below and has been included in the 'Renewal and Replacement' activity category.

Table 7 - Rural Bridges Program Capex – Rural Valleys (\$million)

Valley	2021-22	2022-23	2023-24	2024-25	Total
Lachlan	0.0	1.5	1.2	0.0	2.8
Lowbidgee	0.0	1.3	0.0	0.0	1.3
Macquarie	0.0	0.7	0.6	0.0	1.2
Murray	0.0	0.0	1.3	0.0	1.3
Murrumbidgee	0.0	0.4	0.0	0.0	0.4
Total	0.0	4.0	3.1	0.0	7.1

The need for the expenditure is underpinned by the following objectives:

- Ensure compliance with WaterNSW Bridge Asset Class strategy;
- Provide safe access for WaterNSW personnel, contractors and the public; and
- Minimise whole-of-life cycle costs through optimal intervention.

Jacobs Engineering Group undertook a condition assessment audit of the 73 bridges across 11 Rural Valleys in 2019 which informed future maintenance requirements for each bridge.

A risk-based approach was used to prioritise bridge works to address high risk bridge structures that are recommended for replacement. Risk was assessed considering the condition of the bridge and the operational importance of the bridge (e.g. where it is situated). There are 9 bridges (across 5 Rural Valleys) requiring upgrades during Years 2-4 of the four-year determination period.

4.3.2 Dam Safety Compliance

The management of dam safety is a critical aspect of meeting WaterNSW's legal and regulatory requirements, its business objectives and the expectations of our customers and community. This objective is achieved by implementing and maintaining the WaterNSW Dam Safety Management System (DSMS).

The Dams Safety Regulation 2019 triggered the commencement of the new regulatory framework on 1 November 2019, including the Dams Safety Act 2015. A two-year period was provided for transitioning to the new regulation. During this period, the regulator is developing and implementing the regulatory material to assist dam owners in discharging their compliance obligations.

WaterNSW has undertaken a comprehensive review of the impacts resulting from the new regulation whilst developing and implementing a change management plan to ensure compliance with the regulatory requirements. The DSMS is currently being updated to account for these changes.

The health of the core elements of the Dam Safety Management System remain satisfactory and generally meet the principles of the new regulatory requirements. The development and implementation of strategic improvements is being progressed as planned.

A prudent and least cost investment strategy has been developed for the rural dams based on the approach in the DSMS that is aligned with the new regulation.

A staged and incremental approach to addressing the dam safety risks is applied to limit the cost impact and ensure the outcomes continue to target dominant risks. The resulting series of activities were evaluated for delivery and need for completion in the next four years to inform the scope of works for proceeding (linked) studies or upgrades.

The shortlisted activities that fall within the four-year period are grouped into themes, where appropriate; large capital projects are detailed as standalone items.

The themes and capital projects are provided in Appendix 2.

4.4 MDBA and BRC costs

The MDBA is an independent government agency, which is responsible for planning and managing the Murray-Darling Basin's water resources in the interests of all Basin states. The BRC is similarly responsible for operating and maintaining jointly 'owned' water infrastructure and implement agreed water sharing arrangements in the Queensland-New South Wales border region. Together, these two cross-jurisdictional agencies coordinate and manage water resource and infrastructure within the Border, Murray and Murrumbidgee valleys, using a 'whole of system' perspective where more than one State is involved.

Under an inter-governmental agreement, the NSW Government contributes funds each year to the MDBA and BRC. In the past, the NSW Government has directed WaterNSW to recover a proportion of these funds from our customers and in particular, those in the MDBA and BRC valleys.

As recently as the 2017 Determination Period, we were advised by DPI Water of the maximum charges the NSW Government required us to collect for the period and we passed-through those costs to licence holders in the Murray and Murrumbidgee (MDBA) and Border (BRC) valleys in the form of a two-part tariff, comprising entitlement and usage charges. We propose to continue to pass through the costs of the MDBA and BRC and to maintain the structure of the MDBA and BRC charges for the 2021 Determination Period.

In March 2020, DPIE-W advised WaterNSW that there would be a significant increase in total MDBA and BRC contributions for the 2021 Determination Period and a change to the allocation of those costs between WAMC and WaterNSW, whereby WaterNSW would be assigned a higher share of the costs. In particular, DPIE-W has proposed⁹:

- \$130 million in total MDBA costs (a 2% increase on the 2017 allowance), with \$96 million to be recovered by WaterNSW Bulk Water (56% above the 2017 allowance); and

⁹ The 2017 allowance considers 4 years of costs (2016-17 to 2019-20) to enable a fair comparison with the future period i.e. does not include an additional year of costs for the deferral

- \$8 million in total BRC costs (a 66% increase on the 2017 allowance), with \$4 million to be recovered by WaterNSW Bulk Water (73% above the 2017 allowance).

As IPART has noted in the Issues Paper, the costs of our MDBA and BRC contributions have risen relative to the 2017 Determination period. We note that MDBA and BRC costs are subject to a separate efficiency review process. We further understand that IPART has already engaged Atkins to review the efficiency of the MDBA and BRC costs and the allocation of those costs between WAMC and WaterNSW.

5. Revenue requirement and price setting

This section outlines the revenue requirement over the four years starting in 2021-22 and discusses associated price structures and price setting for the 2021 Determination.

5.1 Revenue requirement

WaterNSW provided a proposed revenue requirement for 2021-22 as part of our Pricing Proposal. An estimated revenue requirement is provided below for the four-years of the regulatory period based on the updated forecast information provided in this response.

Table 8 – Revenue requirement for 2021-22 (proposed) and from 2022-23 (estimated) (\$'000s)

Item	2020-21**	2021-22	2022-23	2023-24	2024-25
Operating costs**	37,473	53,387	58,372	58,905	56,950
Return of capital (depreciation)	18,618	21,167	21,995	23,055	24,131
Return on capital	29,617	17,697	18,308	19,185	20,068
Working capital allowance	258	24	76	29	47
Tax allowance	1,146	502	454	389	425
Other allowances**	3,874	3,657	3,570	3,561	3,513
Total revenue requirement	90,986	96,434	102,776	105,124	105,134
Efficiency dividend	0	-8,130	0	0	0
Revenue for ring-fenced drought projects	0	8,541	9,945	9,966	9,986

*Revenue requirement in FY23-25 is based on forecast FY20 capex consistent with our pricing submission, and RTP costs with a corrected allocation to valleys.

**2020-21 is the last year of the 2017 Determination period.

5.2 Fixed and variable charges

In setting prices in most valleys, WaterNSW sets a fixed and a variable usage charge. Prices in most valleys are set with a 40% fixed and a 60% variable charge ratio. This reflects historic feedback from licence holders that they prefer higher usage-based charges and lower fixed entitlement-based charges. Higher usage charges give customers greater ability to responding water conditions and requirements.

As discussed earlier in this response, the misalignment between our high fixed cost structure and relatively lower fixed proportion of tariffs creates the potential for significant volume variations if actual sales are materially different than IPART's forecasts included in usage charges at the time of the determination.

The pricing structures approved by IPART at the 2017 Determination are reproduced below.

Table 11.1 Decision on price structures for the 2017 Determination

Valley	Price structure (fixed to variable)
Border	40:60
Gwydir	40:60
Namoi	40:60
Peel	40:60 in 2017-18 and 80:20 in 2018-19 to 2020-21
Lachlan	40:60
Macquarie	40:60
Murray	40:60
Murrumbidgee	40:60
Lowbidgee	100:0
Fish River	80:20
North Coast	90:10
Hunter	60:40
South Coast	80:20

Note: We discuss the North Coast and South Coast valleys in Chapter 12.

In the Issues Paper, IPART seeks stakeholder views on the trade-off between relatively higher usage-based charges and higher costs associated with WaterNSW management of revenue volatility risk.

The majority of WaterNSW costs are fixed, and do not vary with water sales. So, when water usage is low, WaterNSW lower revenue is not matched by a commensurate reduction in costs. This creates revenue risk for WaterNSW which is currently managed through the allowance of RTP.

Our consideration of tariff structures and the RTP is discussed in Section 3.2.2 of this response.

5.3 Indicative prices for the 2021 Determination period

The following tables provide estimated price impacts for Rural Valley customers over the four-year regulatory period. In summary:

- Prices for 2021-22 are as proposed in our original Pricing Proposal; and
- Prices for 2022-23, 2023-24 and 2024-25 are based on a 'glide path' whereby price increases are smoothed over the three years in order to ensure charges are fully cost reflective.

Table 9 – Indicative General Security Entitlement Charges

	2020-21	2021-22	2022-23	2023-24	2024-25	Increase p.a. from FY23 to FY25
Border	2.13	2.16	2.43	2.73	3.07	12%
Gwydir	3.75	3.63	4.16	4.78	5.49	15%
Namoi	8.58	8.51	9.63	10.89	12.32	13%
Peel	4.33	4.34	5.17	6.16	7.34	19%
Lachlan	2.94	2.80	3.46	4.27	5.28	24%
Macquarie	3.07	3.06	3.70	4.47	5.39	21%
Murray	0.81	0.81	0.91	1.03	1.17	13%
Murrumbidgee	1.19	1.18	1.32	1.47	1.65	12%
Lowbidgee*	0.84	0.85	1.18	1.64	2.28	39%
North Coast	9.83	9.83	9.83	9.83	9.83	0%
Hunter	10.98	11.16	13.45	16.21	19.53	20%
South Coast	17.41	17.41	17.41	17.41	17.41	0%

*Lowbidgee charges listed here relate to supplementary licences.

** 2020-21 is the last year of the 2017 Determination period.

Table 10 – Indicative High Security Entitlement Charges

	2020-21	2021-22	2022-23	2023-24	2024-25	Increase p.a. from FY23 to FY25
Border	5.74	5.91	6.64	7.46	8.38	12%
Gwydir	11.93	15.62	17.94	20.61	23.67	15%
Namoi	18.40	24.38	27.58	31.20	35.30	13%
Peel	44.77	45.77	54.54	64.98	77.41	19%
Lachlan	16.56	18.95	23.40	28.90	35.70	24%
Macquarie	14.55	15.65	18.90	22.84	27.59	21%
Murray	1.66	1.83	2.07	2.34	2.65	13%
Murrumbidgee	3.18	3.44	3.84	4.29	4.79	12%
North Coast	12.69	12.69	12.69	12.69	12.69	0%
Hunter	14.15	14.37	17.32	20.87	25.14	20%
South Coast	33.19	33.19	33.19	33.19	33.19	0%

* 2020-21 is the last year of the 2017 Determination period.

Table 11 – Indicative Usage Charges*

	2020-21	2021-22	2022-23	2023-24	2024-25	Increase p.a. from FY23 to FY25
Border	5.86	5.96	6.70	7.52	8.45	12%
Gwydir	12.79	14.21	16.33	18.75	21.54	15%
Namoi	21.52	24.00	27.16	30.72	34.76	13%
Peel	19.78	18.20	21.68	25.83	30.78	19%
Lachlan	20.51	22.42	27.69	34.20	42.25	24%
Macquarie	14.84	15.68	18.94	22.88	27.65	21%
Murray	2.06	2.29	2.58	2.92	3.30	13%
Murrumbidgee	3.57	3.94	4.40	4.92	5.49	12%
North Coast	18.77	18.77	18.77	18.77	18.77	0%
Hunter	13.60	14.04	16.92	20.38	24.56	20%
South Coast	18.60	18.60	18.60	18.60	18.60	0%

*Based on a 20 year rolling average from 1999-2000 to 2018-19, consistent with our pricing submission

** 2020-21 is the last year of the 2017 Determination period.

Table 12 – Indicative Fish River Charges*

	2020-21	2021-22	2022-23	2023-24	2024-25	Increase p.a. from FY23 to FY25
Raw Water						
Access Charge - Major customers	0.42	0.42	0.44	0.47	0.50	6%
Access Charge - Minor customers	84.00	83.59	88.59	93.89	99.50	6%
Usage Charge - all customers	0.26	0.28	0.29	0.31	0.33	6%
Usage above MAQ Charge - all customers	0.68	0.69	0.73	0.78	0.82	6%
Filtered Water						
Access Charge - Major customers	0.68	0.74	0.78	0.83	0.88	6%
Access Charge - Minor customers	164	147.95	156.80	166.18	176.12	6%
Usage Charge - major customers	0.39	0.31	0.33	0.35	0.37	6%
Usage Charge - minor customers	0.5	0.31	0.33	0.35	0.37	6%
Usage above MAQ Charge - major customers	1.07	1.05	1.12	1.18	1.25	6%
Usage above MAQ Charge - minor customers	1.32	1.05	1.12	1.18	1.25	6%

*In our Pricing Proposal, we applied forecast volumes in Fish River which included volumes driven by Wallerawang power station. All prices, including those in 2021-22, have been updated above using a forecast which excludes this usage (20 year rolling average from 1999-2000 to 2018-19).

** 2020-21 is the last year of the 2017 Determination period.

5.4 Indicative bill impacts

As per IPART’s request to provide bill impacts for years 2 to 4, Table 13 below presents price and bill impacts for WaterNSW charges over a four-year determination period (excluding MDBA / BRC charges). The analysis assumes that WaterNSW charges are set on a cost reflective ‘glide path’ over the last three years, with the first year being consistent with our pricing proposal.

Across all valleys, price increases of 15% per annum, excluding the effects of inflation and MDBA / BRC costs, are required in 2022-23, 2023-24 and 2024-25 to fully recover WaterNSW’s costs.

The bill impacts in Table 13 for valleys excluding Fish River are based on simple average between High Security (100ML of entitlements with 100% utilisation) and General Security (100ML of entitlements with 60% utilisation) customers. Bill impacts for Fish River are based on a simple average across major customers and minor customers, based on forecast usage and actual Minimum Annual Quantities.

Table 13 – Indicative Price Changes and Bill Impacts (Combined General and High Security)

	FY21 WNSW Bill (\$)	2021-22 (proposal)	2022-23 (4 year prices)	2023-24	2024-25
Border	\$862	2% (+\$17)	12% (+\$109)	12% (+\$122)	12% (+\$137)
Gwydir	\$1,807	14% (+\$245)	15% (+\$305)	15% (+\$350)	15% (+\$402)
Namoi	\$3,071	14% (+\$427)	13% (+\$459)	13% (+\$520)	13% (+\$588)
Peel	\$4,037	-3% (\$-135)	19% (\$747)	19% (\$890)	19% (\$1060)
Lachlan	\$2,616	9% (+\$238)	24% (+\$671)	24% (+\$829)	24% (+\$1,024)
Macquarie	\$2,068	5% (+\$111)	21% (+\$453)	21% (+\$548)	21% (+\$662)
Murray	\$288	9% (+\$25)	13% (+\$41)	13% (+\$46)	13% (+\$52)
Murrumbidgee	\$504	8% (+\$39)	12% (+\$64)	12% (+\$71)	12% (+\$79)
Lowbidgee	\$42	1% (+\$0)	39% (+\$17)	39% (+\$23)	39% (+\$32)
North Coast	\$2,628	0% (+\$0)	0% (+\$0)	0% (+\$0)	0% (+\$0)
Hunter	\$2,345	2% (+\$55)	21% (+\$492)	21% (+\$593)	21% (+\$714)
South Coast	\$4,018	0% (+\$0)	0% (+\$0)	0% (+\$0)	0% (+\$0)
Fish River	\$1,387,571	-11% (\$-148,044)	6% (\$74,139)	6% (\$78,574)	6% (\$83,274)
Average -all valleys	\$108,604	4% (\$4,150)	15% (\$16,822)	15% (\$19,331)	15% (\$22,216)
Average - all valleys (excl. Fish River)	\$2,024	5% (\$102)	16% (\$333)	16% (\$385)	16% (\$445)

6. Metering reform

As noted in our Pricing Proposal, the NSW Government is implementing a new metering framework for non-urban water take. Given uncertainty around the policy and operational landscape, and the associated costs of metering reform, WaterNSW excluded the costs of the non-urban metering reform from its Pricing Proposal. This section outlines the drivers and timetable for metering reform and the implementation and ongoing management activities that WaterNSW will be required to undertake to as a consequence of metering reform.

Certain elements of the non-urban metering reform program have only recently become clear, enabling WaterNSW to undertake initial analysis of the costs it anticipates incurring in implementing the new framework and in complying with its requirements on an ongoing basis.

These preliminary cost estimates will be further developed and validated, for provision to IPART by the end of November 2020.

6.1 Background

As part of the Water Reform Action Plan (“**WRAP**”) 2017, the NSW Government detailed the implementation of a new metering framework that seeks to improve the standard and coverage of non-urban water meters (“**Metering Reform Program**”). The WRAP was developed following the Matthews Review and the Murray-Darling Basin Compliance Review findings of shortcomings in the NSW water management and compliance and enforcement system.

The Matthews Review was undertaken following allegations of water theft or illegal water take from within the MDB and surrounding regions. At the time, NSW water use accounted for more than half of the water use in the MDB, however an estimated one-third of that water take was unmetered.

The WRAP committed the NSW Government and governance bodies to 40 actions to improve water management in NSW, including a commitment to implement a robust water metering framework. This included the NSW Government clearly articulating and designating roles and responsibilities to the governance and management bodies for NSW water.

The new metering framework has been established with the following key objectives:

- The vast majority of licensed water take must be accurately metered;
- Meters must be accurate, tamper proof and auditable;
- Undue costs on smaller water users are to be minimised; and
- Metering requirements are to be practical and able to be implemented effectively.

For WaterNSW, the major element of the new framework is the introduction of a mandatory metering condition in licences to require metering equipment that meets specified standard plus telemetry to be installed, used and properly maintained on all water supply work approvals above a certain threshold.

Under the new metering framework, water users with works that meet one or more of the following metering thresholds will be required to have compliant metering equipment:

- Works already required to have a meter or measure water take;
- All surface water works except for pumps below 100mm in diameter;
- All groundwater works except for bores below 200mm in diameter;
- Multiple works on a single property or authority; and
- All groundwater works that take water from at-risk groundwater sources.

IN addition, all surface water works, except for pumps below 200mm in diameter will be required to remotely transmit water take information to the NSW Government.

Legislation underpinning the new metering framework has commenced and the requirements will be rolled out over a five-year period, starting with the largest surface water pumps and then progressively implemented on a region-by-region basis. The remaining transition to the new metering requirements will impact the 2021 Determination period:

- Stage 1 - 1 December 2020 - for all surface water pumps 500 mm or larger – estimated 1,260 surface water pumps;
- Stage 2 - 1 December 2021 - for all remaining works in the inland northern region – estimated 7,600 additional works;
- Stage 3 - 1 December 2022 - for all remaining works in the inland southern region – estimated 7,380 additional works; and
- Stage 4 - 1 December 2023 - for all remaining works in the coastal regions – estimated 6,000 additional works.

6.2 Implementation and ongoing management activities

WaterNSW currently undertakes meter reading, a role which will greatly expand in the 2021 Determination period with the requirements for additional meters to be installed. As a result of these reforms, customers will need to install new meters or demonstrate the accuracy of existing

meters, with around 4,500 meters (surface water works except pumps less than 200mm) also requiring telemetry.

Given the phased transition to the new metering framework, WaterNSW will be required to extend some of its current practices when undertaking implementation activities to transition to the full and amended metering process. Major implementation activities include those that are required for the transfer to the new metering frameworks and those which require upgrades and will be sustained throughout the next period.

Implementation and ongoing management activities include:

- **Government owned meters** – as part of the reform, WaterNSW has the responsibility to make all government-owned meters on private land compliant with the new non-urban metering regulations. Once these meters are compliant, a new meter maintenance regime will be implemented (based on the meter maintenance requirements in the same regulations). The new meter maintenance requirements are likely to increase the frequency of visits per site per year.
- **Reporting requirements (water users)** – Water users who are required to install a meter but do not use telemetry, once the meters pass their compliance dates, will be required to self-report their water extractions or confirm that they have not extracted water, monthly.

For those water users who use a single work to take both licensed water and unlicensed water (e. water under Basic Landholder rights (“BLR”)) will need to report the proportion of their unlicensed water take extractions monthly either via a portal or manually.
- **Reporting Requirements (WaterNSW)** - WaterNSW will need to download the data from each local intelligence device (“LID”) onsite at least once per annum for those not connected to telemetry. These data need to be stored in a data repository and then used for the intended purposes of billing, account management, determining water take, system operations and compliance.
- **Hosting of the Data Acquisition Service (DAS)** – the NSW Government has procured a cloud-based DAS to collect and store data received from the compatible data logging and telemetry devices on meters. Data collected will inform compliance and enforcement activities. The establishment of DAS for ongoing operation and maintenance is to be managed by WaterNSW.
- **Development of a Duly Qualified Person (DQP) Portal** - DQP is a newly created role as part of the Metering Reform Program, being a person with the qualifications, skills and experience to carry out work on metering equipment. The DQP Portal will enable DQPs to register new and replaced meters, telemetry and fill in online and submit QDP certificates. WaterNSW is responsible for certification of compliance and managing ongoing accreditation of meters against requirements. This includes the development and maintenance of the DQP Portal. WaterNSW is also responsible to ensure the data collected are accurate.
- Development of **education and communications materials** that will help explain to customers the nature of the obligations.
- **Supporting customers through the implementation process**, for example, responding to and managing increased inquiries, calls, site visits and complaints.
- **Project management** to oversee and process the changes throughout the business.

6.3 Metering process

Through the metering reform transition period, the existing metering landscape, including both systems and customers, presents challenges that drive new and amended processes and costs.

WaterNSW processes under the Metering Reform Program are considered in three areas or workstreams: **Metering Compliance** Process, **Recording and Reporting** Process and **General Enquiries** Process. Educating our customers on the reform changes will also need to occur.

6.3.1 Metering Compliance Process

The metering compliance process manages the interface with meter users relating to the implementation and ongoing business processes for the water reform.

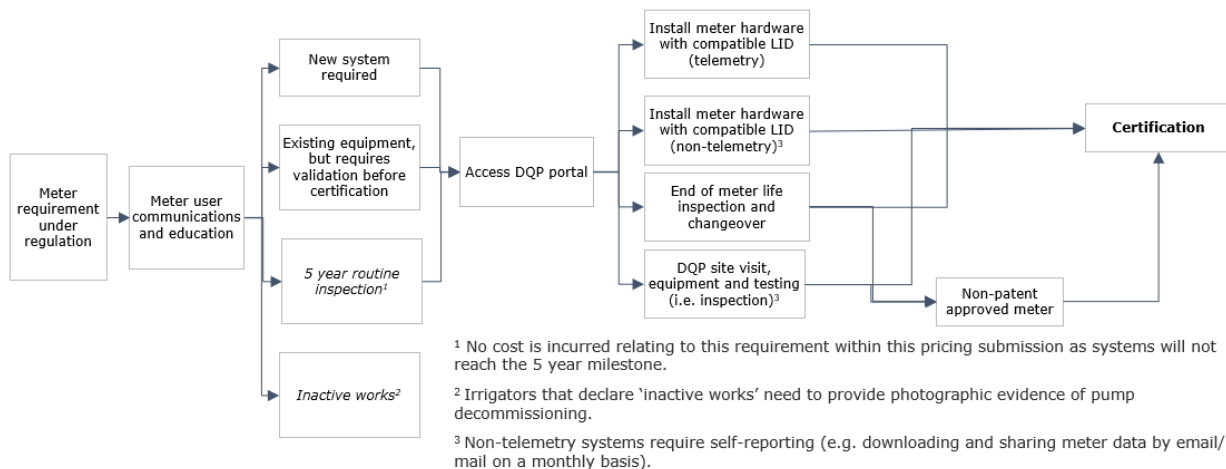
Key objectives of this metering workstream: establish the metering program reform accurately and efficiently.

Key steps and activities within this process that drive costs are shown in Table 14. Metering compliance process flow is shown in Figure 3.

Table 14 - Metering Compliance activities

Step	Activities
Communications	<ul style="list-style-type: none"> • Manage delivery of communications plan • Facilitate mailouts of communication/ educational materials
Equipment	<ul style="list-style-type: none"> • Support customers with accurate information • Fault management (system use)
Access DQP Portal	<ul style="list-style-type: none"> • Build and manage Portal • First level of user support for Portal use • Accredited DQPs • Manage DPQs • Quality assurance of DQPs • Inform DPQs of updates to standards and rules
Accreditation	<ul style="list-style-type: none"> • Maintain information on accredited systems/ infrastructure • Accredited equipment
Non-patent	<ul style="list-style-type: none"> • Process non-patent approved meter inspections and certifications • Manage communications and education
Certification	<ul style="list-style-type: none"> • Process certificates of compliance • Manage ongoing accreditation requirements

Figure 3 - Metering Compliance process flow



6.3.2 Reporting and Recording Process

The recording and reporting process primarily manages business as usual meter reform post implementation, including interfacing with the regulator, NRAR. Within this area of activity, WaterNSW is required to receive and record telemetry and meter data, as well as process this information for compliance, inspection and testing. The outputs and reports are provided to NRAR and DPIE to ensure compliance against obligations.

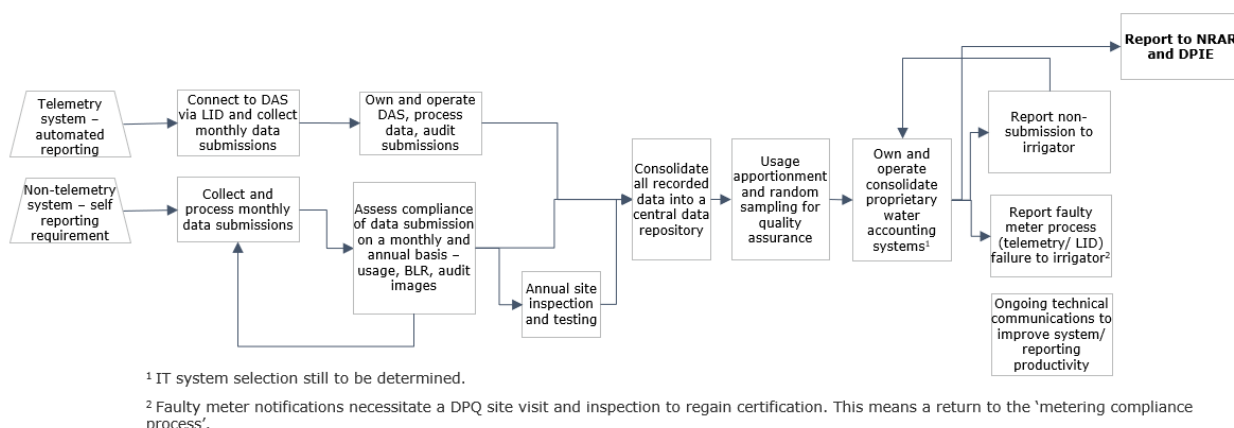
Key objectives of this workstream: maintain metering in an accurate and efficient manner.

Key steps and activities within this process that drive costs are shown in Table 15. Reporting and Recording process flow is shown in Figure 4.

Table 15 - Reporting and Recording activities

Step	Activities
Receive data	<ul style="list-style-type: none"> Receive manual data (emails, mail) Ensure secure connectivity of telemetry systems with DAS (including satellite systems)
Process data	<ul style="list-style-type: none"> Operate and maintain DAS licence Analyse data Categorise irrigator compliance against licenses Cross check recorded meter images against reported data
Site inspection	<ul style="list-style-type: none"> Physical annual site visit to inspect compliance of system and recording (including travel)
Database	<ul style="list-style-type: none"> Manage a centralised database for all metering data
Verification	<ul style="list-style-type: none"> Matching take to water rights/ licence/s Random sampling a proportion of submissions to verify compliance
Monitor performance	<ul style="list-style-type: none"> Manage water accounting system Integrate with other systems and communicate (e.g. licences, billing) Monitor customer take-up Manage reporting gaps
Communications	<ul style="list-style-type: none"> Notify customers of reporting omissions Manage comms and education Proactive comms with users on options for enhanced system/reporting productivity
Reporting	<ul style="list-style-type: none"> Report annually to NRAR on extractions against licences If reporting non-compliance persists, report to NRAR

Figure 4 - Reporting and Recoding process flow



6.3.3 General Enquiries and Education Process

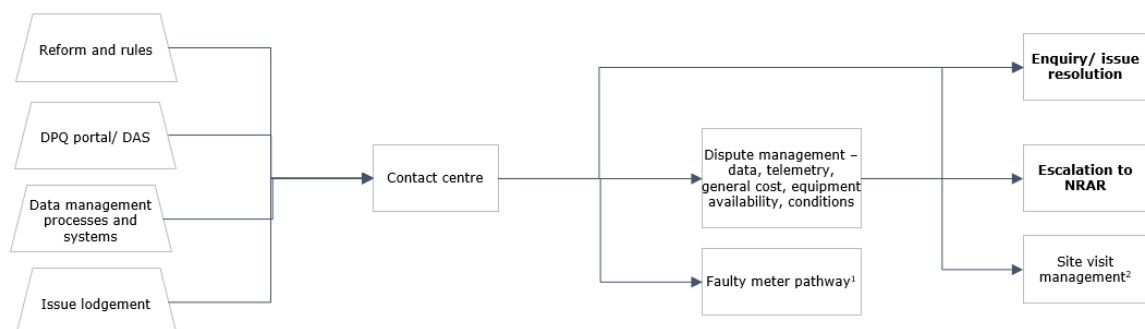
Given the materiality and complexity of the Metering Reform Program, there will be a significant increase in enquiries from customers to WaterNSW. WaterNSW is responsible in the role of public interface between customers and the governance and management of water obligations in NSW. WaterNSW is committed to educating its customers on their obligations under the reforms.

Key objectives of this workstream: address enquiries efficiently and fairly.

Key steps and activities within this process that drive costs are shown in Table 16. The General Enquiries and Education process flow is shown in Figure 5.

Table 16 - General Enquiries and Education activities

Step	Activities
Service Centre & Field team	<ul style="list-style-type: none"> Process calls relating to the metering program Provide operational assistance to customers Manage online materials and education, contact details and processes for metering users Train Service Centre and Field staff relating to meter reform and processes
Manage Disputes	<ul style="list-style-type: none"> Manage dispute and faulty meter cases Develop pathways for resolution or escalation
Close	<ul style="list-style-type: none"> Close enquiries and resolutions Manage reporting of 'reporting non-compliance' to NRAR in line with guidelines Facilitate site visits

Figure 5 - General Enquiries process flow

¹ Faulty meter pathway necessitates a DPQ site visit and inspection to regain certification. This means a return to the 'metering compliance process'. This process is managed through WaterNSW online channel.

² Initiates a site visit under the 'recording and reporting' process.

6.4 Key metering complexities

The complexity of water user, required systems and varied customers, presents challenges that drive costs and process through the transition and on an ongoing basis.

As WaterNSW analyses these forecast costs through the Determination Period, a material step up in metering costs will be required.

Key complexities within the metering process that drive costs and that which are undergoing further critical consideration, include:

- **Licensing:** Water users within the MDB region often hold multiple licences to access water supply. Licences are allocated and provided by WaterNSW to water users dependent on, and on the basis of how and why, the water is being used. Water users accessing and utilizing multiple licenses creates complexity and nuance in the reporting and recording of metering processes.
- **Technical literacy:** There is significant variability in the technical literacy and connectivity of different water users with the region. Engagement, communications and training that WaterNSW undertakes and manages as part of both the transition and ongoing business process are therefore varied and bespoke to users, driving time and costs for the business.
- **Varied systems:** The level and intensity of metering and reporting required under the new frameworks, is driving a significant uplift business processes for WaterNSW during the next regulatory determination period. Given the varied and (for non-telemetry meters) manual processes, meter reading monthly is a significant and time-intensive business process.
- **Allocation of costs:** Given the bespoke nature of water users literacy, systems and consumption, the WaterNSW systems required to transition to and operate within the new metering framework are not applicable to all water users. Therefore, when considering the cost allocation of processes and systems, complexity arises across customer and licence types. Consideration and complexity are noted as to how best to allocate these costs in a transparent, fair and equitable manner.

Certain elements of the non-urban metering reform program have only recently become clear, enabling WaterNSW to undertake initial analysis of the costs it anticipates incurring in implementing the new framework and in complying with its requirements on an ongoing basis.

These preliminary costs estimates will be further developed and validated, for provision to IPART by the end of November 2020.

7. Responses to IPART's 16 Questions

Question 1

How well has Water NSW delivered its bulk water services since 2017?

Response:

Since 2017, for many valleys, we are experiencing higher business operating costs and higher costs of complying with legislative obligations and maintaining customer service standards. External events, including a lower interest rate environment due to financial market uncertainty, weather events including drought and the recent COVID-19 pandemic and associated economic and employment impacts have all impacted on our (and our customers') activities.

WaterNSW has also assumed responsibility for delivering the NSW Government's drought response initiative. Notwithstanding, WaterNSW has met most of its regulatory requirements and stakeholder expectations during the current period, while supporting our customers during this difficult time.

Question 2

Was Water NSW's capital expenditure over the 2017 determination period efficient?

Response:

WaterNSW's capital expenditure over the 2017 was efficient. Our detailed response is found in Section 4.

Question 3

Is Water NSW's proposed expenditure on maintenance efficient?

Response:

WaterNSW has undertaken its maintenance in accordance with accepted maintenance standards. Further information on our proposed maintenance expenditure will be provided to IPART as part of the efficiency review.

Question 4

Do you have any comments on Water NSW's operating activities and associated operating costs?

Response:

As outlined in our Pricing Proposal, this response (Section 3) and our interactions with IPART's technical consultants, WaterNSW considers that its past and proposed operating activities and costs are prudent and efficient.

Question 5

Is the current structure of the RTP efficient and equitable?

Response:

WaterNSW's comments on the suitability of the RTP moving forward are outlined in our Pricing Proposal (Page 88) and in Section 3.2.2 of this response.

Question 6

How should Water NSW manage its revenue volatility risk?

Response:

WaterNSW's approach to managing revenue volatility risk is outlined in our response on the RTP forward in our Pricing Proposal (Page 88) and in Section 3.2.2 of this response. Our approach includes an assessment of tariff options, the RTP and consideration of a UOM moving forward.

Question 7

How should Water NSW most efficiently meet its requirements for fish passageways?

Response:

The requirements for fish passageways are driven by legislative requirements and are therefore mandatory in nature. The fishways program is predominantly comprised of fishways to 'offset' WaterNSW's obligations under section 218 of the Fisheries Management Act 1994, primarily arising from dam safety upgrades. WaterNSW will continue to work with the IPART's consultants as they assess the prudence and efficiency of our proposed expenditure on fishway offsets.

Question 8

What are your views about Water NSW's overall level of core capital expenditure over the 2021 determination period?

Response:

As outlined in our Pricing Proposal, this response (Section 4) and our interactions with IPART's technical consultants, WaterNSW considers that its past and proposed capital programs are prudent and efficient and provide value for money for customers.

Question 9

Should governments bear all the costs of increasing water security and availability for licence holders?

Response:

Under WaterNSW's proposal for 2021-22, the capital works associated with the Government's drought response initiative have been allocated to the Government RAB as WaterNSW has been directed to deliver the program of works on behalf of Government.

Question 10

Who should pay for future expenditure on major drought-related projects, including asset renewals and upgrades?

Response:

Although there is an expectation of future expenditures to be incurred during the working life of the assets, we are unable to provide any further details at this time. We are currently unable to provide a view on the appropriate cost sharing arrangements to apply to future steady state expenditure on major drought related projects and assets.

Question 11

Over what determination period should we set prices?

Response:

As outlined in Section 2 of this response and in our Pricing Proposal, we propose a one-year determination period be implemented for our rural bulk water services from 1 July 2021 to 30 June 2022.

A one year period will better address the uncertainty for our customers, who are experiencing the impacts of drought intensified by the recent bushfires and the COVID-19 global pandemic and to better address the impacts of reform than a four-year period.

It will also allow us the opportunity to undertake extensive customer engagement to better understand the practical impacts for our customers of these uncertainties and challenges and help inform our subsequent four-year Pricing Proposal.

Question 12

Are there policy and industry reforms that make four-year forecasts of costs and usage difficult? Has COVID-19 hampered Water NSW's customer consultation?

Response:

WaterNSW considers that there are significant policy and industry reforms underway that make forecasting costs and usage difficult. This has contributed significantly to WaterNSW's proposal for a one-year determination period as outlined in Section 2 of this response.

Question 13

Do you agree with the cost share ratios set in our cost share review? If not, for which activities should we modify the cost share ratio? Please specify an updated cost share ratio and explain why it is appropriate.

Response:

Please see our discussion on this matter in Section 2.2 of this response.

Question 14

We are required to set prices that recover Water NSW's efficient costs in the MDB valleys. If efficient costs are increasing, how should costs be recovered over the determination period?

Response:

Please see our discussion on this matter in Section 2.2 of this response.

Question 15

How should we set prices in coastal valleys?

Response:

WaterNSW is proposing to hold the charges in the North and South Coast constant over the upcoming one-year determination period.

In its 2017 IPART Determination, IPART set prices for the North and South Coast by reference to the estimated efficient pricing band. IPART also amended the tariff structure to increase the fixed proportion of charges to stimulate demand and increase revenue collections over the medium term (90:10 fixed to variable for North coast and 80:20 fixed to variable for South Coast).

We report that the change in tariff structure implemented by IPART in 2017 has had no meaningful impact in stimulating demand in the North and South Coast.

Question 16

What is the appropriate mix of fixed and usage charges?

Response:

Please see our response in Section 5.1 (Fixed and Variable Charges) and Section 3.2.2 (Risk Transfer Product) of this response.

MDBA/BRC Government Share

Table 3.1 on page 20 of the WaterNSW rural bulk water issues paper includes between \$32 million and \$35 million for the combined MDBA and BRC costs in the rural bulk water revenue requirement.

We understand that the Department has made a submission to the issues paper, outlining that the amount is incorrect and appears to be the combined amount to be included in both WaterNSW rural bulk water and WAMC revenue requirements. We support the Department's comments.

Appendix 1 – WCR considerations re length of determination period

Requirements under the WCR

WaterNSW's application for a one-year determination period is compliant with the WCIR and we request IPART to give due consideration to the merits of setting charges under a one-year determination period, consistent with WaterNSW's proposal.

On 23 September 2015, IPART was accredited under Part 9 of the WCIR to determine or approve pricing applications for NSW MDB large bulk water providers. The accreditation was subject to the two mandatory conditions and attached the ACCC's pricing principles for price approvals and determinations under the *Water Charge (Infrastructure) Rules 2010*, dated July 2011 (the ACCC Pricing Principles). The accreditation requirements under Part 9 of the WCIR (as it was then known) are given effect by the transitional provisions in the new WCR.

The mandatory conditions include:

- a) [...] that the applied provisions apply as a law of the State and are in force;
- b) [...] that the approval or determination of regulated charges of all Part 6 operators and Part 7 operators relating to State water resources of that State must be carried out by the accredited agency in accordance with the accredited arrangements and the applied provisions.

Note: the applied provisions refer to the WCR.

According to the ACCC, the first mandatory condition ensures that multiple regulators across the MDB will apply one set of pricing principles to all determinations under the WCIR (as it was then known), helping to achieve consistency where decisions are being made by different regulators in different Basin states.

We note that the ACCC imposed two additional conditions under the terms of accreditation. Relevantly, the first additional condition required IPART to apply the ACCC pricing principles in making determinations or approvals under the WCIR (as it was then known).

Pursuant to Rule 24 of the WCR, WaterNSW lodged an application with IPART in which it proposed a regulatory period of one-year for MDB valleys (from 1 July 2021 to 30 June 2022). We note that clause 24 of the WCIR states:

- 1) *A Part 6 operator that is also a supplier of urban water services the charges for which are determined by an agency of a State, under a law of the State, in respect of a period other than a period referred to in paragraph (a) or (b) of the definition of regulatory period, may make an application in writing to the Regulator for that other period, or a part of that other period, to be a regulatory period in relation to that operator for the purposes of an application under Rule 25.*
- 2) *The Regulator, having regard to the circumstances, may approve the application.*

We considered that infrastructure services provided under the Broken Hill Pipeline constituted an urban water service because it is a water service supplying an urban centre beyond the point at which the water has been removed from a Basin water resource consistent with Section 91(3) of the Water Act (Cth).

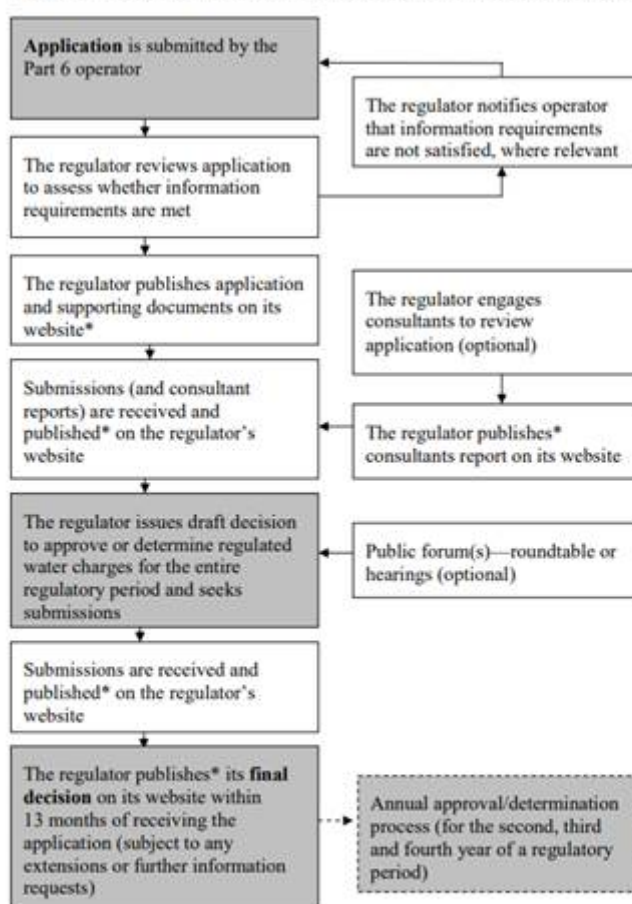
Discussions with IPART and ACCC staff suggested that WaterNSW’s approach to a one-year determination was technically feasible (i.e. compliant) under the relevant legislation and therefore open to WaterNSW to propose.

Under the WCR (i.e. the applied provisions); the first mandatory condition pursuant to the ACCC accreditation; a pricing application under Rule 25 (2) of the WCIR must comply with the information requirements set out Schedule 1 of the WCR.

Schedule 1 refers to the requirement for a Part 6 operator to provide forecast revenue, charges, and costs (among other things) for the following regulatory period. For example, in clause 4 in Schedule 1, the Part 6 operator must provide forecast revenue from providing infrastructure services for each year of the following regulatory period. We submit that the following regulatory period within the context of Schedule 1 and Rule 25 refers to the one-year regulatory period proposed by WaterNSW, in line with Rule 24 of the WCR.

Under the flow chart in Figure 1 of the ACCC Pricing Principles, the first additional condition pursuant to the ACCC accreditation, once a Part 6 operator lodges an application under the WCR, the regulator is required to review whether information requirements are met. If the information requirements are not met (i.e. non-compliant), the regulator is required to notify the operator, where relevant. The flow chart is reproduced below:

Figure 1 Process for the initial approval or determination of regulated charges



* subject to confidentiality

If the information requirements are met (i.e. compliant), the above flow chart implies that the regulator must decide whether to accept or reject the application (subject to review). Note that under Rule 29 of the WCR (i.e. the applied provisions); the Regulator must not approve the regulated charges as set out in the application unless it is satisfied of the following:

- a) that the determination of the applicant's regulatory asset base used to calculate those charges (where relevant) is in accordance with Schedule 2; and
- b) that:
 - i. the applicant's total forecast revenue (from all sources) for the regulatory period is reasonably likely to meet the prudent and efficient costs of providing infrastructure services in that regulatory period; and
 - ii. the forecast revenue from regulated charges is reasonably likely to meet that part of the prudent and efficient costs of providing infrastructure services that is not met from other revenue.

If the Regulator is not satisfied as to the matters referred to in subrule (2), the Regulator *must determine the regulated charges so as to be satisfied as to the matters* referred to above.

WaterNSW submits that the operation of Rule 25, Schedule 1 and Rule 29 of the WCR in conjunction with the mandatory and additional conditions (the ACCC Pricing Principles) imposed upon IPART under the ACCC Accreditation, intended to provide the operator with more regulatory certainty around the treatment and assessment of their regulatory proposal. To quote the ACCC, the purpose of the first mandatory condition of the accreditation is to help *achieve consistency where decisions are being made by different regulators in different Basin states*.

On this basis, WaterNSW submits that IPART must give due consideration to the merits of setting charges under a one-year determination period, consistent with WaterNSW's complaint proposal.

In addition, a rejection of our one-year determination proposal is inconsistent with the intention of Rule 24 of the WCR i.e. to align, wherever possible the regulatory period of an MDB determination with that of an approval or determination in respect of an urban water service.

The intention of Rule 24 of the WCIR is described in the Explanatory Statement for the WCIR:

*The purpose of this rule is to allow operators subject to approvals or determinations in respect of their charges for urban water services to apply to have the timing of the approval or determination of charges under the Rules aligned with the urban water pricing process. **Aligning the timing of these processes seeks to minimise costs arising from having separate approval or determination processes for an operator's rural and urban charges** (emphasis added).*

The Regulatory Impact Statement explains the rationale behind the adoption of Rule 24 at page 101 as follows:

This misalignment of regulatory periods will create major administrative complexities leading to business inefficiencies and cost imposts in accounting around different regulatory periods. In its final advice the ACCC recommended a rule that allows the ACCC to align the length of the regulatory period with the length of a regulatory period that has been determined by another regulatory body where an operator is subject to regulation of its urban prices by that other regulatory body. This should address the concerns of LMW that it would be subject to determinations that did not align in respect of its urban water charges and its rural water charges.

The intention behind Rule 24 is restated at Page 41 of the ACCC's Water infrastructure charge rules: Final advice:

If the ACCC regulates LMW's rural services, there is scope to streamline the regulatory process. LMW's business is already divided into urban and rural activities. The ACCC would operate within the ESC's existing cost allocation framework in approving or

*determining LMW's rural charges, and would work cooperatively with the ESC to incorporate any changes to this methodology into the future. In addition, **the ACCC is recommending rules that will allow for the timing of the urban and rural price setting processes to be aligned. This alignment will minimise much of the additional costs arising from having separate agencies determining LMW's rural and urban charges** (emphasis added).*

As mentioned above, we considered that infrastructure services provided under the Broken Hill Pipeline constituted an urban water service because it is a water service supplying an urban centre beyond the point at which the water has been removed from a Basin water resource consistent with Section 91(3) of the Water Act.

As WAMC expenditure is recovered through water management and planning charges, it is not clear to WaterNSW that the services provided under WAMC would constitute an urban water service. Therefore, IPART's stated preference of aligning the regulatory period of an MDB determination with that of a WAMC determination instead of an urban water supply determination, does not appear to be supported by the intention of Rule 24 of the WCR.

While we note IPART's preliminary preference for a four-year determination period, WaterNSW's proposed one-year determination period is compliant with the requirements of the WCR.

Minimising bill impacts for customers under the WCR

In order to approve or determine charges, WaterNSW notes that IPART must be satisfied that the total forecast revenue for each year of the regulatory period recovers the prudent and efficient costs of providing the service in line with Rule 29 of the WCIR, including the costs incurred by WaterNSW in complying with regulatory obligations and requirements as stated in the ACCC Pricing Principles.

Importantly, IPART must be satisfied that the forecast revenue from regulated charges is reasonably likely to meet that part of the prudent and efficient cost of providing infrastructure services *that is not met from other revenue*.

IPART must also have regard to whether the charges contribute to achieving the Basin water charging objectives and principles set out in Schedule 2 of the Water Act. The Basin water charging objectives and principles include:

- a) *to promote the economically efficient and sustainable use of:*
 - i. *water resources; and*
 - ii. *water infrastructure assets; and*
 - iii. *government resources devoted to the management of water sources; and*
- b) *to ensure sufficient revenue streams to allow efficient delivery of the required services; and*
- c) *to facilitate the efficient functioning of water markets (including inter-jurisdictional water markets, and in both rural and urban settings); and*
- d) *to give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management; and*
- e) *to avoid perverse or unintended pricing outcomes.*

IPART is bound by the requirements of the ACCC accreditation as highlighted in the section above on the one-year determination proposal. However, we note that there are a number of factors that influence the amount of revenue that should be recovered from customers in line with the requirements of the WCIR.

Appendix 2 – Dam safety requirements

As discussed in Section 4 a staged and incremental approach to addressing dam safety risks is applied to limit the cost impact and ensure the outcomes continue to target dominant risks. The resulting series of activities were evaluated for delivery and need for completion in the next four years to inform the scope of works for proceeding (linked) studies or upgrades.

The shortlisted activities that fall within the four-year period are grouped into themes, where appropriate; large capital projects are detailed as standalone items.

Through this process, the themes and capital projects listed, described and costed hereon are required for dam safety compliance to reach a defensible risk position.

Copeton Dam – Spillway scour protection works

The Copeton Dam main spillway channel experienced significant erosion (approx. 100,000m³ of rock scoured / displaced) towards the end of dam construction, when a significant flood passed through the catchment. An unusually deep, narrow scour channel 20 metres in width and up to 25 metres deep in fresh granite was formed. Operational restrictions were applied to mitigate the risks whilst long term solutions were being developed. The right side of the spillway chute has been used as the 'service' spillway, given the rock is more competent on this side of the spillway. A wall was constructed to contain flows within this section of the spillway.

Should a larger flood pass through the dam, the left ('secondary') side of the spillway will have to be utilised. This would lead to further spillway chute scour that could result in the spillway headworks structure being compromised through back erosion. This could potentially compromise the structural integrity of the spillway gates leading to uncontrolled release of water. This would be a dam safety incident.

Studies are currently underway to improve knowledge on the erodibility of the downstream rock. This information will improve confidence in our understanding of the asset risk and inform the development and implementation of prudent risk controls.

Table 17 - Copeton Dam – Spillway scour protection works – Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Copeton Dam – Spillway scour protection works	No change	\$2.18			\$2.18

Pamamaroo Inlet Regulator

Pamamaroo Inlet Regulator passes inflows from Lake Weatherall into Lake Pamamaroo as an off river storage reservoir, as the first of a series of Lakes that make up the greater Menindee Lakes Scheme. The purpose of the Menindee Lakes Scheme is to provide augmented flows into the Lower Darling River system in addition to flood management, urban and mining water needs for Broken Hill, and stock and domestic irrigation supply along the Lower Darling River.

The Pamamaroo Inlet Regulator has several identified deficiencies. Interim risk mitigation measures have been implemented to ensure that that asset continues to perform its function whilst long term solutions are being developed.

This project seeks to implement risk control measures that will deliver prudent lifecycle costs for Pamamaroo Inlet Regulator.

Several investigations and engineering assessments have been undertaken. A risk assessment of the structure was completed that informed the development of risk controls. A prudent solution has been developed.

The costs in the following table replace the direct project cost estimate in our Pricing Proposal.

Table 18 - Pamamaroo Inlet regulator– Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Pamamaroo Inlet regulator		\$7.09			\$7.09

Lake Cargelligo

Lake Cargelligo is a critical asset which supplies water for irrigation, recreation and domestic use. Failure of any of the embankments would result in significant business, social and customer consequences. The current risk profile of the system is intolerable. The risk assessment has concluded that the benefits gained through renewal exceed the cost of investment. The Project will deliver several risk-reduction measures that will:

1. Reduce the risk of internal erosion of the embankment dams;
2. Reduce the risk of overtopping of the embankment dams during flood; and
3. Reduce the risk of slope instability in the embankment dams.

The benefits in executing this asset renewal/upgrade project include:

1. Control the identified risks;
2. Reduce the possibility of unplanned failure; and
3. Reduce the asset lifecycle costs.

Table 19 - Lake Cargelligo – Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Lake Cargelligo	No change	\$8.6			\$8.6

Dam safety review & associated studies

Dams Safety Regulation 2019 requires that every 15 years a safety review is completed by competent dam engineering experts and supplied to Dams Safety NSW on notice. WaterNSW currently undertakes a risk based assessment of dam safety. However to comply with the regulation, a standards based assessment has to be undertaken over and above our current practice.

Safety Reviews for the following dams have been scheduled within the regulatory period:

- Burrendong Dam;
- Copeton Dam;
- Wyangala Dam; and
- Rydal Dam.

Because the reports have a 15-year life and are treated as capital expenditure.

The forecast cost estimates are sourced from the existing costs and programming requirements and align with a Rural Safety Review program. The costs for each study are based on recent estimates WaterNSW received from its greater Sydney PRA for similar studies.

Table 20 - Dam safety review and associated studies – Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Dam safety review and associated studies		\$0.03	\$0.42	\$0.75	\$1.20

Rural Portfolio Risk Assessment

WaterNSW applies a Portfolio Risk Assessment (PRA) approach to the assessment and management of its dams in accordance with the regulatory requirements and business philosophy. This approach has been applied successfully to the greater Sydney portfolio in 2019 and the rural portfolio in 2012. The output of the PRA provides the business with an up to date understanding of portfolio risk profile. This information is then used to develop prudent risk control solutions that provide the best outcomes for the business and our customers.

The PRA for the rural portfolio is now required and this will be aligned with the new regulatory requirement for risk assessments to be undertaken every five years.

The costs for each study are based on recent studies WaterNSW has undertaken for similar studies. The costs are fully capitalised and no operating costs are associated with this activity.

Table 21 - Rural Portfolio Risk Assessment – Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Rural Portfolio Risk Assessment		\$1.14	\$2.64	\$1.90	\$5.86

Spillway Chute, Outlet works and OPT testing and surveillance

One of the focus areas of the new regulation is on the operation and maintenance practices to ensure that dam safety components remain in good shape to perform their intended functions as and when required.

WaterNSW developed and implemented a suite of corporate procedures that sit under the DSMS for the 'Operational Performance Testing' and condition assessments of its mechanical and

electrical components that have a dam safety purpose. These procedures are being rolled out to the rural dams.

The purpose of this activity includes:

1. Validating through testing the current intervention systems operate as required. i.e. operational preparedness testing of spillway and outlet works system.
 - Dam Safety NSW’s ‘Operations and maintenance plan: Guideline’ indicates the operation and maintenance plans should detail instructions for collection and reporting of data at an appropriate frequency for:
 - Testing and operation of spillway gates and associated controls
 - Testing and operation of outlet gates, valves and associated controls.
2. Reinstating and validating the function of foundation, wall and spillway drainage systems;
3. Establishing testing procedures, monitoring and recording load states of the post tension anchoring systems installed for stability of major dam systems;
4. Establishing baseline dataset for deformation monitoring of concrete faced rockfill dams; and
5. Confirming and reassessing the dam features with recent development in understanding of the dam structure (i.e. lined spillway chutes – Oroville Dam).

Activities 1-3 have a finite life that defines their validity and are treated as capital expenditure. Activities (4-5) provide a baseline for future performance tracking and re-evaluation of performance criteria respectively; as such are treated as operating expenditure.

The timing of these studies are determined by our regulatory obligations and the planned periods for the comprehensive 5 yearly inspections and rural PRA.

Table 22 - Spillway Chute, Outlet works and OPT testing and surveillance – Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Spillway Chute, Outlet works and OPT testing and surveillance		\$1.78	\$2.14	\$1.61	\$5.57

Risk Based Instrumentation and Automation

An important consideration of dam operation and maintenance is collection of the appropriate information at the appropriate time; and the management of this information; to inform dam safety decisions and monitor performance. Currently the surveillance practice is based on a standards based approach.

WaterNSW has a mature and detailed understanding of the risk profile of its dams. This enables the application of sophisticated risk informed decision making to deliver a balanced and cost effective combination of non-structural and structural risk mitigation solutions.

WaterNSW is developing a risk-based surveillance framework. The adoption of a risk-based surveillance approach is fully supported by the WaterNSW Dam Safety Technical Assurance Group (DSTAG).

The studies within this theme investigate, details and implements the surveillance and monitoring equipment (and associated improvements) required. The costs are fully capitalised and no operating costs are associated with this activity.

Table 23 - Risk based instrumentation and automation – Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Risk based instrumentation and automation		\$0.17	\$0.38	\$0.20	\$0.75

Risk mitigation plans and options

WaterNSW has a corporate process that is documented in the DSMS for the management of dams that have an elevated risk profile in accordance with the regulatory and business risk acceptance criteria. Risk management plans are developed for each dam in this category. The plan details areas where additional knowledge is required to provide confidence in the risk assessment and actions, to enable prudent decision making on risk mitigation solutions.

The timing of these studies is determined by our business and regulatory obligations. The activities associated with higher risk dams generally occur first. The forecast costs for each study are based on recent studies WaterNSW has undertaken for similar studies.

Table 24 - Risk mitigation plans and options – Rural Valleys (\$million)

	2021-22	2022-23	2023-24	2024-25	Total
Risk mitigation plans and options		\$0.21	\$0.23	\$0.12	\$0.55