AtkinsRéalis

Final Report

IPART

25 June 2025

IPART_2025 / 2 / DG / 004

WATERNSW - RURAL VALLEYS EXPENDITURE REVIEW (2025)

Notice

This document and its contents have been prepared and are intended solely as information for IPART and use in relation to WaterNSW - Rural Valleys Expenditure Review (2025)

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Contents

Tables

Figures

Executive Summary

This report presents the findings of our review of the capital and operating expenditure for the regulated services of WaterNSW – Rural Valleys. It addresses the prudent and efficient expenditure in the future determination period which encompasses financial years 2026 (FY26) to FY30.

We have based our findings on WaterNSW's Pricing Proposal, the annual and special information returns (AIR and SIR) presented to IPART by WaterNSW in November 2024, five days of structured interviews, information provided by the business and responses to subsequent written questions. We are grateful to the WaterNSW team and management for the time provided at interview and in responding to subsequent questions.

We have applied the new 3Cs framework[1] and recommended a range rather than a single figure for expenditure. We summarise our findings below.

Cross cutting issues

We have reviewed a number of aspects of WaterNSW's approach to asset management. We consider that there is significant room for improvement in long term (empirical and risk-based) planning and a move away from simplistic projections.

On risk management we consider that data gaps are a key challenge for WaterNSW. WaterNSW has made a number of positive advances, including a shift to accepting some risk, but there is clearly still progress to be made on data and decision-making and how customers' views shape risk appetites for example.

We consider that WaterNSW would benefit from continuing to improve its collection of asset condition and performance information for its asset base so that it is in a better position moving forwards to employ a targeted and prioritised approach that is balanced between risk and performance.

We consider that WaterNSW would benefit from taking greater ownership or oversight of cost estimation to drive improvements over time. Capturing outturn project cost information and documenting these in an accessible and comparable format will improve benchmarking and challenge future cost estimates, thus driving more accurate cost estimates.

Operating expenditure

Outturn opex has been higher than the allowance in all years of the current Determination period. On average outturn opex has been $5.3M p.a. or 9% greater than the allowance.

WaterNSW has provided some high level narrative for the higher spend (e.g. overheads, insurance and land tax) but has not provided robust detailed justification, especially for the high overheads costs. The lack of explanation suggests that WaterNSW may not have a strong system of measuring, understanding and managing variance against the Determination.

WaterNSW has proposed a significant increase (+$21.2M p.a. or 32% average) compared to actual expenditure to date in the current Determination period.

It is the first time that WaterNSW has submitted a pricing proposal using a base-trend-step approach. It has created a projection of opex by individual years and then sought to classify the differences between these projections and its base year (FY23) opex into either base year adjustments, trends or step changes. This means that there is not an

[1] https://www.ipart.nsw.gov.au/water-regulation-handbook

easy calculation trail underlying the proposed base, step and trend adjustments but rather the adjustments themselves are explanations of the difference.

WaterNSW has applied twenty base year adjustments. We consider that only three of these (efficiency improvement and non-recurrent adjustments) meet IPART's Water Regulation Handbook definition of a base year adjustment. We have considered the remainder as either a trend (labour and insurance cost increases) or step change (all others).

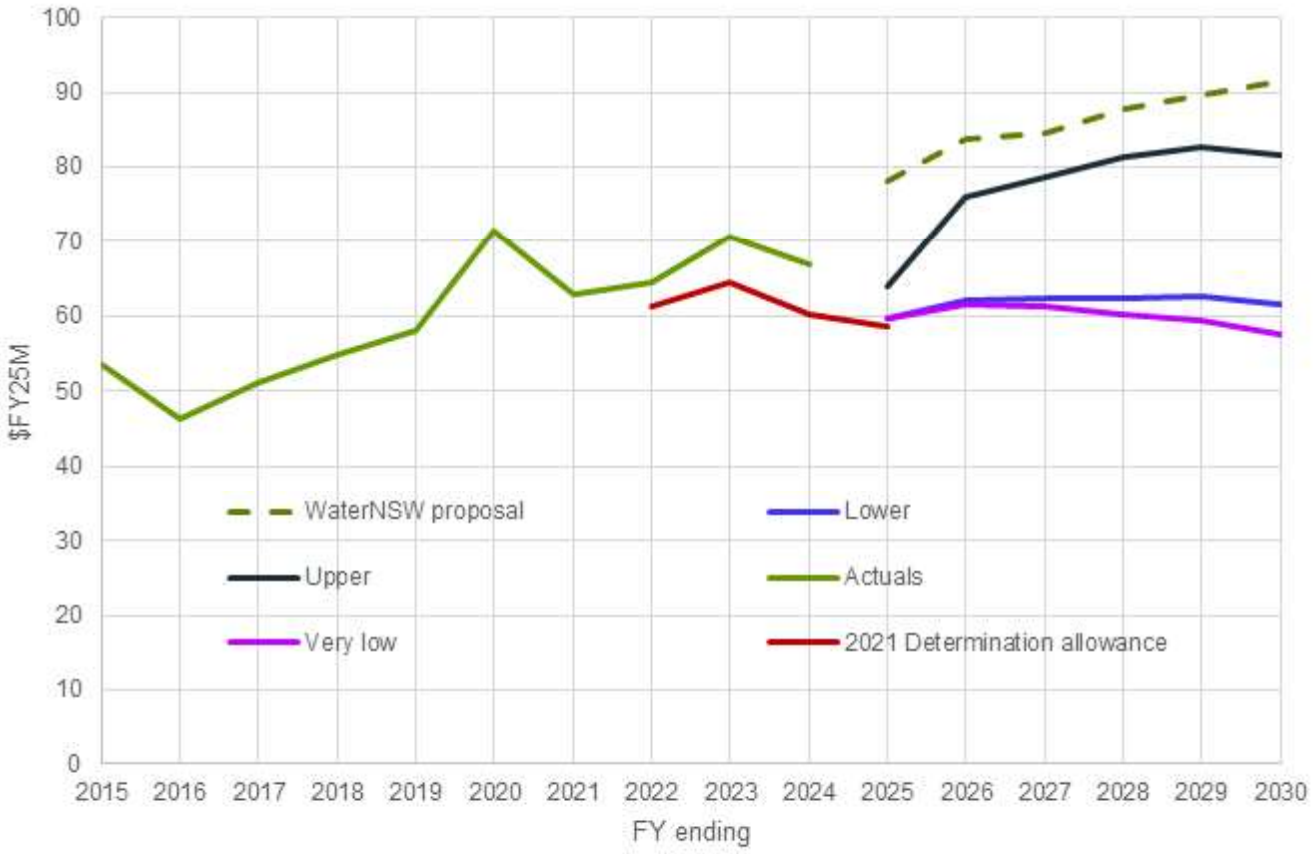
We note that WaterNSW has adopted FY23 as the base year. We consider FY24 to be an upper estimate of base opex given the scale of justified variance. For the lower range of base opex, we consider that IPART's 2021 Determination allowance, adjusted for well justified variance, is a reasonable starting point.

We have reviewed the potential trend changes and recommended adjustments for land tax and efficiency. We have not incorporated real price effects for insurance or labour cost as the justification was not strong.

We have also reviewed the 17 step changes proposed by WaterNSW as well as a number of the changes put forward as base year adjustments. The largest recommended step changes related to digital costs and land management. We have not incorporated any of the proposed operating model adjustment. The business has only provided a high level mapping of additional operating model roles to 'areas'. It is not clear to us that any of the areas listed are associated with new regulatory obligations, customer benefits or opex from capex which have not already been reviewed as a separate step change.

We have developed three ranges: 'upper', 'lower' and 'very low' (the same as 'lower' but excluding any land tax increases). The resulting projections are summarised in graphical form below. The upper range is an average of $7.4Mp.a. (8%) less than WaterNSW's proposal, the lower range is $25.2M p.a. (29%) less and the 'very low' range is $27.4M (31%) less. Compared to FY24 actuals they represent an average 22% increase ('upper'), or a reduction of 8% ('lower') and 14% ('very low').

Figure E-1 – Opex ranges



Source: AtkinsRéalis analysis

We consider that there is greater uncertainty in our projections than when we have carried out similar reviews of other companies, noting for example:

- Whilst WaterNSW has responded to all of our requests for information and done so in a reasonably timely manner, the information provided is generally in the form of numbers without calculations or audit trails. This limits our understanding of WaterNSW's costs and proposed adjustments.
- It has been challenging to unravel the many adjustments proposed. Some of the proposed adjustments appear to be there to undo other adjustments (vacancy normalisation and some of the 'other' adjustment for example). Others appear to duplicate those made elsewhere (e.g. operating model changes duplicating at least some of the proposed operating licence changes).
- Considering the scale of increase (and consequent impact on customers) WaterNSW has provided surprisingly little formal documentation such as business cases demonstrating decision-making logic, efficiency and consideration of the impacts and benefits to customers. Opex has a significant impact on customer bills, and we consider that it is good practice for formal justification to be in place for proposed opex changes in the same way as it should be for significant capex.
- We have been surprised by the fact that the business has not been able to provide detailed assessment and understanding of historical variance in opex, given that this is the kind of thing we would expect a well-managed business to have assessed at the time and have had plans in place to manage overspend. This lack of detailed variance analysis limits our confidence in the drivers for historical expenditure performance and overspend.

Capital expenditure

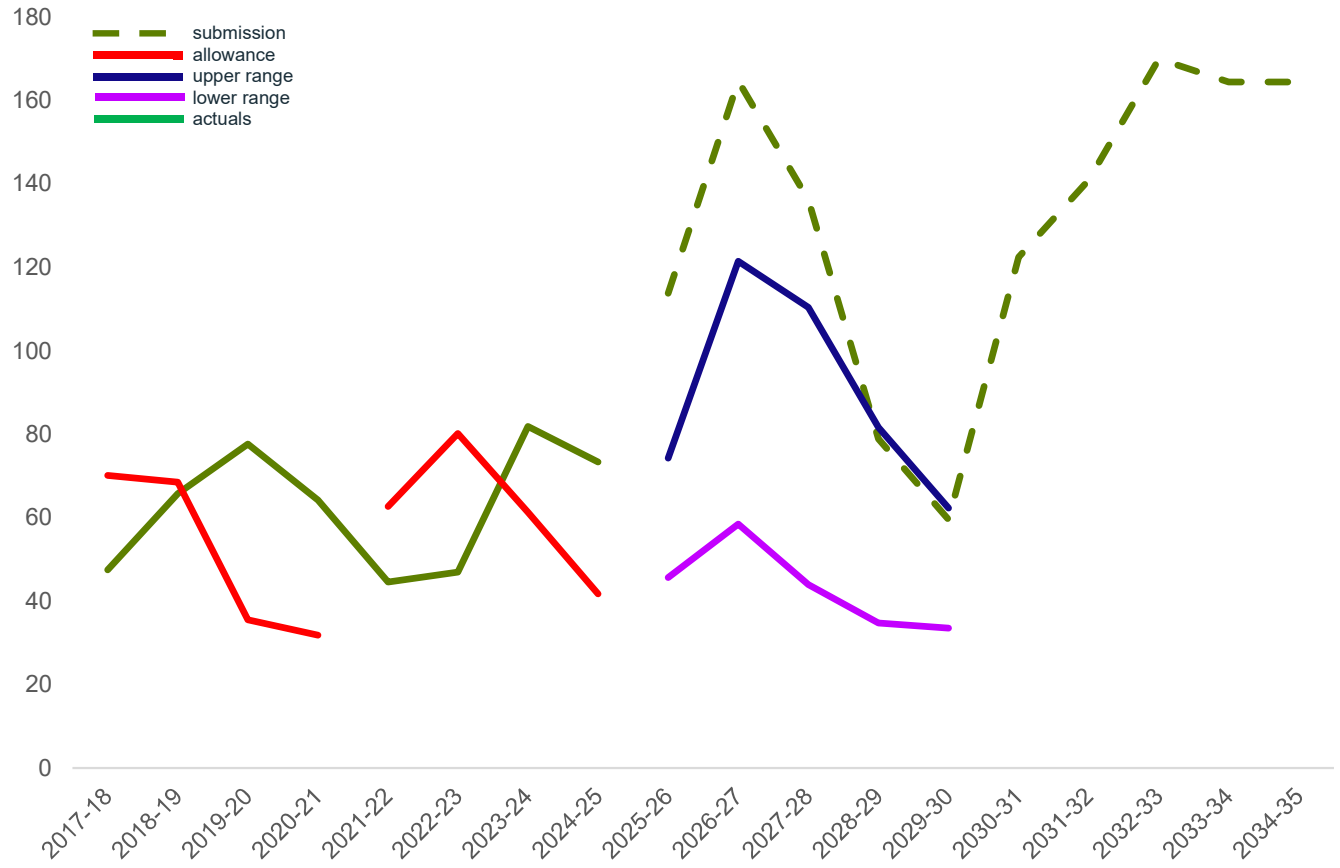
WaterNSW has proposed a 32% increase on an annual basis in its capital program from that it delivered in 2024 and 77% increase on an annual basis that it is forecasting to deliver overall in the 2021 Determination period. The significant increase in the program is dominated by increases in Renewals & Replacement, Environmental Planning & Protection, and Dam Safety Compliance activities, though we note that part of the Dam Safety Compliance increase may be explained by the fact that WaterNSW informed us that it previously allocated some costs to general activities.

The Environmental Planning & Protection and Dam Safety Compliance programs are driven by legislative requirements. The Environmental Planning & Protection activity largely consists of a program of fishways that WaterNSW was supposed to deliver during the 2021 Determination, but little progress was previously made. Whilst the Renewals & Replacement activity is subject to a benefit assessment and prioritisation, the projects do not appear to be closely linked to asset condition or performance.

WaterNSW has taken a view on the envelope for its renewals by using a long-term trend for the replacement of all assets at their end of book life. This approach for longer life assets can overstate the expenditure as it does not take into consideration the performance or condition of the assets to operate beyond their book life. Given that Rural Valleys have a significant long life asset base, we consider that these inappropriately drive a higher view of renewal requirements than what is required to maintain serviceability. By having a larger view of the envelope this has appeared to result in a list of projects that are not particularly price or delivery constrained and have driven a significant increase in the expenditure. This coupled with significant programs for Environmental and Dam Safety Compliance works has resulted in the substantial increase in capital expenditure that the business is proposing.

The recommended level of capital expenditure for the upper range scenario is 19% below that requested by WaterNSW (but still 53% greater than the average actuals between FY22 and FY24). The lower range scenario recommendation is 61% below the requested level (and 27% lower than the average actuals between FY22 and FY24) and is summarised graphically below.

Figure E-2 – Recommended capex ranges ($FY25 M)



Source: Analysis of AIR/SIR

Digital expenditure

We have reviewed the cross-cutting WaterNSW digital capex and opex for Greater Sydney, Rural Valleys and WAMC before they are then allocated to the different Determinations. It is outside of our scope to review the standalone WAMC initiatives or any discrete Greater Sydney digital expenditure, which are covered by separate reviews. We have seen evidence that there has been an improvement in digital maturity, albeit from a relatively low base, compared with the last two price reviews.

Total digital expenditure in the current price path is forecast to be approximately 13% above the IPART allowance according to WaterNSW's projections, at $182M or an average of $36M per annum between FY21 to FY25. A step change in total expenditure is proposed for the future price path, at $361M or an average of $72M p.a.

Overall, the justifications for the unexpected changes to activities, and in some cases increases in costs, during the current price path compared with the IPART allowance appear to be reasonable. The overspend is relatively modest, with the changes relating to the impact of the floods and Covid on the business, Cloud adoption, licensing cost increases and increases in number of licences because of increased staffing numbers.

One area of inefficient historical expenditure relates to the Water Added Value Environment (WAVE) program, which represents the biggest area of capital expenditure during the current price path. WaterNSW acknowledges $1M of inefficient spend but we have identified a higher range due to the significant reduction in benefits being delivered (range from allowing $36.5M to only $6M of the $53.5M actuals for the total capital expenditure). We understand that this would represent ex-post capex adjustment.

The step changes in the future price path relate to both opex and capex. For opex, this is driven by software licensing, people costs and the shift from on-premise capex solutions to software as a service opex solutions (a pattern across all sectors). For capex, this relates to both significant increases in Business as Usual (BAU) capex and also one-off initiatives, notably the Asset Lifecyle Management and the Communications Network Upgrade.

While benchmarking has some limitations, our review of digital spend as a percentage of total expenditure (totex) suggests that the rate of WaterNSW's proposed digital totex is significantly above other water utilities. This could suggest either that WaterNSW is not operating at an efficient level of digital expenditure or that its circumstances and/or operating environment are so different from all the other comparators to justify much higher levels of digital expenditure.

We have identified both an upper and lower range of capex and opex investment which draws on our findings from our review of WaterNSW's performance and plans as well as its proposed rate of digital spend. At the upper end, we have made adjustments to specific programs or activities. Adjustments for the lower end for both capex and opex maintain the same level of overall digital investment as in the current price path in line with any reduction in the overall total expenditure. We have set out the potential risks associated with the different scenarios.

List of acronyms

Acronym	Definition
ACS	Asset Class Strategies
AIR	Annual Information Return
ALARP	As low as reasonably practicable
ARR	Asset Renewal and Replacement
BAU	Business as usual
BT	Base-Trend
BTS	Base-Trend-Step
BY	Base year
Capex	Capital expenditure
CIO	Chief Information Officer
CAGR	Compound Annual Growth Rate
CPI	Consumer Price Index
CWP	Cold Water Pollution
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEOC	Digital Ecosystem Oversight Committee
DevSecOps	Development, Security and Operations
DPC	Digital Portfolio Committee
DSU	Dam Safety Upgrade
EIS	Environmental Impact Study
ERP	Enterprise Resource Planning
FDC	Flow Duration Curve
FTE	Full Time Equivalent
FY	Financial Year
ICT	Information and Communication Technology
IFC	Issued for Construction
IPART	Independent Pricing and Regulatory Tribunal
IVMS	In Vehicle Monitoring System
KPI	Key performance indicator
MDBA	Murray Darling Basin Authority
NPS	Net Promoter Scores
NSW	New South Wales
O&M	Operation and maintenance
Opex	Operating expenditure
p.a.	Per annum
PaaS	Platform as a Service
PLC	Programmable Logic Control
PMF	Project Management Framework
PRC	Program Review Committee
RAB	Regulatory Asset Base
RFI	Request for Information
RTU	Remote Terminal Unit
SaaS	Software as a Service
SIR	Special Information Return
SMEs	Subject Matter Experts
SOCI	Security of Critical Infrastructure Act 2018
Totex	Total expenditure
WAMC	Water Administration Ministerial Corporation
WAVE	Water Added Value Environment
WMS	Water Markets Program
WNSW / WNSW-R	WaterNSW – Regional and Rural Bulk Water
WPI	Wage price index
WTW	Water treatment works

1. Introduction

In October 2024, the Independent Pricing and Regulatory Tribunal of New South Wales ("IPART") appointed AtkinsRéalis to carry out an Expenditure Review for WaterNSW – Regional and rural bulk water (WNSW-R) working alongside Stantec which is undertaking an Expenditure Review for the Water Administration Ministerial Corporation (WAMC). The purpose of this review is to inform the Tribunal's decision on prices for the new Determination period which applies from 1 July 2025 to 30 June 2030.

This Report has been prepared in accordance with the Scope of Works set out in the contract between Stantec and IPART dated 29 October 2024. A Summary of the Scope of Works is reproduced in Appendix A for information purposes.

1.1 Scope of this report

This report presents the findings of AtkinsRéalis' review of capital and operating expenditure proposed by WaterNSW – Rural Valleys for the next Determination period. As set out in the Scope of Works, this includes:

- An assessment of the adequacy, appropriateness and efficiency of the business's levels of operating expenditure, including both historical operating expenditure for the current Determination period (1 October 2021 to 30 June 2025) and proposed operating expenditure for the next Determination period (1 July 2025 to 30 June 2030).
- Recommendations on the efficient level of proposed operating expenditure for the period 1 July 2025 to 30 June 2030.
- A detailed review of the business's planned capital expenditure from 2024-25 to 2029-30.
- Recommendations on the efficient level of capital expenditure for each year from 2024-25 to 2029-30.
- Provision of a range of efficient expenditure covering two scenarios:
  - Low case: the minimum expenditure that the business needs to conduct its essential operations (i.e. any projects that could be deferred, are deferred)
  - High case: the efficient expenditure that the business needs in order to continue to grow and set up for success into the future.

1.2 Review process

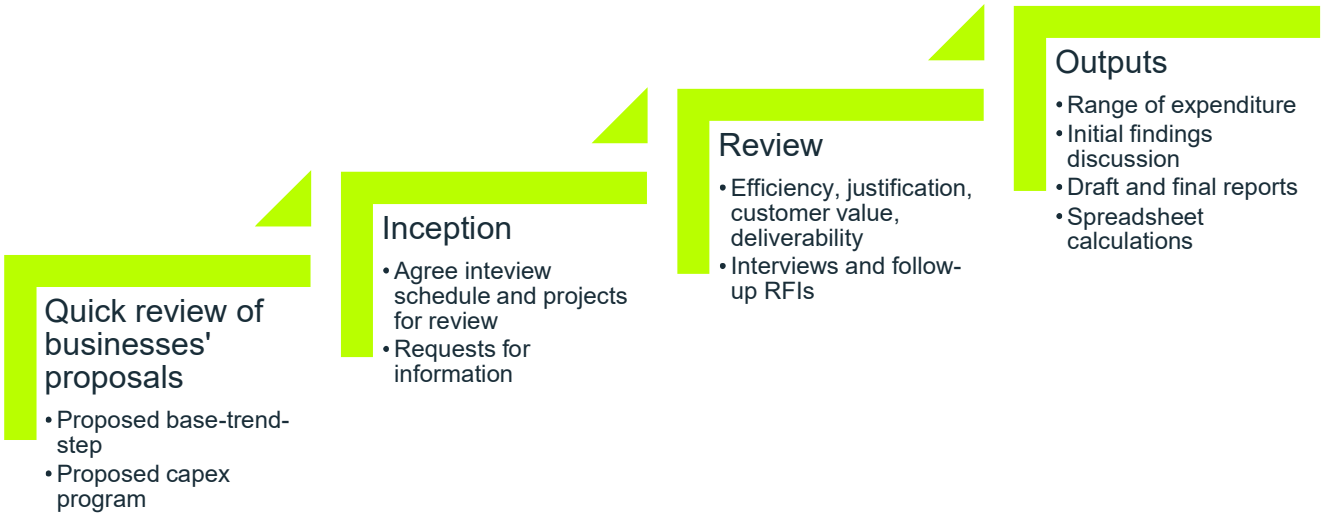
Our approach for undertaking this review is based on our experience in undertaking similar expenditure reviews across Australia and internationally over the past 15 years.

We commenced our review on 29 October 2024. Following identification of the proposed areas of review and sample capex programs, we submitted a Request for Information (RFI) to WaterNSW on 4 November 2024. Documents were provided by WaterNSW from 8 November 2024. Our review team commenced the face-to-face interviews in WaterNSW's offices in Sydney from 25 to 29 November December 2024. Following this, we submitted an Inception Report to IPART on 3 December 2024. During and after the interview period we requested additional supporting documentation relating to a range of issues.

We believe that WaterNSW provided us with this information in a timely manner and to the best of its ability. AtkinsRéalis would like to take the opportunity to thank WaterNSW for making its staff available for the interview days and for the professional manner in which the organisation responded to our challenges and requests for further detail.

Our approach for undertaking the review is summarised graphically below.

Figure 1-1 - Stages of delivery



This report sets out the findings of our review in line with the scope above. Further detail on the methodologies used to undertake specific elements of the review are described in the relevant sections below.

1.2.1 Objectives, purpose and scope

We understand that the objectives of the consultancy assignments encompass expenditure (both capital and operational) and the level of risk being taken by the business. These objectives are summarised in the scope documents as below:

- A high-level review of each business's proposal in terms of the expenditure it is planning, and how that expenditure is justified
- A more detailed review of key elements of each business's proposed operating expenditures and capital expenditures for efficiency and deliverability
- An overall assessment of whether the level of risk each business is taking (both financially and operationally) is appropriate.

1.2.2 Information sources

The key documents relied upon for the review include:

- WaterNSW's Pricing Submission, Appendices and Supporting Documents
- Annual Information Return ("AIR") and Special Information Return ("SIR")
- Responses to Requests for Information (RFI) provided by WaterNSW. WaterNSW has coded these RFI responses as 'SA' for requests raised by the rural team and 'RA' for requests raised by the Greater Sydney review team.

While some of these documents are publicly available online, the majority were directly issued by WaterNSW.

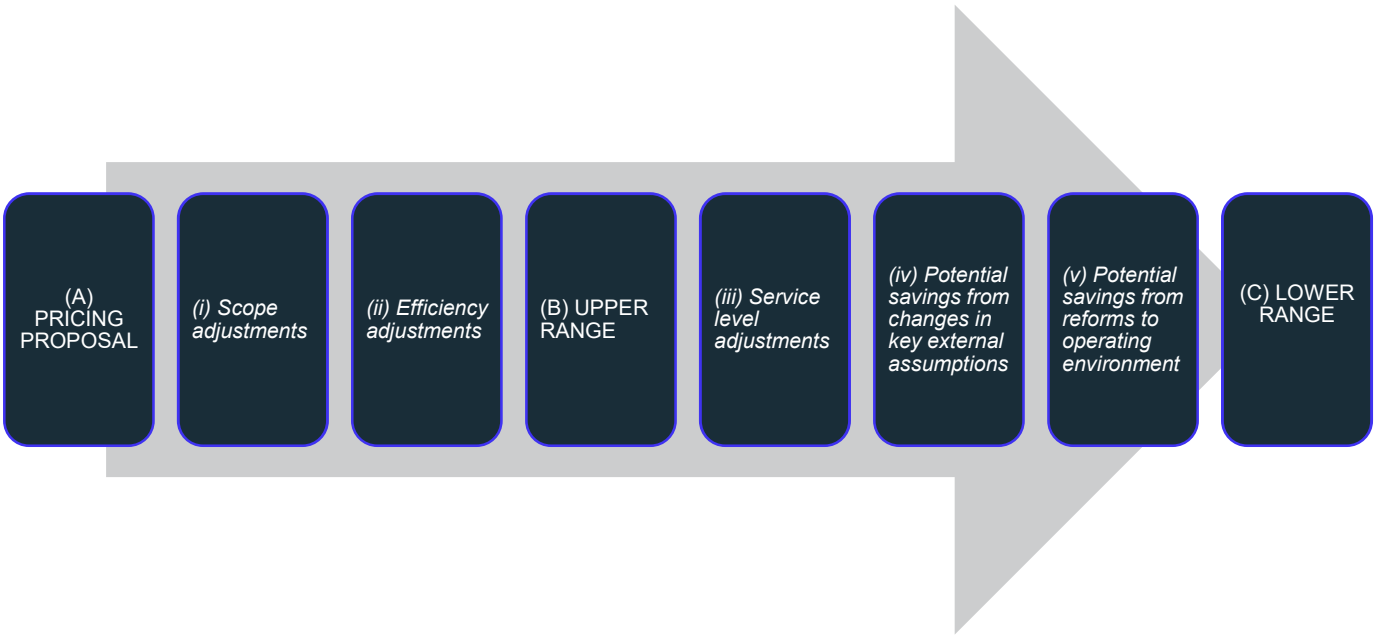
1.2.3 Report Structure

- Section 2 below sets out our view of the business's long-term investment strategy, asset management practice and processes, attitude to risk and cost-efficiency.
- Sections 3 and 4 provide detail on the approach undertaken for the operating and capital expenditure review respectively and set out our findings in line with the scope of works. These sections also set out our overall recommendations on the efficient level of operational and capital expenditure respectively for each year from 2024-25 to 2029-30.
- Section 5 provides an overview of digital total expenditure, including providing more detail behind the efficient level of expenditure covered in the previous sections.

1.2.4 Approach to developing a range of expenditure

IPART's water regulatory framework[2] requires expenditure review consultants to recommend a **range** of efficient expenditure rather than a single recommended figure. In discussion with IPART, the general approach taken to defining the range of expenditure is summarised as follows.

Figure 1-2 - General approach to defining the range of expenditure



Under this framework the upper range bound of expenditure is understood to be the efficient cost of in-scope activities/projects consistent with the proposed service levels and current operating (policy, legislative, regulatory) environment. The lower range bound is understood to be the efficient cost of scaled-back basic service levels and reformed operating environment.

Further description of the adjustments is provided below.

[2] Our water regulatory framework, IPART, November 2022.

Table 1-1 - Adjustments in defining the range of expenditure

Element	Description
(i) Scope adjustments	Adjustments for: ▪ Activities / projects that could be considered outside the scope of the regulated service including costs driven by any unregulated activities and/or activities that do not directly relate to the regulated service. ▪ Activities/projects not sufficiently certain to go ahead or lacking strong justification in period ▪ Errors or omissions ▪ Reflect more realistic external driver assumptions
(ii) Efficiency adjustments	▪ Removal of inefficiencies: removal of duplication, removal of operational inefficiencies, savings from bundling of activities, more realistic costing assumptions/removal of gold-plating ▪ More realistic expenditure profiling ▪ Application of efficiency challenge
(iii) Service level adjustments:	▪ Remove all remaining deferrable and non-essential activities/projects to provide the Tribunal flexibility to balance service level and affordability considerations.
(iv) Potential savings from changes in key external assumptions	▪ Amend key assumptions driving expenditure such as levels of growth and asset risk
(v) Potential savings opportunities from reforms to operating environment (policy, legislative, regulatory)	▪ To allow IPART to advise on potential savings from reforming existing policy, legislative and regulatory requirements.

Source: AtkinsRéalis and discussions with IPART staff

1.2.5 Price base and cost data

The financial information used for this review is based on the Annual Information Return and Special Information (AIR/SIR) data submitted by WaterNSW in September 2024.

Within the AIR/SIR, historical costs are recorded on a nominal basis. IPART has requested WaterNSW to provide forecasts costs in a real price base of 2024/25. For our analysis and within this report, we have sought to present all historical and forecast costs in a consistent, real price base of 2024/25. This allows for better comparison of the underlying trends and drivers of costs over time. To achieve a consistent price base, inflation indices supplied by IPART have been applied to historical costs. The indices applied to convert all costs to a real 2024/25 price base are summarised below.

Table 1-2 - Indices used to convert costs to real 2024/25 price base

Period (inflated)	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Inflation Factor (CPI)	2.1%	1.6%	(0.3%)	3.8%	6.1%	6.0%	3.8%	3.0%
Compounding Factor (Real 2024/25)	1.264	1.244	1.248	1.202	1.133	1.069	1.030	1.000

Source: AIR/SIR

Unless otherwise noted, all prices within this report are presented in a real price base of 2024/25, referred to as $FY25.

2. Cross-cutting issues

2.1 Summary of findings

We have reviewed a number of aspects of WaterNSW's approach to asset management. We consider that there is significant room for improvement in long term (empirical and risk-based) planning and a move away from simplistic projections.

On risk management we consider that data gaps are a key challenge for WaterNSW. WaterNSW has made a number of positive advances, including a shift to accepting some risk, but there is clearly still progress to be made on data and decision making and how customers' views shape risk appetites for example.

We consider that WaterNSW would benefit from continuing to improve its collection of asset condition and performance information for its asset base so that it is in a better position moving forwards to employ a targeted and prioritised approach that is balanced between risk and performance.

We consider that WaterNSW would benefit from taking greater ownership or oversight of cost estimation to drive improvements over time, capturing outturn project cost information and documenting these in an accessible and comparable format so it is better able to benchmark and challenge future cost estimates thus driving more accurate cost estimates.

2.2 Review of long-term plan

WaterNSW does not have a long-term plan document for Rural Valleys.

The long-term planning or modelling that is carried out is driven by the business's view of asset renewals and replacement requirements which we comment on further in Section 4.11. We note that beyond legislative or regulatory requirements (such as those related to dam safety, fishway passes and cold water pollution) and new licence requirements, renewals expenditure forms the bulk of Rural Valleys' activities.

The long term view that WaterNSW takes for Rural Valleys' asset renewal and replacement expenditure is a trend based view over 30 years. This is undertaken by using asset replacement values and asset book lives to produce a profile of expenditure which is then used to inform what the longer term renewal expenditure required is. As noted in Section 4.11 as this does not take into account a risk based approach of assets performing beyond their book lives it is likely to overstate the expenditure requirements.

We consider that there is significant room for improvement in long term (empirical and risk-based) planning for Rural Valleys and a move away from book value type projections.

2.3 Asset management practice and processes

Our approach is based on taking a view of capital efficiency based on need and a review of the building blocks of effective capital planning processes comprising:

- Asset management;
- The robustness of appraisal and cost estimates;
- The effectiveness and approach to risk management; and
- The approach to procurement.

This follows a similar structured approach we applied in our previous expenditure reviews.

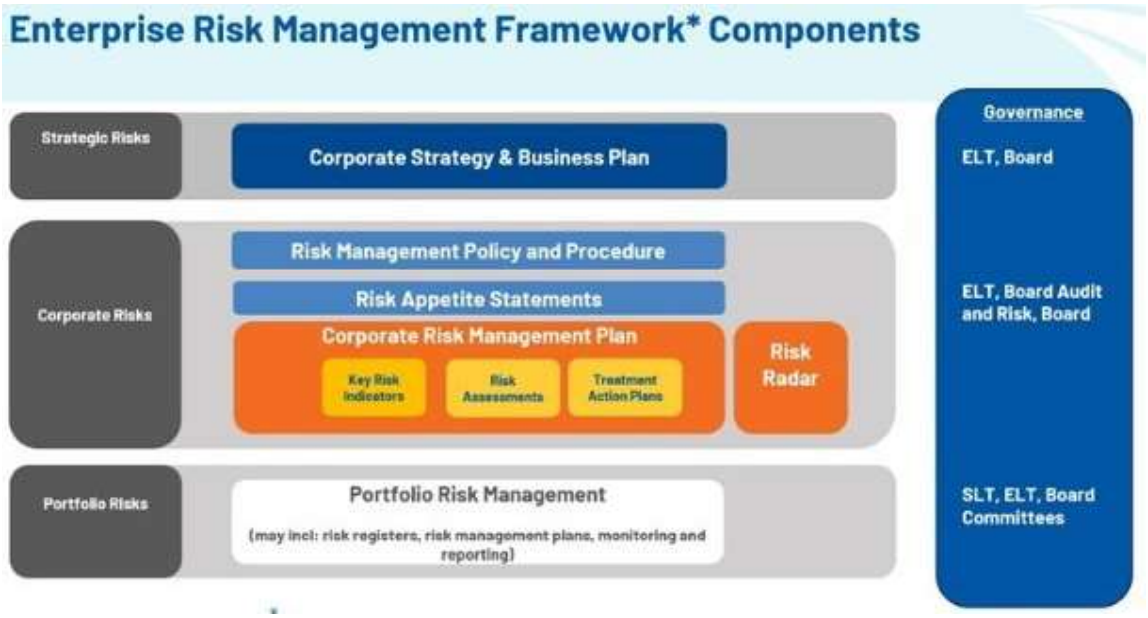
Figure 2-1 - Some of the building blocks of capital planning processes

Source: AtkinsRéalis

2.3.1 Asset management and risk management

The following figure shows WaterNSW's Enterprise Risk Management Framework which it states is compliant with the ISO 3100 standards for Risk Management. The business is transitioning to a new risk management framework which articulates both quantitative and qualitative risk tolerance levels.

Figure 2-2 – Risk Management Framework



Source: WaterNSW Presentation on Approach to Risk Management.

Under the old framework, there were 72 enterprise risks identified. This number is being reduced to 36 in the new enterprise risk appetite framework. The business is also moving away from ALARP (as low as reasonably practicable) and non-ALARP classifications to risk appetite statements.

Over the last 12 months significant effort has been made on the Risk Appetite Statements. There are currently 10 to 12 Risk Appetite Statements that have been formulated to aid the business in understanding risk tolerance.

The process of operationalising these risk appetite statements is understood to be ongoing and they are linked to the enterprise risks. Currently, a risk register is maintained and used as an input to the risk management process. Asset class strategies, which consider both capital expenditure (capex) and operational actions, are the closest existing approach to managing and treating risks.

There has been no direct cost-benefit analysis conducted for each risk element. However, the development of risk appetite statements has helped management and employees better understand the Board's tolerance levels. Historically, there was a perception of zero risk acceptance, leading individuals to make their own risk assessments. The new framework provides clearer guidance on acceptable risks.

The Board has a zero-tolerance policy for material non-compliance, while allowing some tolerance for minor non-compliance. For water quality, the tolerance is set at greater than 95% compliance.

We note that WaterNSW is making improvements to its Asset and Risk Management processes and procedures. However, robust and reliable data is required to underpin views on risk and outcomes and **we consider that data gaps will be a key area for WaterNSW over the 2025 Determination period so that more informed views of risk and management of those risks can be achieved**.

In general **we consider that WaterNSW has made a number of positive advances, including a shift to accepting some risk, but there is clearly still progress to be made on data and decision-making and how customers' views shape risk appetites for example.**

2.3.2 Cost estimation

The estimating function within WaterNSW is responsible for managing corporate risk and ensuring efficient fund expenditure, the WaterNSW methodology for doing so is included in its Estimating Manual. The Estimating Manual provides a good basis for WaterNSW to manage its requirements for cost estimating and covers the following topics: estimating types; estimate structure; estimate development; risk assessment; schedule, cashflow and escalation of costs; and estimating governance and assurance process.

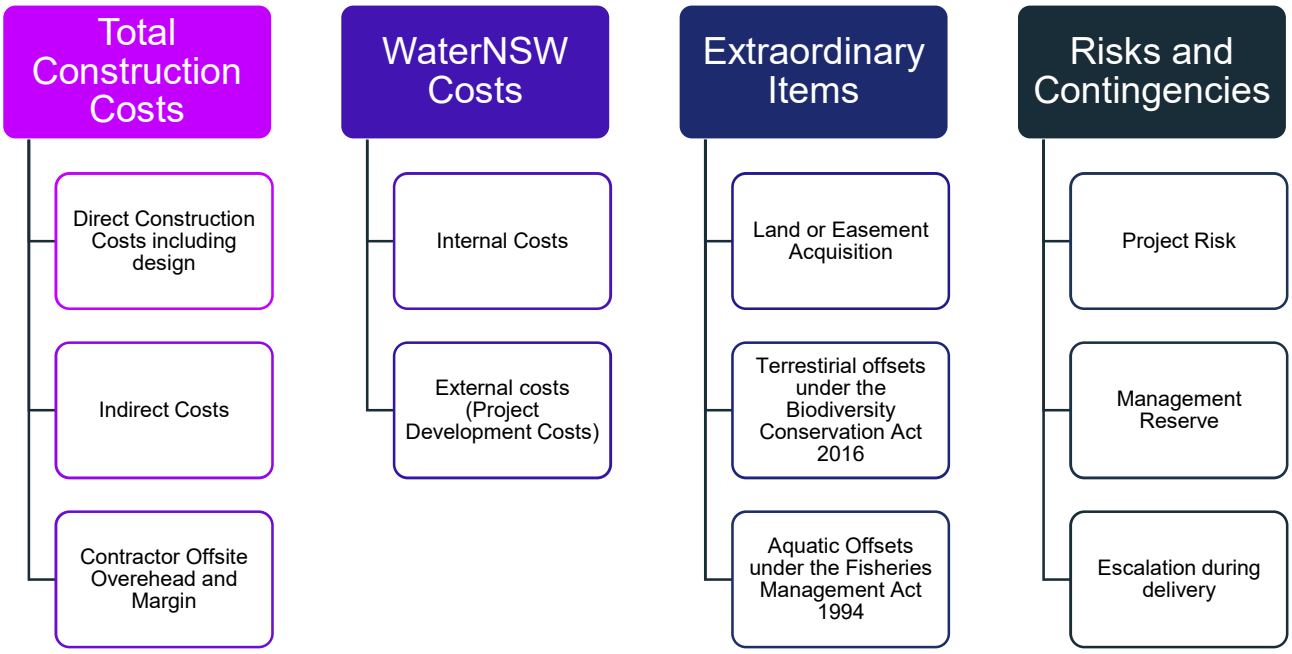
The Manual outlines the role, framework, procedures, and processes of the estimating function, detailing what is needed to build, review, and manage estimates. It relies on other policies and documents for related rules and details, such as the Project Management Framework (PMF) and delegations of authority.

The use of the manual should allow for:

- More accurate capital cost estimating
- Consistent estimating approach and terminology
- Improved decision-making at key project lifecycle points
- Enhanced risk management at both project and business levels
- Efficient processes from project initiation to execution
- Transparency in cost estimating
- Risk and Contingency Management

Cost Estimates are structured according to Figure 2-3.

Figure 2-3 – Cost estimate structure



Source: WaterNSW Estimating Manual and interviews

Risk and Contingency

An integral part of the estimating process is the determination and management of project risks and contingencies for individual projects, the manual includes methodologies for estimating risk contingency values at specific project level but does not cover risk contingencies at the program level. We consider managing risk contingencies at the program or portfolio level is considered best practice as this allows:

1. **Holistic Risk Management**. Would allow WaterNSW to view and address risks across all projects ensuring a comprehensive and consistent approach to risk management which can improve the overall effectiveness of risk mitigation strategies.
2. **Resource Allocation**. Risks that could impact multiple projects can be allocated resources to manage these across the portfolio resulting in more efficient management.
3. **Strategic Decision Making**. By understanding the cumulative risk exposure at program level WaterNSW could make more informed strategic decisions, balancing risk and outcomes across the entire program and ensuring risks are managed in alignment with WaterNSW's strategic objectives.

Target Estimate Accuracy

WaterNSW aims to achieve a target level of estimate accuracy, the target accuracy classes attributed to each stage of the project lifecycle is shown in the following table along with the target accuracy for each class.

Table 2-1 – Target estimate accuracy

Type of Project	Planning Strategic Cost Estimate	Strategic Assessment Preliminary Cost Estimate	Design Final Business Case Cost Estimate	Delivery Readiness Delivery Cost Estimate
Light	Class 5	Class 4	Class 2 or 3	Class 1 or 2
Medium	Class 5	Class 4	Class 2 or 3	Class 1 or 2
Heavy (Construct)	Class 5	Class 4	Class 2	Class 1
Heavy (D&C)	Class 5	Class 4	Class 2	Class 1
Class 5 -25 to +80%	Class 4 -20% to +55%	Class 3 -15% to +30%	Class 2 -5% to +20%	Class 1 -2% to +15%

Source: WaterNSW Estimating Manual

We consider the accuracy bands to be generally reasonable. However, we do see other utilities using more symmetrical ranges and in cases Class 1 estimates to 10% rather than 15% as used by WaterNSW.

Overall, we consider the WaterNSW framework to cost estimation appears to be reasonable. Because we have not carried out an ex-post review of projects we do not have much information on the performance of this process. We consider that it would be useful for WaterNSW to capture outturn project cost information and document these in an accessible and comparable format so it is better able to benchmark and challenge future cost estimates thus driving more accurate cost estimates. In general we consider that it would be useful for WaterNSW to take greater ownership or oversight of cost estimation to reduce reliance on consultants and drive improvements over time.

2.3.3 Procurement

WaterNSW has recently updated its procurement model resulting in three procurement approaches:

- **Asset Renewal and Replacement (ARR) Framework –** the majority of renewal and enhancement projects are procured through this framework
- **Procurement Framework –** used for other capital projects that require specialist skills or regional projects that would not be efficiently delivered under the ARR Framework:
  - Single source quote for <$50k
  - Three quotes for projects above the single source threshold but less than $250k
  - Open tender for projects greater than $250k
- **Operations Professional Services Panel –** used for professional services (project management, communications, capability, and dam safety and engineering). Design services are typically procured under the ARR framework:
  - Direct award for projects less than $500k
  - Competitive open tender of up to eight suppliers for projects greater than $500k

We consider that the updated procurement model has the potential to provide a robust platform for delivering capex by:

- Ensuring efficient management of renewal and enhancement projects through the ARR Framework.
- Offering flexibility for specialist and regional projects via the Procurement Framework.
- Streamlining the procurement of professional services through the Operations Professional Services Panel.

WaterNSW considers that this structured approach enhances its ability to manage and deliver a wide range of capital projects effectively, ensuring that resources are allocated appropriately and projects are given the best chance of success. Because we have not carried out an ex-post review of projects we do not have much information on the performance of the procurement processes.

2.4 Attitude to risk

We consider WaterNSW's risk attitude to be conservative. We consider that it does not optimise for trade-offs between prices and service levels to the same degree that a fully competitive business would.

Projects have been prioritised on the basis of a benefits analysis using a multi criteria scoring approach without projects being tied to specific outcomes on service levels, bill impacts or economic returns, meaning that there is no view of the economic internal rate of return, payback or affordability. This has resulted in a proposed expenditure program that has not been shaped to achieve a particular target in terms of bills and performance. We also note that the prioritisation process has no impact on timing of projects as timings of projects are predetermined by WaterNSW, in addition WaterNSW has also mandated significant numbers of projects (with significant expenditure) and therefore the whole program cannot be seen to be a fully optimised program.

We consider that WaterNSW would benefit from continuing to improve its collection of asset condition and performance information for its asset base so that it is in a better position moving forwards to employ a targeted and prioritised approach that is balanced between risk and performance.

We also note that risk contingencies are managed at project level and not at program level. This also contributes to our view of WaterNSW's conservative approach to risk management, as managing risk at a program level generally enables more efficient expenditure (as project managers are less likely to see the contingency as their budget to spend). **We consider that a shift to managing contingencies at program level would be a positive step forward to enhance efficiency.**

2.5 Overheads

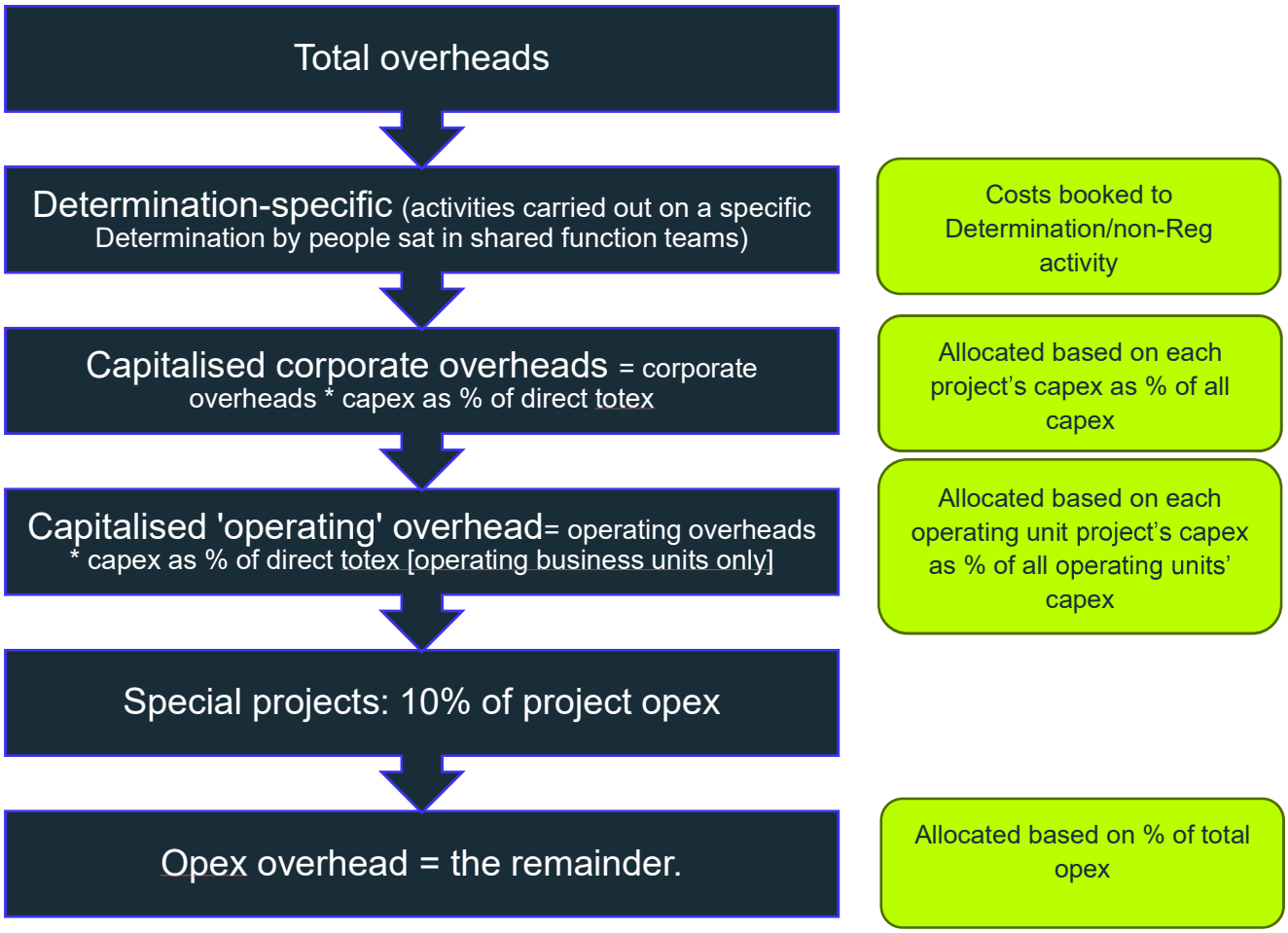
WaterNSW provides services across a number of Determinations as well as other non-regulated activities. Its shared or "overhead" costs are allocated across these Determinations and activities in a two stage process:

1. Corporate[3] and 'operating'[4] overheads are put into buckets to be allocated to capex, 'special projects' and opex as summarised graphically below.
2. Allocation to Determinations/other activities.

The approach is summarised graphically below.

[3] 'Corporate' overheads are those associated with the Chief Executive, Digital, Finance, Legal & Risk, Safety People & Culture and other corporate cost functions as well as some Strategy & Performance costs.
[4] 'Operating' overheads are those associated with the Corporate Affairs and Operations functions as well as some Strategy & Performance costs.

Figure 2-4 - Summary of overhead allocation approach



Source: AtkinsRéalis summary of presentation 26 November 2024 and Cost allocation manual (Appendix 7 to the price submission)

WaterNSW's approach to corporate cost allocation was reviewed in 2021 and it is not in the scope of this review to assess the approach in detail.

However, it is clear that the recommended and outturn expenditure for different Determinations and non-regulated activities may have a significant impact on the overheads allocated to each. Given this and the fact that this report is seeking to set out a **range** rather than single recommended expenditure level, we have considered different potential approaches to assumed overheads.

Table 2-2 – Approaches considered for overhead allocation in our recommendations

Approach	Advantage	Disadvantage
A. Simplicity: use recent actuals for opex overheads (consistent with the Base, Trend and Step approach) and for capex overheads	Simple and avoids over complication. Also avoids artificial precision: outturn expenditure may differ from expectations any way	If future spend mix is very different to historical levels outturn overheads may vary from assumptions
B. Create a model replicating the overhead allocation approach across all expenditure areas	Would allow for an integrated view of overheads which can be adjusted with the Tribunals final decisions	Complex, laborious and potentially at risk of artificial precision
C. WaterNSW model the impacts of recommended expenditure on overhead allocation	WaterNSW will have ownership of overhead allocation	It will be difficult for the Tribunal to see the price impacts of their decisions. Reduces flexibility to amend assumptions/recommendations throughout the process.

Source: AtkinsRéalis

On balance we consider that the simple approach is the most appropriate for these recommendations. It avoids artificial precision and complexity whilst giving the flexibility to amend assumptions throughout the process.

We address our view of the level and allocation of overheads for opex and capex separately in the chapters below.

2.6 Cost efficiency

The Water Regulation Handbook requires businesses to develop a cost efficiency strategy and sets out expectations for standard, advanced and leading categories of approach.

For the 'standard' expectations it sets out that the business will have:

> *a management approved and externally published cost efficiency strategy that includes:*
>
> *– an annual 'efficiency factor' across opex and capex*
>
> *– productivity improvements achieved and proposed, which highlight that the business is adopting innovations*
>
> *– how it has performed against current period targets.*

For an 'advanced' classification IPART expects justification of *"an ambitious annual expenditure 'efficiency factor' and explains reasons for its current performance"* and for 'leading' it expects a *"significant step change in cost efficiencies below historical costs and industry cost benchmarks"*

WaterNSW does not have a document called a 'cost efficiency strategy'. However, its pricing proposal does summarise the opex efficiencies it considers it has made in recent years and proposes a cumulative efficiency target of 1% p.a. of total operating expenditure. It also details the ongoing efficiency program in Attachment 9. The opex efficiencies achieved and proposed are reviewed in further detail in Section 3.

It has applied a reduction to the cost estimates for new candidate capital projects and fishway projects by the following factors to reflect program-level efficiency opportunities[5]:

- 2.5% for small rural valleys (those with FY26-30 capex <$5M, i.e. Border, Lowbidgee, North Coast, Peel, South Coast); and
- 3.0% for large rural valleys (those with FY26-30 capex >$5M (Fish River, Gwydir, Hunter, Lachlan, Macquarie, Murray, Murrumbidgee, Namoi).

It estimates that it has reduced proposed capex in Rural Valleys by $7.2M as a result[6]. The proposed opex and capex efficiencies are discussed in Sections 3 and 4 below.

[5] The proposal sets out the expectation that efficiencies can be driven from robust needs and options assessment, value engineering, procurement efficiencies and project management efficiencies via allocation of low complexity projects to Regional Delivery teams.
[6] Attachment 18 to WaterNSW's pricing proposal

3. Review of operating expenditure

This chapter presents a review of WaterNSW's Rural Valleys operating expenditure (opex), both historical and proposed. It concludes with a recommended range for IPART's consideration.

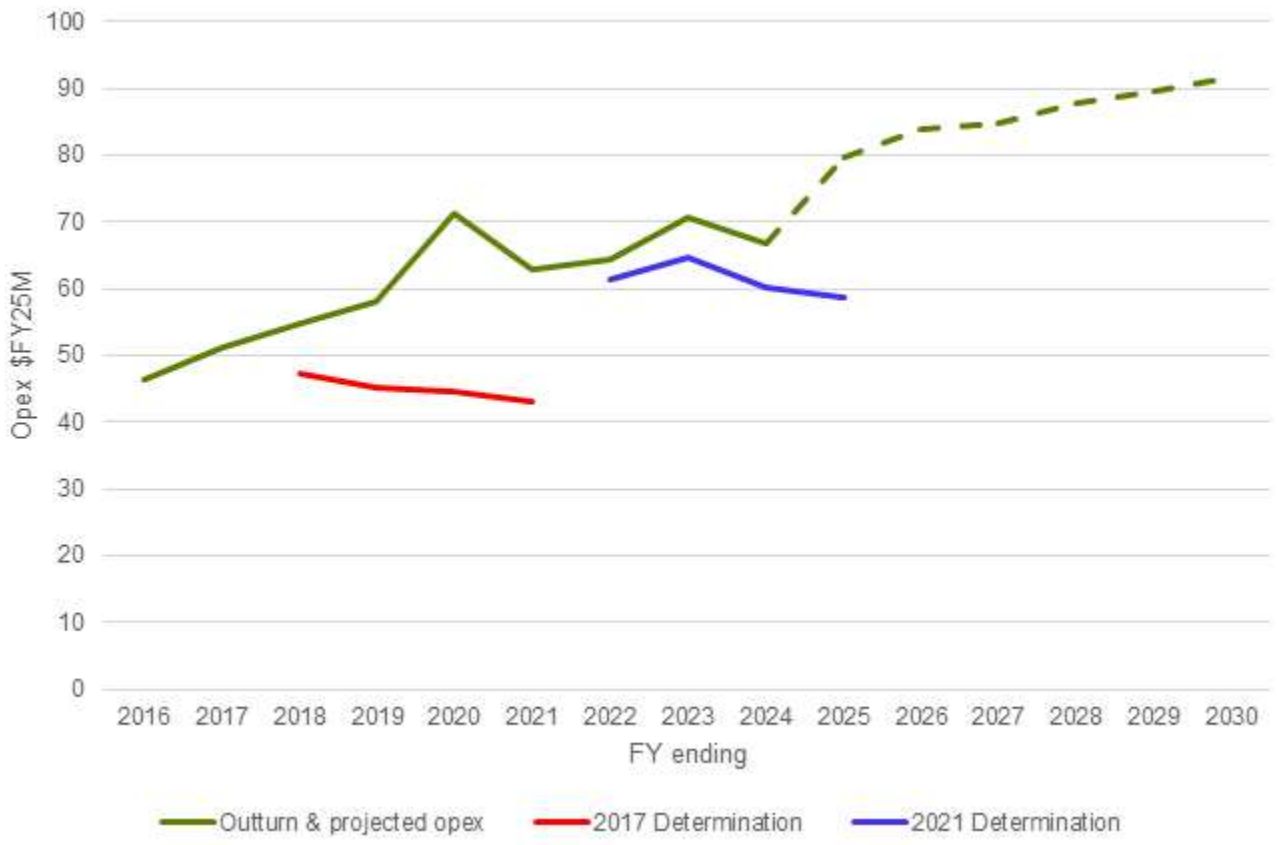
3.1 Summary of findings

We summarise our findings below.

Current period

Outturn opex has been higher than the allowance in all years of the current Determination period. On average outturn opex has been $5.3M p.a. or 9% higher than the allowance.

Figure 3-1 – Historical and proposed Rural Valleys opex



Source: Analysis of 2021 and 2024 AIR/SIRs

WaterNSW has provided some high level narrative for the higher spend (e.g. overheads, insurance and land tax) but has not provided robust detailed justification especially for the high overheads costs. The lack of explanation suggests that WaterNSW may not have a strong system of measuring, understanding and managing variance against the Determination.

WaterNSW has stated that it has achieved $19.7M of efficiency savings in recent years, of which $17.8M apply to the 'core' businesses (the three Determinations). There is some lack of clarity about how this has been calculated and which years the claimed efficiencies relate to (i.e. whether they relate to savings made in FY23 and 24 or FY22, 23 and 24) and they are not broken down by Determination. It is possible that these savings

have been made across the three Determinations when comparing FY21 to FY24. However, it is clear that the core business has not seen a net reduction of $17.8M between FY22 and 24 and even more clear that Rural Valleys has seen an increase rather than a reduction in this period.

WaterNSW's proposed opex

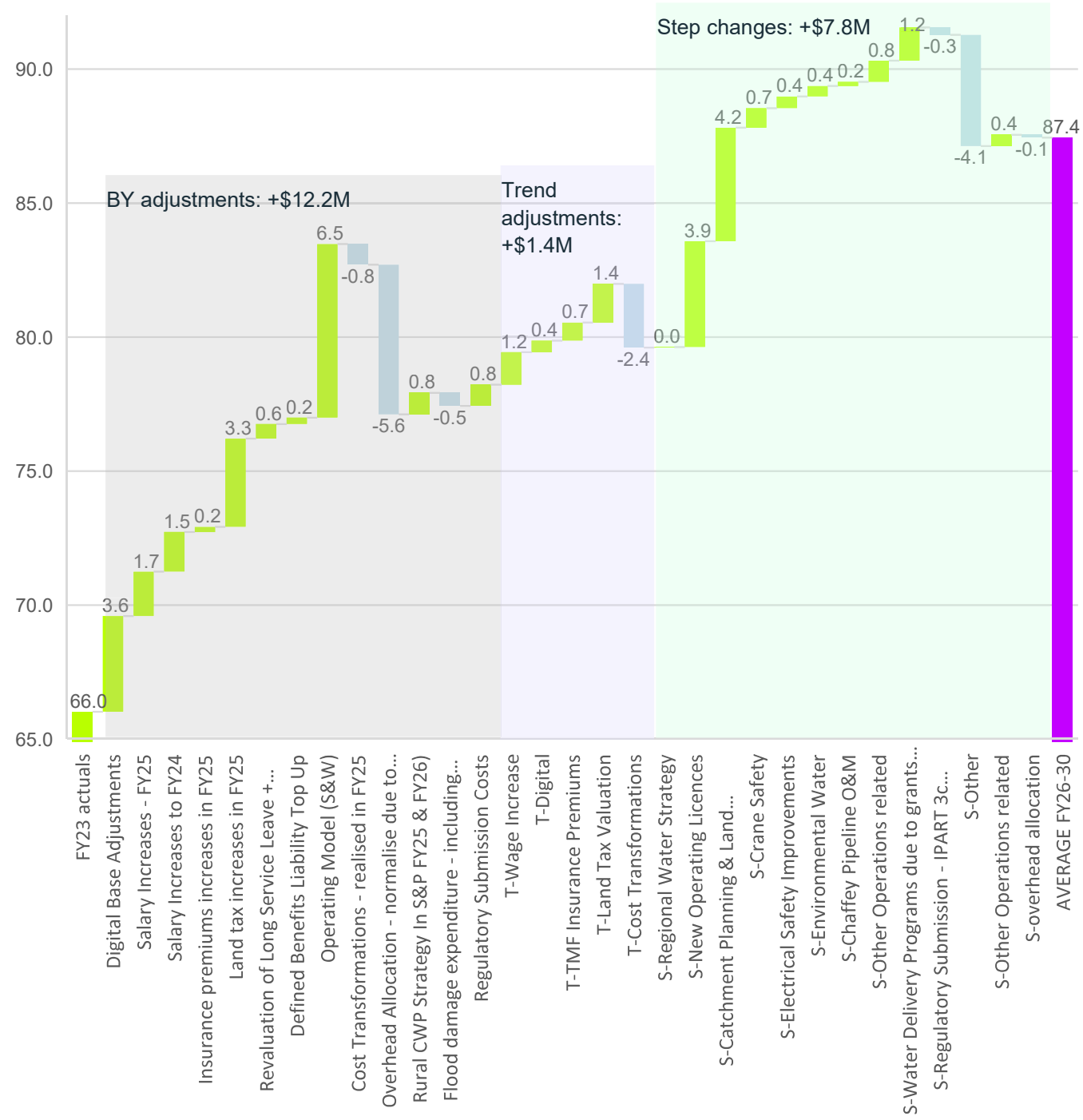
WaterNSW has proposed a significant increase (+$21.2M p.a. or 32% average) compared to actual expenditure to date in the current Determination period.

It is the first time that WaterNSW has submitted a pricing proposal using a base-trend-step (BTS) approach. It has created a projection of opex by year and then sought to classify the differences between these projections and its base year (FY23) opex into either base year adjustments, trends or step changes. This means that there is not an easy calculation trail underlying the proposed base, step and trend adjustments but rather the adjustments themselves are explanations of the difference. Some of the largest changes are named things like 'operating model' (actually partially a change in vacancy assumptions[7]) and 'overhead allocation' (despite the name, also partially related to vacancy assumptions- removing some of the operating model increases).

The proposed base year adjustments have the largest effects on proposed opex, followed by step changes, with the proposed trend adjustments being partially offset by efficiency assumptions.

[7] i.e. adjustments to reflect differences between the number of job vacancies in the base year and future years

Figure 3-2 – Bridge between FY23 actuals and WaterNSW proposed FY26-30 average for Rural Valleys ($M)



Source: Analysis of WaterNSW's spreadsheet "Detailed BTS"

WaterNSW has applied twenty base year (BY) adjustments. We consider that only three of these (efficiency improvement and non-recurrent adjustments) meet the definition of a base year adjustment. We have considered the remainder as either a trend (labour and insurance cost increases) or step change (all others).

We note that WaterNSW has adopted FY23 as the base year. It is not the most recent full year of accounts and does not comply with the guidance in the Handbook. Whilst use of FY24 as the base year would comply with the Handbook, expenditure in that year was significantly ($6.7M or 11%) higher than the 2021 Determination

allowance. WaterNSW has not provided detailed explanations of this variance at a Determination level. In particular we do not have a clear statement as to why exactly overheads were so much higher than the Determination allowance.

Given this we consider FY24 to be an upper estimate of base opex. We consider that adjustments for efficiency and regulatory submission costs are reasonable. We have made our own assessments of these figures based on the 2021 Determination efficiency challenge and the average rate of regulatory submission spend.

For the lower range of base opex, we consider that IPART's 2021 Determination allowance, adjusted for well justified variance, is a reasonable starting point. WaterNSW has indicated that the $0.7M positive variance in 'administration' costs in FY24 is due to insurance and land tax (see further detail below). We consider that it would be reasonable to assume that insurance and land tax are exogenous factors. WaterNSW has not provided a detailed explanation and justification for the other variances (e.g. to what extent they are exogenous or how customers benefit). As such we consider that IPART's 2021 Determination allowance, adjusted for insurance and land tax, is a reasonable lower estimate of base opex.

Range of future opex

We have reviewed the potential trend changes and comment as follows:

- The proposed land tax trend increase appears to be a nominal rather than 'real' price increase. We have adjusted accordingly.
- We are not convinced that WaterNSW has made a case for real terms increases in labour costs. Wage price inflation has been below general inflation in the last ten years.
- Given the wider market data, suggesting negative premium movements, and in the absence of any more concrete information about WaterNSW's future premiums we are not in a position to recommend real terms increases in insurance costs.
- We have recommended consideration of a higher rate of efficiency than proposed by WaterNSW to take account of the efficiency performance in the current period.

We have also reviewed the 17 step changes proposed by WaterNSW and four areas proposed as base year adjustments. Key findings include:

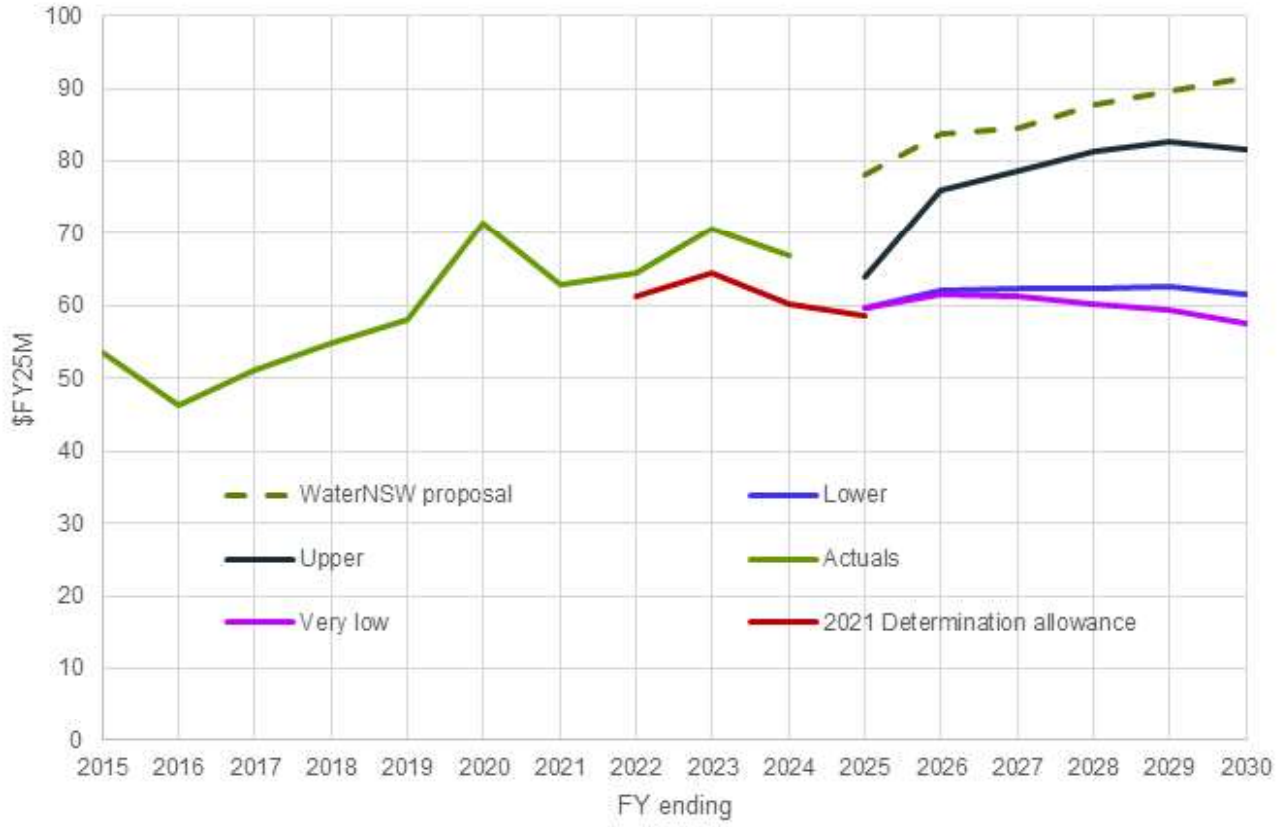
- **New operating licence conditions:** there appears to be significant flexibility in the scope of many of the conditions. We have reflected this in the range of expenditure.
- **Increased compliance with existing regulatory requirements:** for land management we accept that activities which reduce the risk of things like bushfire and biosecurity hazards have wider benefits but we have limited confidence in the appropriateness of the proposed response and costs. For crane safety we consider that there is a reasonable case for stepping up inspection and maintenance activities on some of WaterNSW's highest health and safety risk assets but consider that there is a reasonable case for assuming that the net increase in costs is lower than estimated. For electrical safety, we estimate that a negative adjustment is appropriate given that proposed spend is less than in FY24.
- **New Regulatory Requirements:** we consider that we have not been given sufficient explanation, information and justification to confidently recommend this as a material step change. However, recognising that there is likely to be a drive towards greater focus on environmental water holdings, we have included some expenditure in the 'upper' range.
- **New recurrent controllable opex resulting from new capex:** in general we find that there is a clear driver for these changes, with some questions around costing and whether WaterNSW's customers are the appropriate people to pay for these activities (e.g. those associated with the taking on of assets funded by others).

- **Grant Expiry:** the justification provided relates to maintenance of the system and WaterNSW has not justified the benefits of further development. As such it is not clear to us that the case has been made that continuation of the same level of expenditure is warranted.
- **Regulatory Submission:** following our recommended base year adjustment we have included a net neutral step change implied by the cost estimates provided to both the 'upper' and 'lower' range of expenditure.
- **Other Step Changes:** for water carting we have included the full costs in the 'upper' range and none of the costs in the 'lower' range as it appears likely that the current arrangements could be maintained. We have recommended the network enhancement step change. We have also recommended part of the 'other' negative adjustment for the completion of projects before the new Determination period.
- **Overhead Allocation Adjustment:** we have incorporated the effect of the reduction in the overhead pool.
- **Land tax:** we have examined three scenarios based on the rate at which currently untaxed land is subject to land tax.
- **Digital:** we have built in the findings of the digital expenditure review set out in Section 5.
- **Operating model:** we have not incorporated any of the proposed change. The business has only provided a high level mapping of additional roles to 'areas'. It is not clear to us that any of the areas listed are associated with new regulatory obligations, customer benefits or opex from capex which have not already been reviewed as a step change above.
- **Ongoing compliance:** it is not clear to us how this represents a base year adjustment or step change as the description suggests that new studies are being initiated now that others are finished. We have not included this as a step change.

Recommended opex range

We have developed three ranges: 'upper', 'lower' and 'very low'. The resulting projections are summarised in graphical form below. The upper range is an average of $7.4Mp.a. (8%) less than WaterNSW's proposal, the lower range is $25.2M p.a. (29%) less and the 'very low' range is $27.4M (31%) less. Compared to FY24 actuals they represent an average 22% increase ('upper'), or a reduction of 8% ('lower') and 14% ('very low').

Figure 3-3 – Opex ranges



Source: AtkinsRéalis analysis

The advantages and disadvantages of these projections are set out below.

Table 3-1 – Our view of the range of opex

Base year adjustment	WaterNSW proposal	Upper range	Lower range	Very low range
Summary of approach	FY23 actuals + CPI + adjustments largely to FY25 "budget" - efficiency + non-recurrent adjustment + trend adjustments (including labour and insurance)	FY24 actuals + CPI - FY25 efficiency - regulatory submission costs + land tax trend - efficiency trends + numerous steps	2021 Determination allowance for FY25 + CPI + justified variance + land tax trend - efficiency trends + numerous steps	As per lower range but without land tax increases

Base year adjustment	WaterNSW proposal	Upper range	Lower range	Very low range
	+ numerous step changes			
Opex (all valleys) in FY30	$91.5M	$81.6M	$61.6M	$57.5M
Advantanges	The business owns these projections	Builds on the revealed costs in FY24	Ask customers to only pay for justified variance compared to the previous Determination	As per 'lower' but also customers are not asked to pay higher bills to cover land tax on land, some of which has been transferred without a case being made about customer benefit
Risks/disadvantages	Many of the large cost increases do not appear to have a business case or similar justification. The business has not followed the base-trend-step approach Overheads will depend on allowances/spend in other Determinations and capex	It is difficult to tell how representative FY24 is and how efficient the variance from the 2021 Determination is based on the information provided We have had to build our own view of the base-trend-step model Overheads will depend on allowances/spend in other Determinations and capex	Requires significant efficiencies to be realised quickly if WaterNSW is going to spend within the allowance Overheads will depend on allowances/spend in other Determinations and capex	As per 'lower' but also the allowance is unlikely to be sufficient if land taxes increase

Source: AtkinsRéalis

We would also add that there is greater uncertainty in our projections than when we have carried out similar reviews of other companies, noting for example:

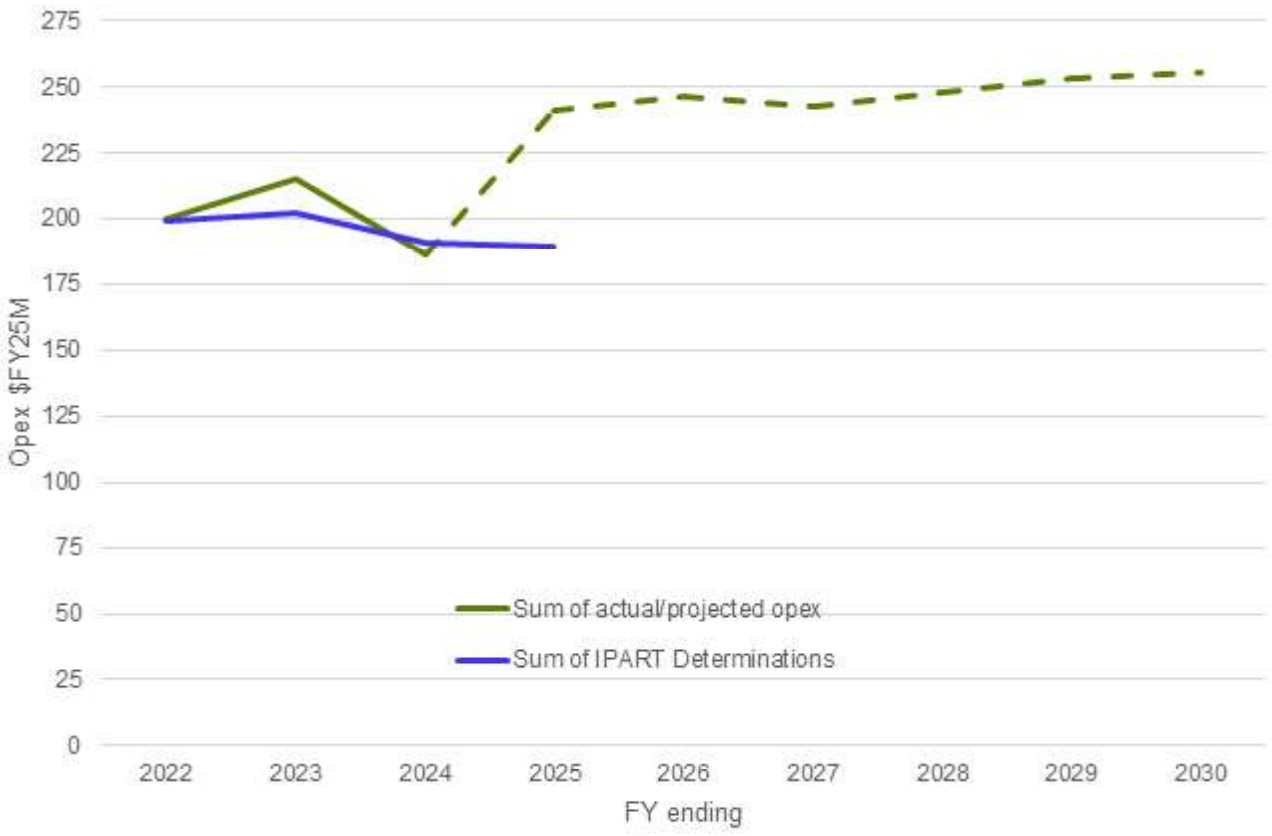
- Whilst WaterNSW has responded to all of our requests for information and done so in a reasonably timely manner, the information provided is generally in the form of numbers without calculations or audit trails. This limits our understanding of WaterNSW's costs and proposed adjustments.

- It has been challenging to unravel the many adjustments proposed. Some of the proposed adjustments appear to be there to undo other adjustments (vacancy normalisation and some of the 'other' adjustment for example). Others appear to duplicate those made elsewhere (e.g. operating model changes duplicating at least some of the proposed operating licence changes)
- Considering the scale of increase (and consequent impact on customers) WaterNSW has provided little formal documentation such as business cases demonstrating decision-making logic, efficiency and consideration of the impacts and benefits to customers. Opex has a significant impact on customer bills and we consider that it is good practice for formal justification to be in place for proposed opex changes in the same way as it should be for significant capex.
- We have been surprised by the fact that the business has not been able to provide detailed assessment and understanding of historical variance in opex, particularly overheads, given that this is the kind of thing we would expect a well-managed business to have assessed at the time and have had plans in place to manage overspend. This lack of detailed variance analysis limits our confidence in the drivers for historical expenditure performance and overspend.

3.2 Context

WaterNSW has submitted a combined pricing proposal setting out total opex and opex for each of the Greater Sydney, Rural Valleys and WAMC Determinations. It has applied a similar approach (such as the choice of base year and method of calculating the base year adjustments) and a number of the same assumptions to all of the Determinations. This includes the assumptions underlying its proposed 'trend' adjustments for example.

Figure 3-4 – WaterNSW 'total' historical and proposed opex (aggregate of three Determinations)

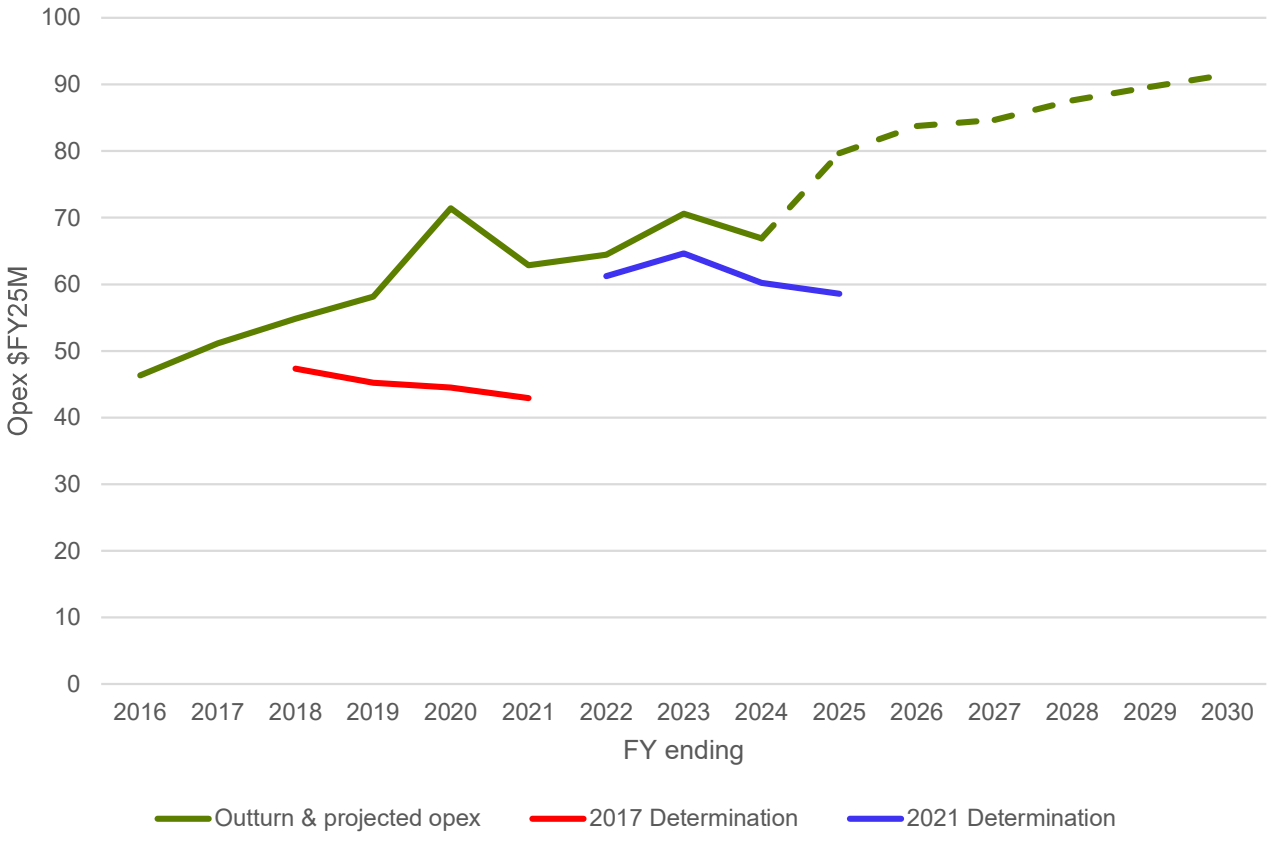


Source: Figure 1, Attachment 8, WaterNSW pricing proposal

This report will focus on the proposed opex for Rural Valleys. However, it is useful to also examine the wider picture. Examination of Figure 3-4 and Figure 3-5 below highlights that:

- It appears that WaterNSW's overall opex performance has been more reasonable but Rural Valleys has consistently exceeded its opex allowance:
  - Based on WaterNSW's analysis summarised above, whilst average opex has exceeded the allowance in FY22 to 24 for both 'total' and Rural Valleys, total opex is much closer to the allowance and is below it in the most recent year of actuals (FY24).
  - Indeed, Greater Sydney and WAMC opex are below the allowance in FY24 (by $8.1M and $3.2M respectively) whereas Rural Valleys opex is $6.7M above it.[8]
- The opex performance of Rural Valleys continues a pattern from the previous (2017) Determination period when opex also significantly exceeded the allowance.
- WaterNSW proposes to continue a fairly consistent long term trend of increasing real terms opex for Rural Valleys. Opex has seen an annualised average real terms increase of $1.5M p.a. (2.5% p.a.) since FY15, WaterNSW proposes to increase it by an annualised average of $4.1M p.a. (5.4% p.a.) from FY24 to FY30.

Figure 3-5 - Historical and proposed Rural Valleys opex



Source: Analysis of 2021 and 2024 AIR/SIRs

We note that in 'SIR Opex 1" and "Opex" of WaterNSW's "Rural" AIR/SIR Rural Valley's opex in FY24 is reported as $76.0M (in $FY25). However, in RFI response SA-62 WaterNSW has clarified that this is an error and the correct figure is actually $66.9M (in $FY25) as per the "Opex-Doc" tab, stating:

[8] All taken from Attachment 8 to the pricing proposal.

The $76.0M opex in FY24 was an old figure that erroneously included $9.1M in IT SaaS costs which was meant to have moved to reg capex. This error was picked up late in our submission process where management decided to correct the opex and capex numbers in our submission but not redo the revenue calculations due to time constraints…. Therefore the correct RV opex number is $66.9M

We examine the historical and proposed opex for Rural Valleys in further detail below.

3.3 Historical operating expenditure

3.3.1 Variance in expenditure

The opex for Rural Valleys has exceeded the allowance by 9% in the actuals to date (i.e. FY22 to 24). WaterNSW projects this to increase further in FY25, exceeding the allowance by $21.1M or 36% according to its pricing proposal.

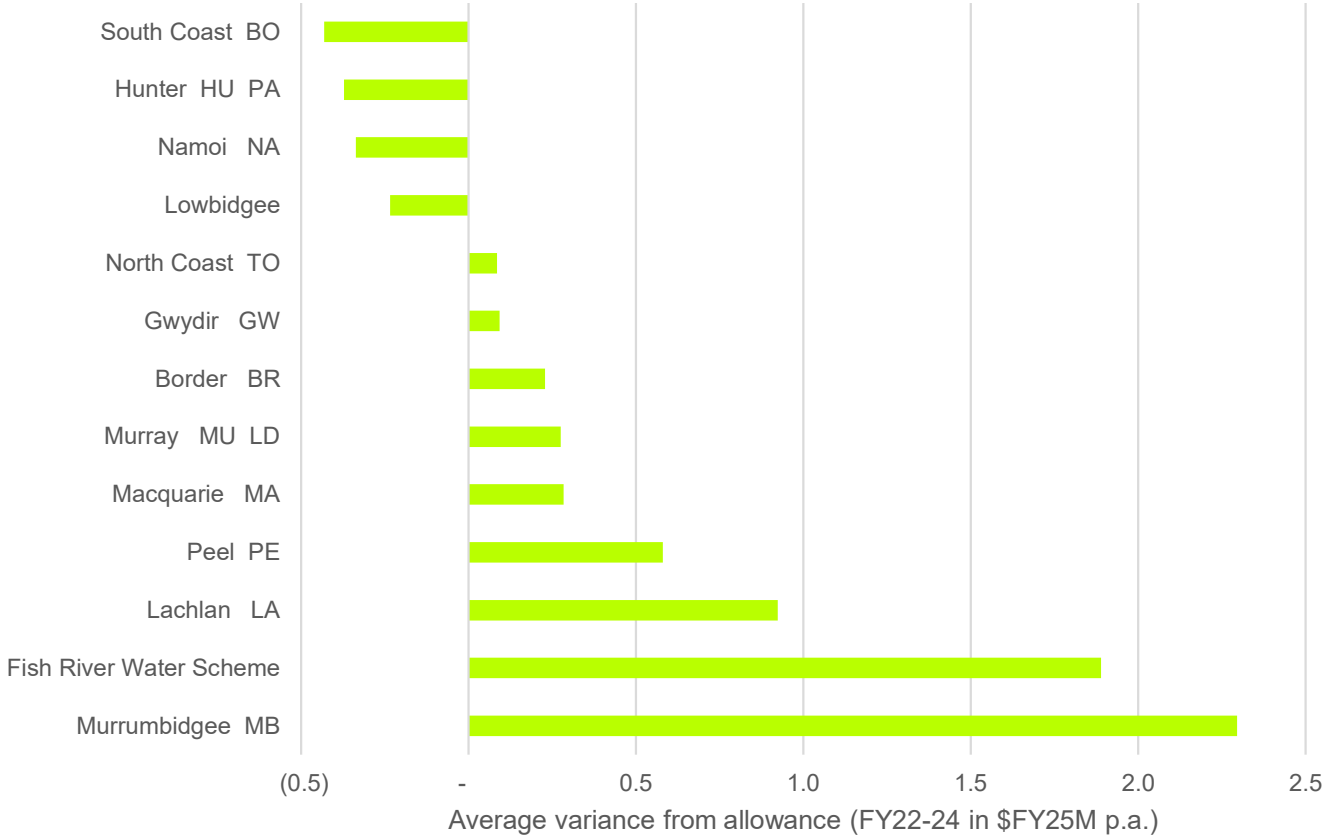
Table 3-2 – Variance from 2021 Determination ($FY25M)

FY ending:	2022	2023	2024	2025 (forecast)	Sum of actuals	Actuals and FY25
Outturn/projected opex	64.5	70.6	66.9	79.7	201.9	281.6
2021 Determination	61.2	64.6	60.2	58.6	186.1	244.7
Variance from Determination	3.2	6.0	6.7	21.1	15.9	36.9
Difference %	5%	9%	11%	36%	9%	15%

Source: Analysis of AIR/SIR

As can be seen in Figure 3-6, the exceedance is widely spread with only four valleys seeing opex below the allowance and only then by generally small amounts.

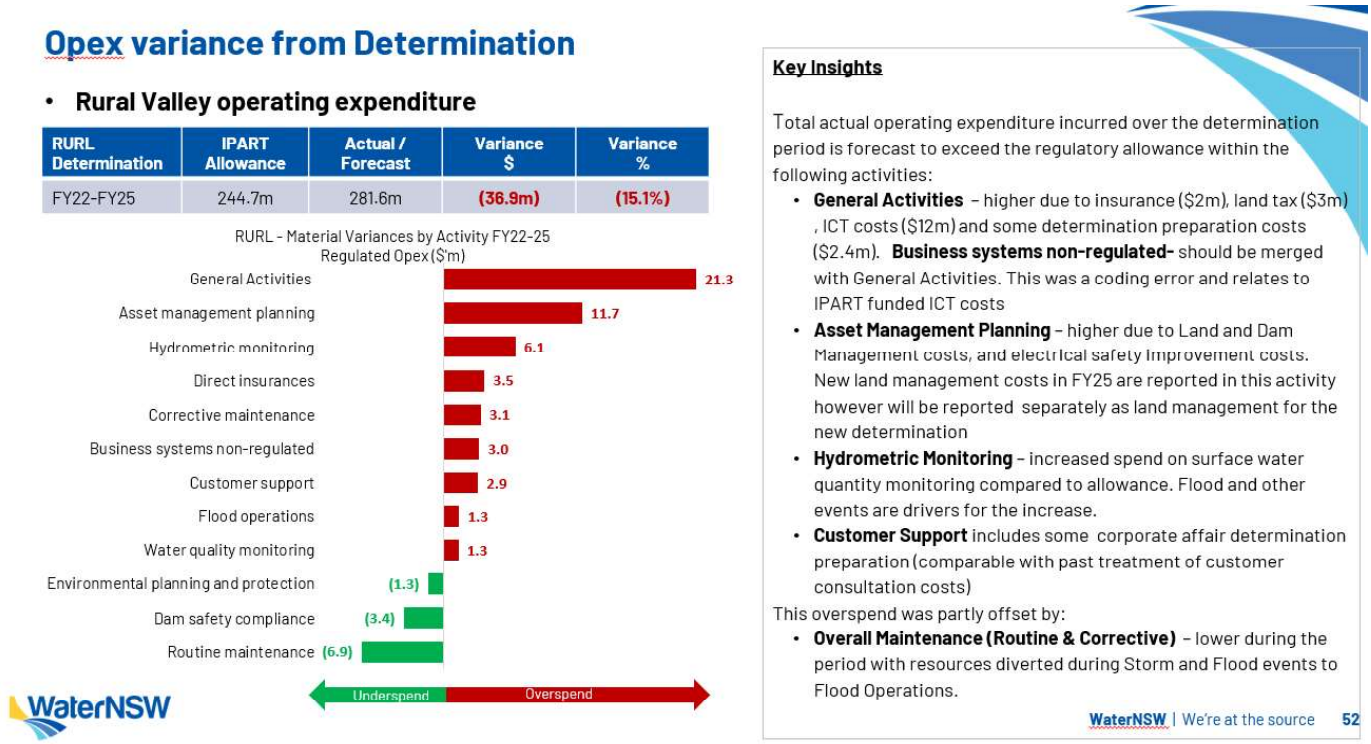
Figure 3-6 – Average variance against Determination allowance by valley (actuals)



Source: Analysis of 2021 and 2024 AIR/SIRs

During the interviews, WaterNSW provided an explanation of the variance which is copied below. This highlighted the effects of ICT costs, land tax, insurance, submission preparation costs and hydrometric monitoring for example. It also explained that maintenance was lower than expected because resources were diverted to storm and flood events.

Figure 3-7 – WaterNSW commentary on variation



Source: WaterNSW presentation "Bulk Water Expenditure Review - Nov 25 Day 1 - Sessions 1-10_Consolidated Slide Pack for Day 1"

In response to a request for explanations of the key drivers for variance by cost types, WaterNSW provided the following breakdown and commentary.

Table 3-3 – WaterNSW's analysis of opex variance ($FY25M)

	Actuals		Variance		Explanation provided
FY ending:	**2023**	**2024**	**2023**	**2024**	
Administration	5.6	5.4	0.6	0.7	Higher due to insurance and land tax.
Allocated Overheads	21.1	17.7	8.5	3.7	Lower capex resulted in higher-than-expected overheads being allocated to opex Rural Valleys specific overhead increased starting FY22, followed by drop in later years. This is due to salary and wages, whereby staff have directly identified working on overhead projects supporting Rural Valleys in FY23.
Consultancies	0.3	0.0	(4.5)	(4.3)	
Contractors	7.9	9.1	5.1	6.3	Overspend is driven by higher Land and Dam Management

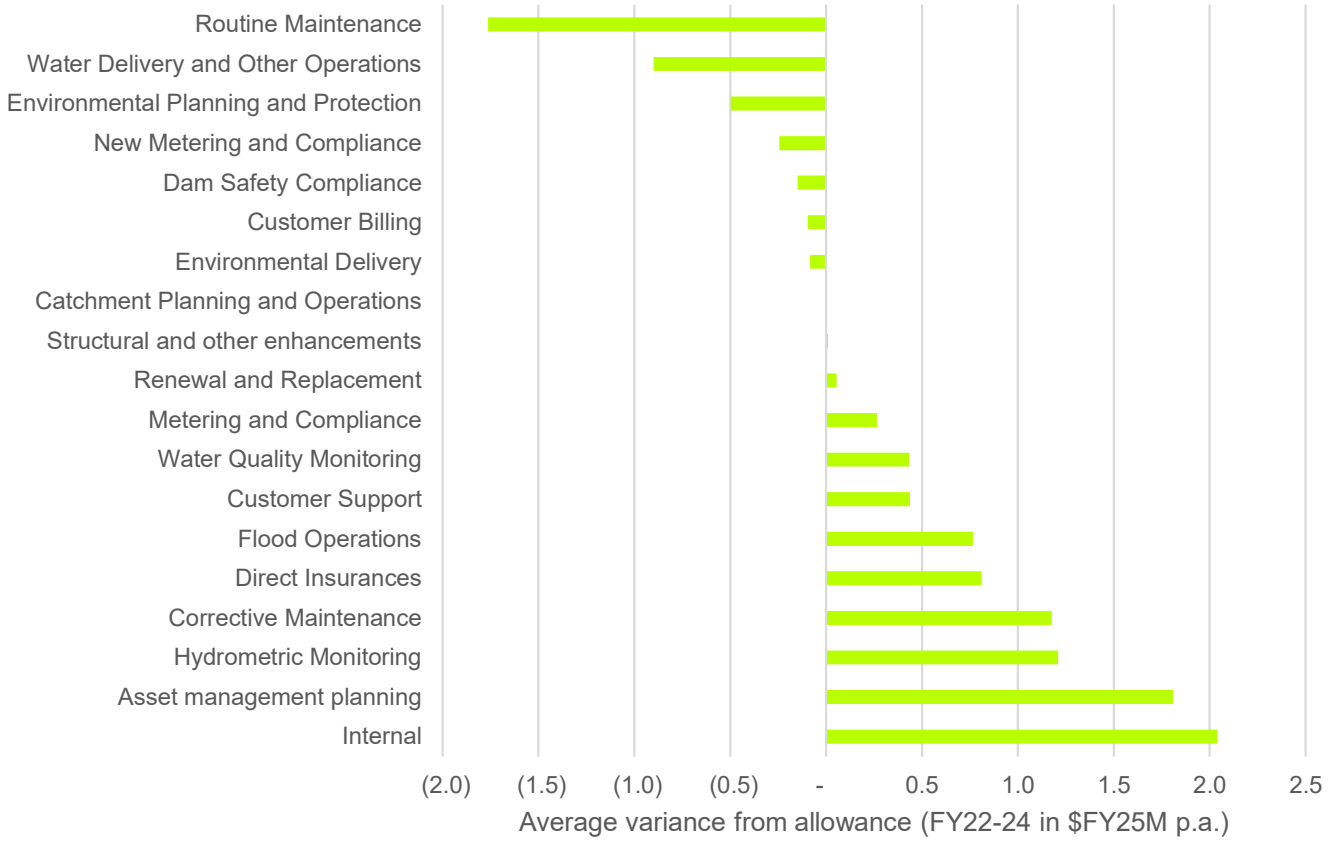
	Actuals		Variance		Explanation provided
FY ending:	**2023**	**2024**	**2023**	**2024**	
					costs, electrical safety improvement, and hydrometric monitoring costs.
Material Plant & Equipment	4.0	3.8	0.1	0.1	
Other Employee Related	0.5	0.5	0.1	0.1	
Salary & Wages	31.2	30.5	(4.0)	0.2	
Total	70.6	66.9	5.9	6.7	

Source: RFI Response "SA-33"

The table suggests that overheads were the largest source of overspend in the FY23-24 period. This is closely followed by contractor spend. However, we note that there is underspend in the 'consultancies' spend which may be at least partially interchangeable with the contractor category, especially given that much of the overspend relates to activities such as asset management planning. Combining these two categories suggests a more minor variance across contractor and consultancy spend of c$1.3M p.a.

WaterNSW's explanations are broadly consistent with our own analysis of the variance, with 'internal' activities being the main driver of the higher expenditure as can be seen below.

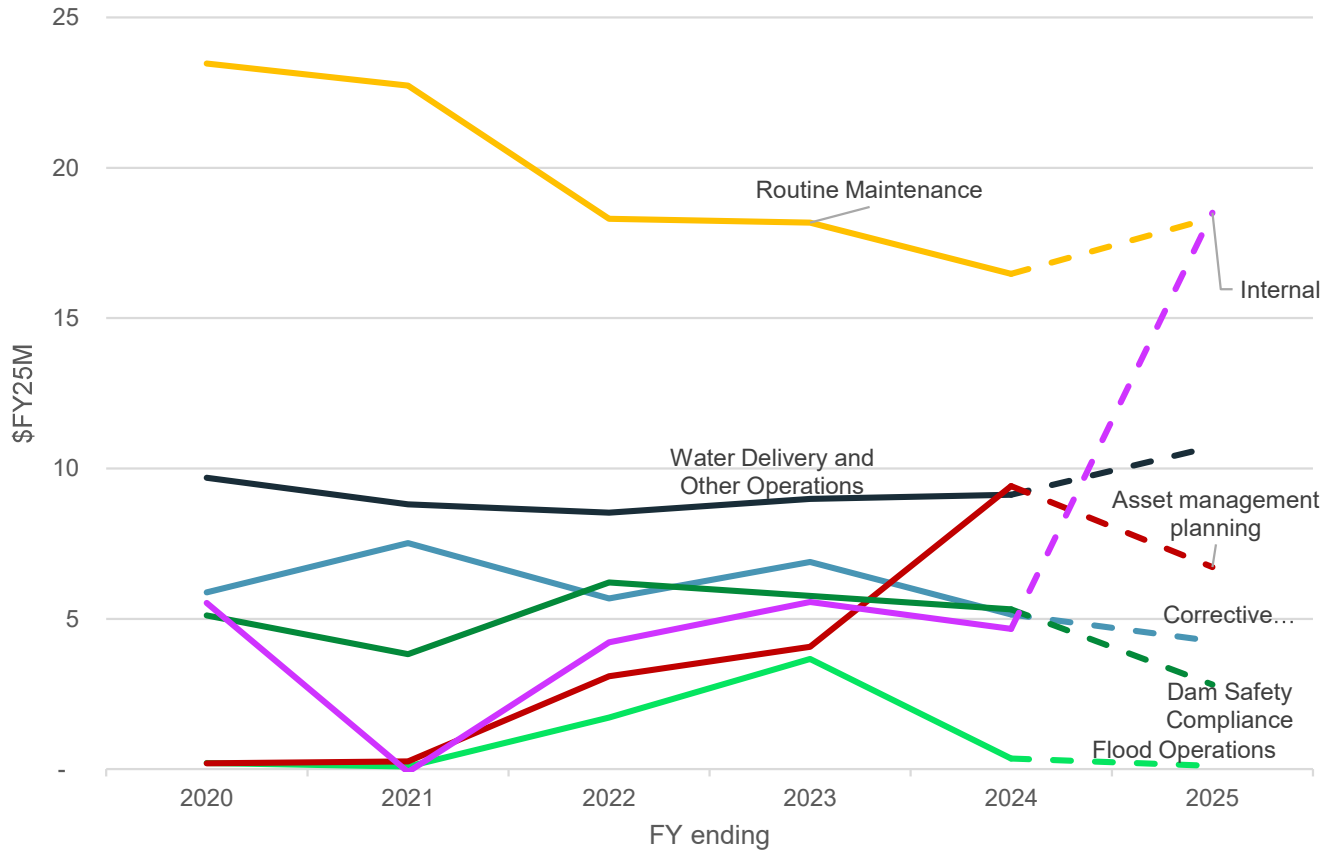
Figure 3-8 – Average variance against Determination allowance by activity (actuals)



Source: Analysis of AIR/SIR

These changes are shown on a year-by-year basis for selected activities below.

Figure 3-9 – Opex Trends by activity (actuals)



Source: Analysis of AIR/SIR, note selected larger or variable activities only

Flood operations costs increased in FY23 with the flooding that year. We have confirmed with WaterNSW[9] that insurance-funded opex have not been included in these opex figures.

We asked WaterNSW what the drivers are for the projected increase in internal costs in FY25 and how it relates to the proposed base-trend-step approach reviewed below. The response given (SA-65) is copied in the text and table below:

> *These "internal" activity costs represent general WaterNSW support activities not directly attributable to specific IPART-defined activities. The main drivers for the increase in FY25 include digital costs, land tax, IPART determination costs.*
>
> *A breakdown of the key drivers for the increase from FY24 to FY25 and how it relates to the base year and step adjustments you have included in your proposal is outlined in the table below*

[9] From RFI response SA-28

Table 3-4 – WaterNSW's explanation for the increased 'internal' costs in FY25 ($FY25M)

Area	Impact	Mapping to WaterNSW's proposed base-trend-step
Digital costs (please refer to snip of presentation to explain the key drivers)	$8.5m	In base adjustment
Land tax - increasing land valuations and an increase in the land portfolio due to the WAMC Land Transfers	$3.5m	In base adjustment and trend
Determination preparation related costs	$2.0m	In base adjustment and step
New community education obligations, and corporate strategic plan	$0.4m	In base adjustment

Source: WaterNSW document "SA-65"

We also asked WaterNSW to explain why Rural Valleys overheads increased significantly in FY23 as seen in Table 3-3. In response SA-39, WaterNSW stated that "*FY23 Rural Valleys overspend vs allowance by $6m, which is driven by overheads costs allocated to the determination. Although at total level, overhead pool remains relatively similar across years, the Rural Valleys specific overhead increased in FY23, followed by drop in later years.*"

To us, this did not provide sufficient explanation of why it had increased. We followed it up by asking again for an explanation of the reasons for the allocated overhead costs being so much higher than the Determination allowance (as shown in Table 3-3) and where these costs had been coded to. Its response is copied below in Table 3-5.

Given the reference below to a potential overstatement and it being *'difficult to know for sure'* we consider that WaterNSW has not been able to provide an explanation for Rural Valleys-specific overheads being so high in FY23. This surprises us given that spend was significantly higher than the allowance that year with overheads the main driver and **suggests that WaterNSW may not have a strong system of measuring, understanding and managing variance against the Determination.**

Table 3-5 – WaterNSW explanation for overheads being significantly higher than the allowance in FY23 and FY24 (AtkinsRéalis highlights in bold)

The primary project for rural valleys overheads is "AL900212.31 Administration - Overheads – Rural". This is a general overhead for shared resource costs. Please see below for an understanding of how costs are recorded under this project: *•In FY23, employee salaries were automatically assigned to an "administration overhead" project based on location, unless manually adjusted through timesheets. Regionally-based support roles were assigned to a general RV Overheads project code. This project code has the main cost in the allocated overhead line and is contributing to the variance to allowance.* ***•It's possible that RV's overhead allocation in FY23 was overstated** due to the assignment of regional roles to this project code. However **It is difficult to know for sure, and we would need to go back and test what the change may have been** if time sheets were used (which would be extremely difficult, given the passing of time),* *•Where timesheets have been amended to specific projects these costs will be reflected in the Salaries & Wages lines. It should be noted that the S&W line is underspend versus the allowance in FY23.* *•With the implementation of a new payroll system, an updated operating model, and a renewed focus on accurate time attribution, the method for assigning salary costs has evolved. This has moved costs out of RV Overheads and into general administration WaterNSW overheads. This has resulted in a decrease of overhead costs from FY25 in the RV Overhead project code …...* *•This change aims to more accurately reflect the actual project contributions of support roles.*

Source: WaterNSW RFI SA-63&64

3.3.2 Efficiencies achieved

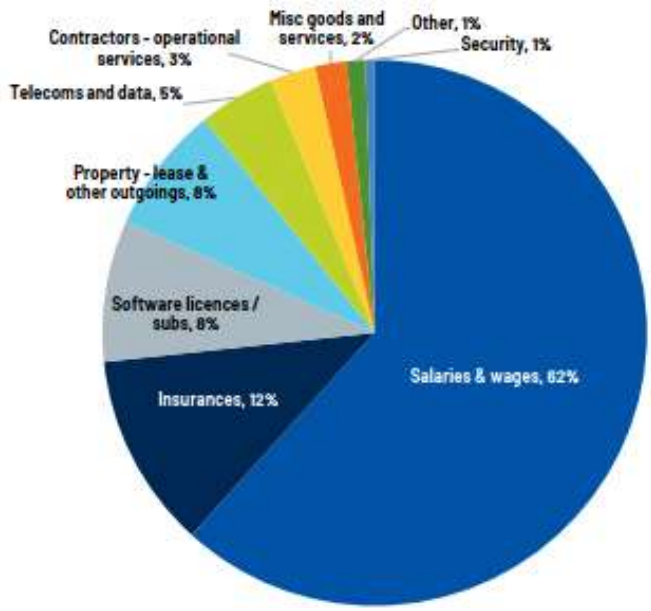
WaterNSW's pricing proposal sets out its estimates of the efficiencies it has achieved and built into its proposal, stating:

> *Over the past two years WaterNSW has permanently removed $19.7 million of operational expenditure from the entire business. This reduction was against a baseline target set in 2022 of $21.6 million.*

It states that these are recurrent (i.e. not one-off) cost savings and estimates that $17.8M of the savings relate to regulated opex activities with the remaining $1.9M being attributed to non-core activities such as the Murray Darling Basin Authority (MDBA) and non-regulated activities.

It states that the largest contributors to these savings were the *"streamlining of senior management roles, reduced property leasing costs and reductions in contract labour*". It provides a breakdown of the regulated cost savings achieved as summarised in Figure 3-10 below, which makes it clear that the majority of savings WaterNSW estimates relate to labour costs.

Figure 3-10 – WaterNSW's breakdown of opex savings achieved



Source: Figure 43, WaterNSW's pricing proposal

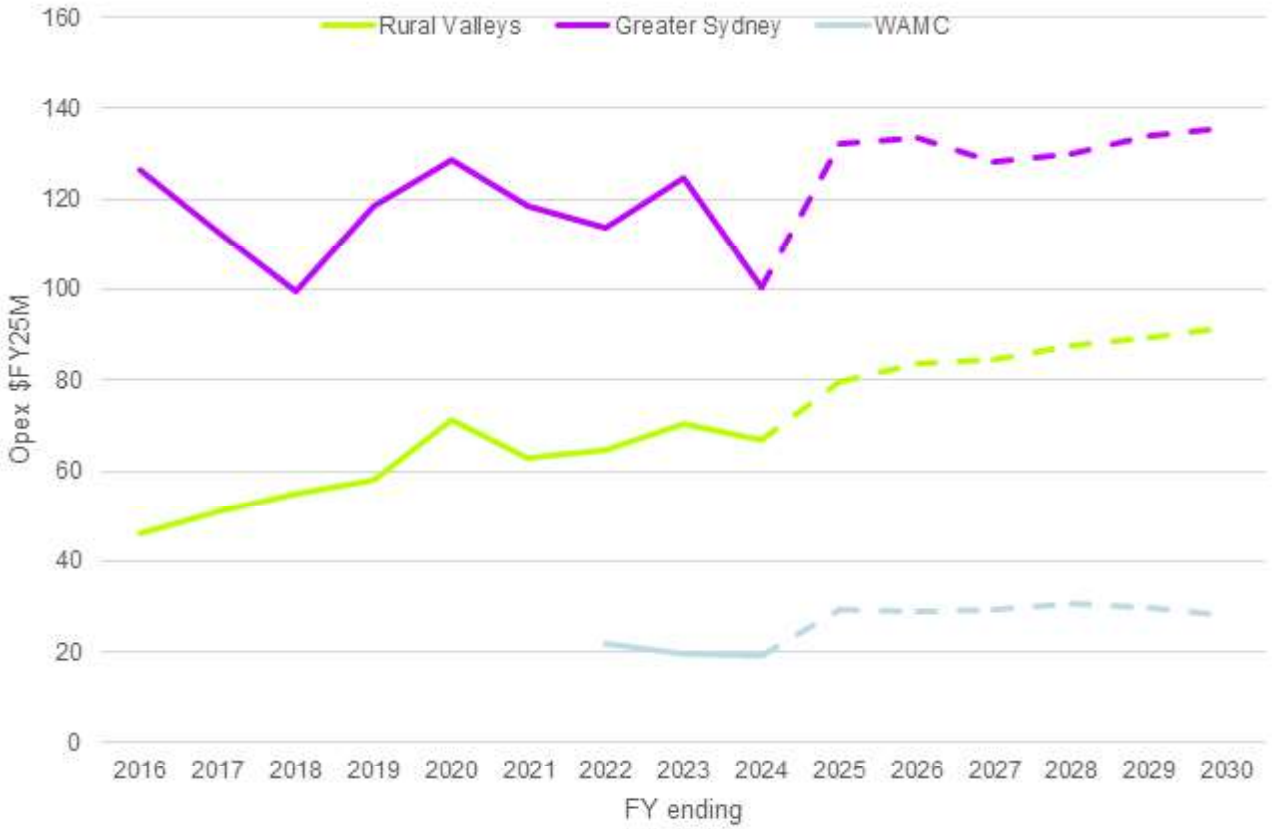
WaterNSW has not estimated the impacts of these savings on different Determinations so it is not straightforward to assess the impacts on Rural Valleys specifically.

There appears to be some confusion about the timescale for measuring and having achieved these savings. The pricing proposal refers to the $19.7M being achieved *"over the past 2 years"*. Given that the proposal was submitted in September 2024 it appears likely that this refers to savings achieved in FY23 and FY24.

However, the graphs showing the evolution of savings over time in Figures 1 and 2 of Attachment 8 to the Pricing Submission have non-zero numbers in FY22 building to $19.7M by FY24, suggesting that some of the savings had already been achieved and measured in FY22. Figure 4 of the same attachment then gives a breakdown of the $17.8M cost reduction *"since FY23"*.

It is possible that these savings have been made across the three Determinations when comparing FY21 to FY24. However, as summarised in the figures below it is clear that the core business has not seen a net reduction of $17.8M between FY22 and 24 and even more clear that Rural Valleys has seen an increase rather than a reduction in this period.

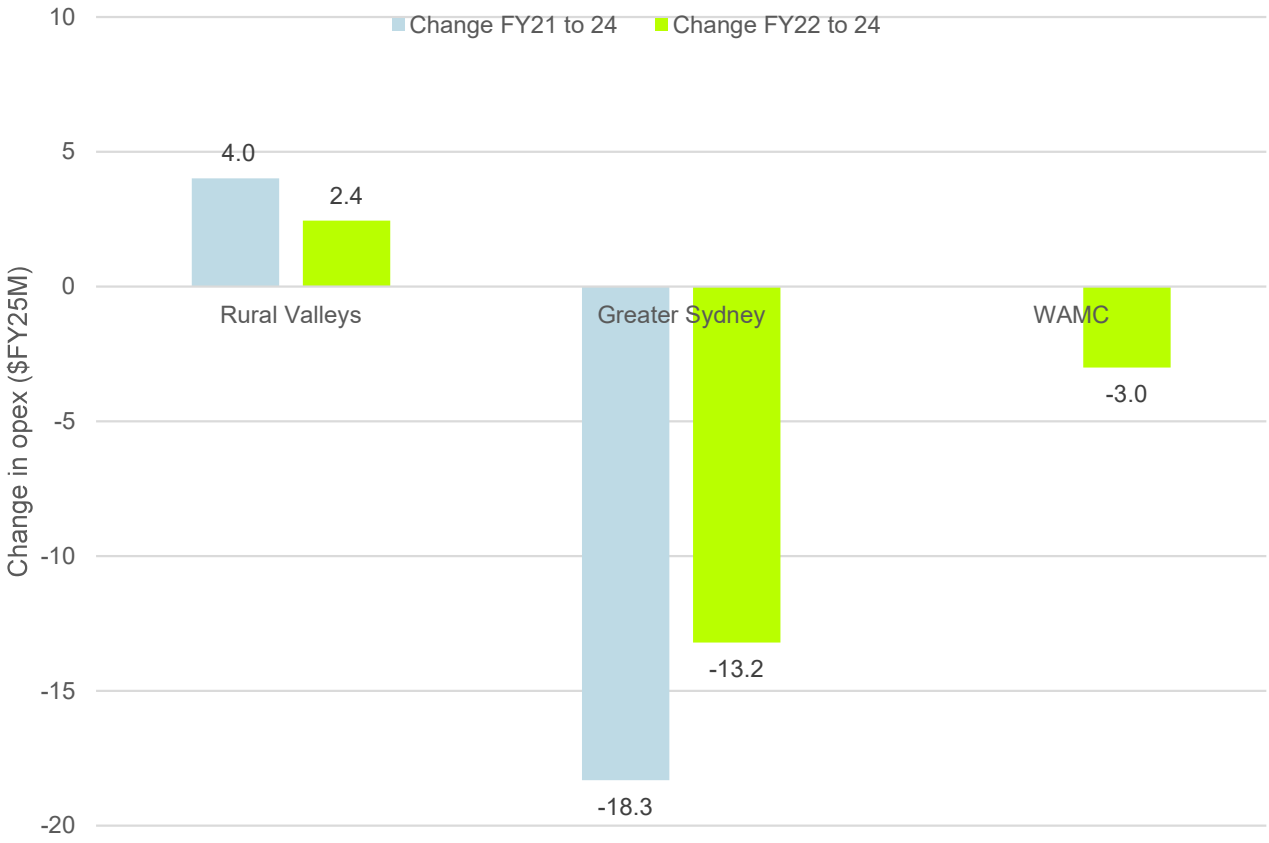
Figure 3-11 – Opex trends across the three Determinations



Source: Analysis of AIR/SIR and Attachment 8 of the Pricing Submission

Figure 3-12 below suggests that there has been a net reduction of c$13.8M p.a. across the three Determinations from FY22 to FY24. It may be that the net reduction from FY21 to FY24 is higher than this (we don't have the WAMC data readily available). If WAMC saw a further reduction of $0.5M between FY21 and FY22 it may be possible that the $17.8M saving was achieved between FY21 and 24.

Figure 3-12 – Recent change in opex by Determination



Source: Analysis of AIR/SIR and Attachment 8 of the Pricing Submission

To summarise the above:

- Outturn Rural Valleys opex was higher than the allowance in all years of the current Determination period. WaterNSW has provided some high level narrative for the higher spend (e.g. overheads, insurance and land tax) but has not provided robust detailed justification especially for the high overheads costs.
- The lack of explanation suggests that WaterNSW may not have a strong system of measuring, understanding and managing variance against the Determination.
- WaterNSW has stated that it has achieved $19.7M of efficiency savings in recent years of which $17.8M apply to the 'core' businesses (the three Determinations). There is some lack of clarity about which years these claimed efficiencies relate to (i.e. whether they relate to savings made in FY23 and 24 or FY22, 23 and 24) and they are not broken down by Determination.
- It is possible that these savings have been made across the three Determinations when comparing FY21 to FY24. However, it is clear that the core business has not seen a net reduction of $17.8M between FY22 and 24 and even more clear that Rural Valleys has seen an increase rather than a reduction in this period.

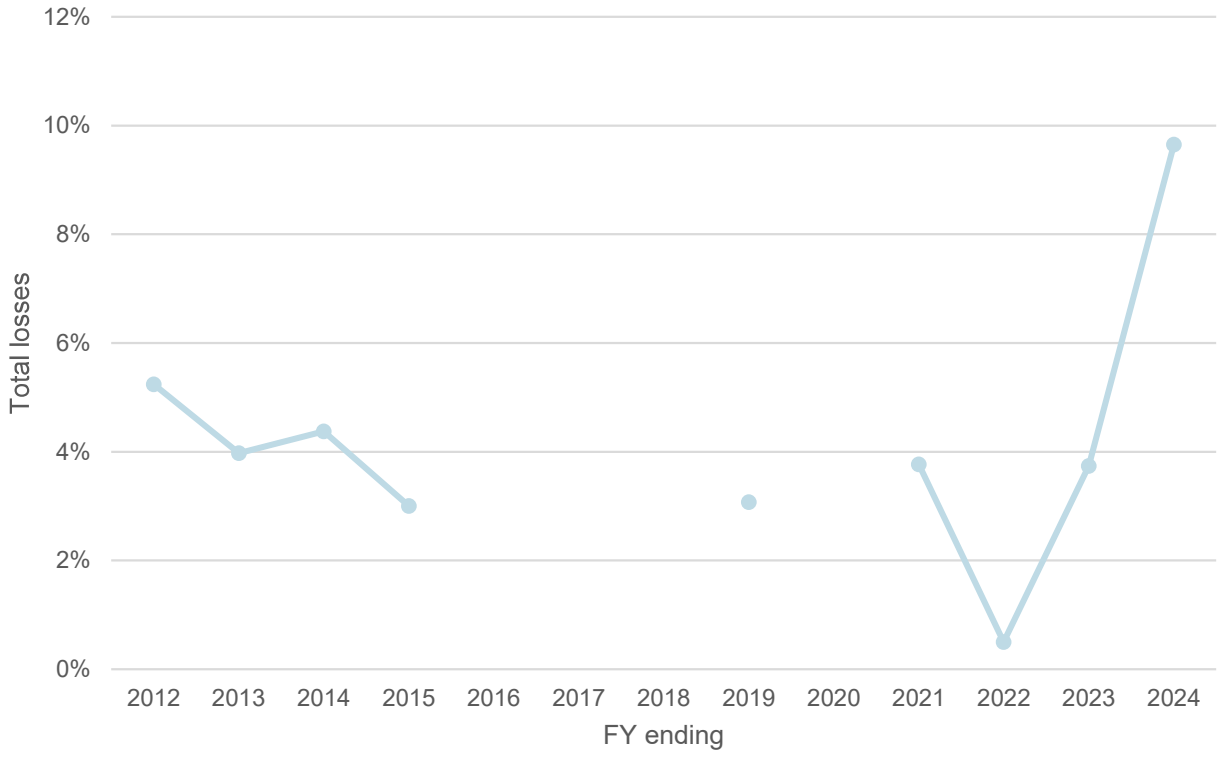
3.3.3 Service

The Customer Service team has been working closely with its Digital team on initiatives to improve the service offered to customers, such as through the Water Insights Portal and the Customer and Water Market System (WMS). The latter is both a customer portal and work management system all rolled into one, and it is still work in progress as there is only basic functionality at this point in time, but what has been achieved has been well received to date both internally and we understand also externally.

We reviewed the internal Business Performance Measures (inbound calls and case closure times), complaint volumes as well as the Net Promoter Scores (NPS - a measure of customer satisfaction and experience). Overall, the picture on customer service performance is a positive one across the indicators. For example, NPS is in the range of 54 to 67, which would be considered very good. Where internal performance measures showed a deterioration, this was linked to a high vacancy rate in the team and once numbers were back at full strength the performance improved. Where there are complaints and dissatisfaction, this is more typically linked to wider policies, processes and constraints in the WaterNSW operating environment, rather than linked directly to the customer service performance.

In terms of technical performance WaterNSW has provided some information on losses, summarised graphically below. Whilst FY24 does show an increase in losses it is difficult to draw significant conclusions from a single year's results.

Figure 3-13 – Losses performance over time



Source: Analysis of document "D2024 56114 Water Delivery Operational Surplus Performance Indicator 2024-2025(2)"[10]. Note: there are significant gaps in the data provided.

WaterNSW also publishes an annual asset health report which picks out a number of criticality trends over time and reports on in-year capability loss events. We discuss asset health in Section 4.2.2 below.

[10] Losses for Border, Gwydir, Namoi, Peel, Macquarie, Lachlan, Murrumbidgee and Hunter valleys

3.4 WaterNSW's proposed operating expenditure

3.4.1 Overview of approach taken by WaterNSW

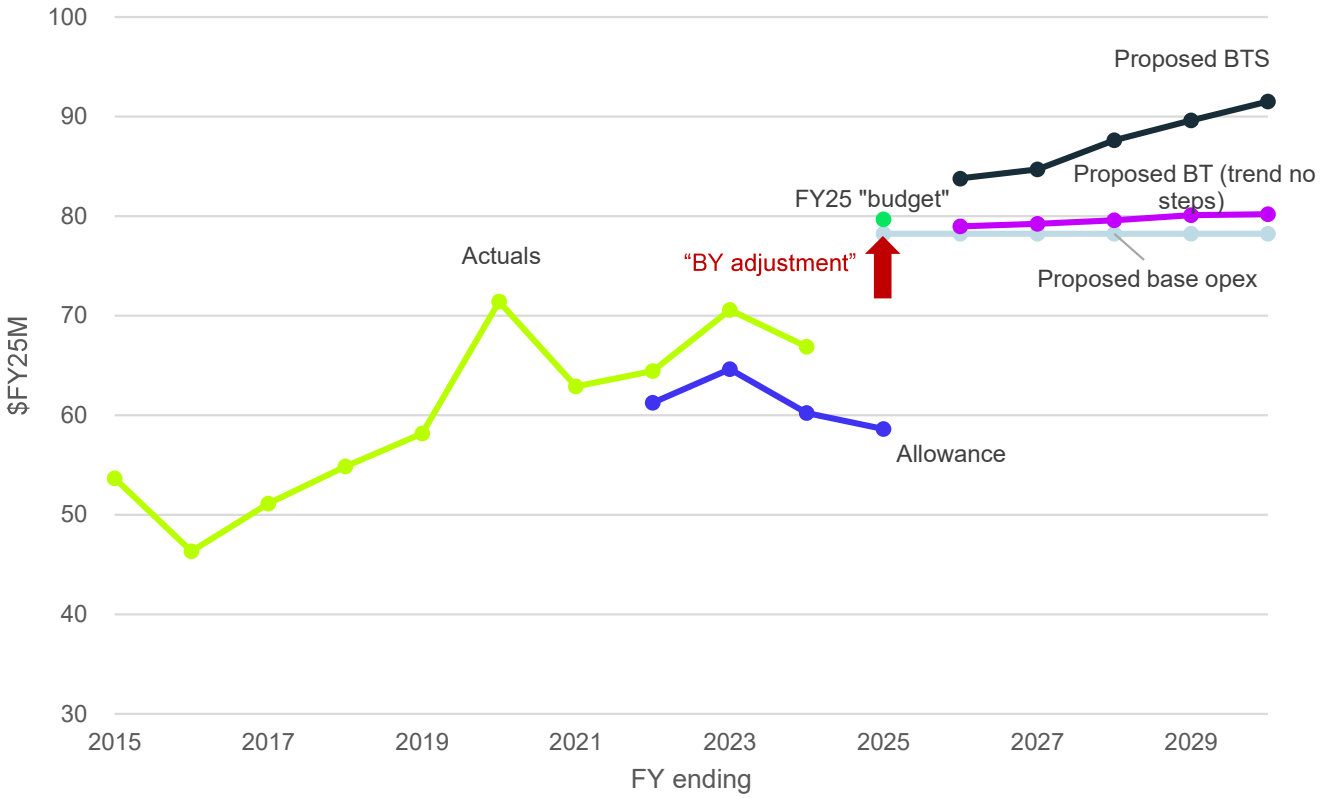
The approach taken by WaterNSW is summarised below. Formally the process starts with FY23 actuals, but the adjusted base year is largely based on WaterNSW's proposed FY25 "budget", with base year (BY) adjustments calculated mainly as the difference between this FY25 "budget" and FY23 actuals[11]. WaterNSW has then derived step changes for each year as the difference between its projected opex for each year (excluding trend increases) and its proposed base year level.

Figure 3-14 – Summary of the approach taken by WaterNSW

The resulting proposed opex is summarised below. As can be seen, the two biggest contributors to the proposed increase in opex are the BY adjustment and the step changes, i.e. the difference between the base-trend-step (BTS) and base-trend (BT) lines in the graph.

[11] We understand from the interviews that WaterNSW has carried this out by looking at the deltas across the three Determinations in aggregate and then allocated to each one Determination based on its percentage of opex, i.e. something close to FY23 actuals + ([FY25 budget – FY23 actuals] x % FY25 budget split going to this Determination/Valley).

Figure 3-15 – Summary of the approach taken by WaterNSW



Source: Analysis of AIR/SIR

The approach taken in numerical form is:

1. **Pre-adjustment base year**: FY23 opex of $66.0M (nominal)

2. **BY adjustments**: addition of $12.2M mainly based on the difference between FY25 and FY23 opex including adjustments for digital costs, salaries, insurance and efficiencies. For example, for Rural Valleys this includes a net adjustment (increase) of $0.3M for non-recurrent expenses, made up of $0.8M of regulatory submission costs and a saving of $0.5M of flood related costs.

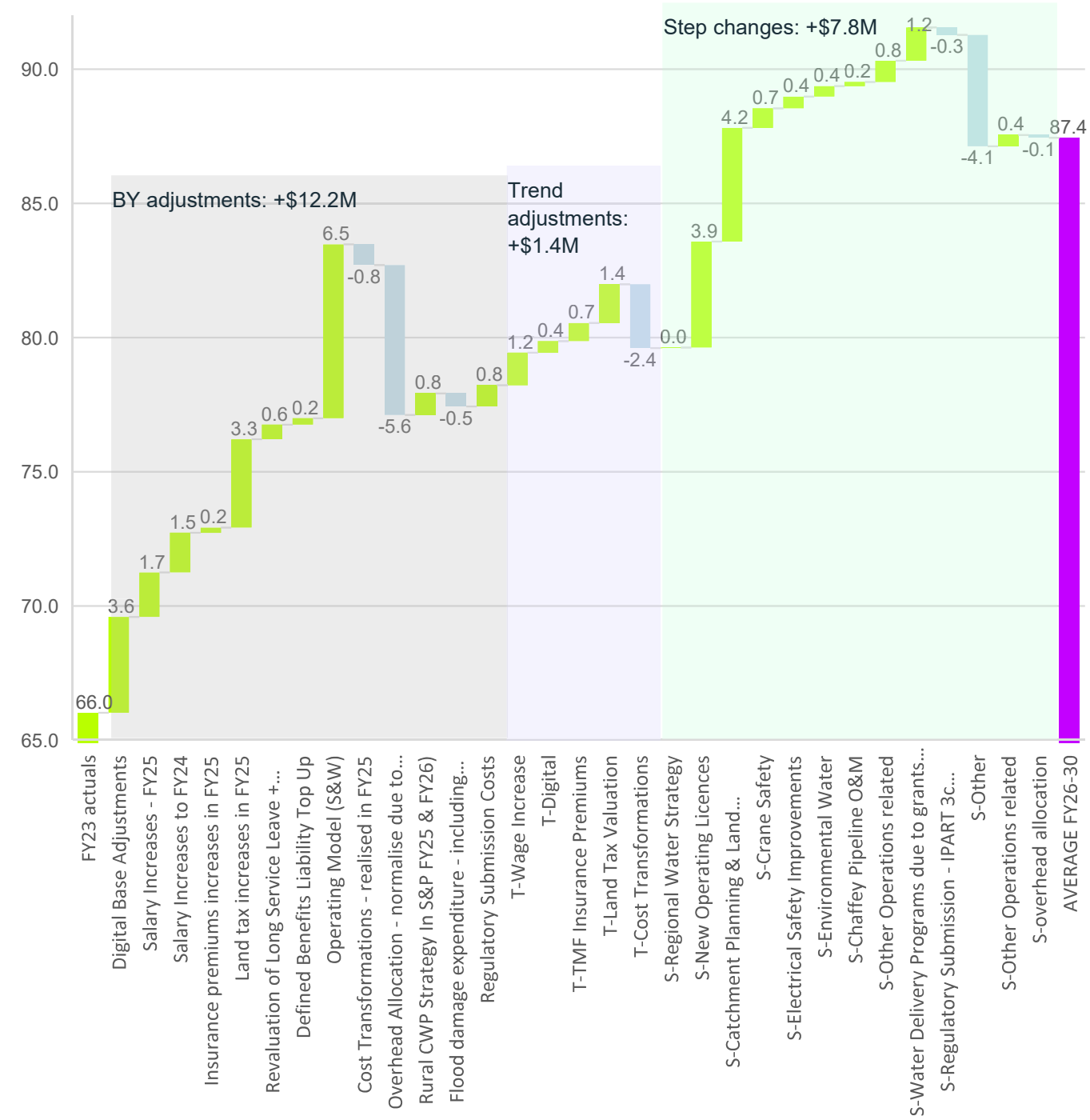
3. **Base year opex**: (1) and (2) results in $78.2M of base year opex. The differences between this and the FY25 figure in the "Opex-Doc" part of the AIR/SIR ($79.7M) are not fully clear to us but we assume that some of it relates to how the adjustments have been allocated between Determinations and some may relate to the fact that the base year takes an average view of factors such as the costs of preparing the regulatory submission (as reflected in the proposed non-recurrent adjustment) whereas FY25 looks at the expected expenditure in that year.

4. **Trend**: addition of an average of $3.8M of trend increases and $2.4M of efficiency savings, resulting in an average net increase of $1.4M p.a.

5. **Steps**: addition of an average of $7.8M p.a. of additional expenditure. Similar to the BY adjustments and as described in Section 3.4.4 below, these are multi-layered, with the largest components related to a proposed compliance uplift as well as new operating licence conditions.

This is also summarised in the bridge below.

Figure 3-16 – Bridge between FY23 actuals and WaterNSW proposed FY26-30 average for Rural Valleys ($M)



Source: Analysis of WaterNSW's spreadsheet "Detailed BTS"

We discuss each element of this process in further detail below.

3.4.2 Base year opex

3.4.2.1 Choice of base year

IPART's Water Regulation Handbook states that

> *Baseline opex reflects the business's efficient recurrent controllable opex in the second last year of the current determination period. This would be the most recent year with a full 12 months of data available*.

The current Determination period extends to FY25 and we interpret the wording in the Handbook as indicating that FY24 is the year which best aligns with the guidance.

At interview, when asked why it has chosen to use FY23 as the base year WaterNSW explained that it was because the audited accounts for FY24 weren't ready until September 2024 when the pricing proposal was due to be submitted. We understand this point but note that there were apparently no significant adjustments as a result of the audit, Hunter Water used its third quarter FY24 forecast as the basis of its base year and Sydney Water was also able to use FY24 actuals in its submission.

We also note that opex in FY24 was lower than in FY23 across all three Determinations and that WaterNSW has identified that overheads may be overstated in FY23 (see Section 3.3.1). For all of these reasons as well as the obvious point that it represents a more current data point, it appears that **FY24 would be a more appropriate base year**.

3.4.2.2 Base year adjustments

IPART's Water Regulation Handbook outlines the adjustments it expects as follows:

> • *remove non-controllable expenditure items to be forecast separately […]*
>
> • *remove one-off or non-recurring expenditure items incurred in the base year, or add normally occurring items that were not incurred in the base year*
>
> • *remove additional cost savings or efficiency improvements expected or committed to in the final year of the current determination period, including any continuing efficiency improvement expectations set by IPART for the current period.*
>
> *We would expect the pricing proposal to demonstrate the efficiency of the adjusted baseline opex (e.g., using benchmarking analysis), and provide justification for the adjustments and explain any deviations from the base-year opex allowance previously determined by IPART.*

We compare the approach taken by WaterNSW to this guidance below.

Table 3-6 – Alignment of WaterNSW's proposed Rural Valley's base year adjustments to the Handbook

Area	Comment
Non-controllable expenditure	These have not been explicitly addressed and separated out by WaterNSW. However, it is possible that there is no significant non-controllable expenditure.
Non-recurring expenditure	✓ +$0.3M applied
Additional cost savings or efficiency improvements	-$0.8M reduction applied for "*cost transformations realised in FY25*". However, we note that this is less than the challenge applied in the 2021 Determination allowance as discussed further below. We note that WaterNSW has also applied a reduction of $5.6M for overhead allocations. However, the majority of this relates to vacancy "re-normalisation" which is then more than offset by the operating model adjustment[12]
Demonstration of efficiency of the adjusted baseline and explain any deviations from the base-year opex allowance previously determined by IPART.	The efficiency of the adjusted baseline opex has not been explicitly addressed in the pricing proposal. In response to RFIs WaterNSW has provided a short explanation of the variances from the allowance for FY23 and 24 actuals (see Section 3.3) but not the proposed baseline which is significantly higher than this level due to the proposed base year adjustments.

Source: IPART's Water Regulation Handbook. Adjustments from "Detailed BTS"

Note that 'green' shading suggests that the submission appears to comply with the expectations outlined in the Handbook whereas 'orange' shading suggests at least some issues.

We comment specifically on the proposed adjustments and their alignment with the Handbook definitions of base year adjustments below. The value of these adjustments is quoted at the level of the combined three Determinations as this was the level of information made available at this more granular level.

Table 3-7 – Comments on WaterNSW proposed base year adjustments (three Determinations level)

Base year adjustment (effects on total opex across the three Determinations)	**Meets definition of a base year adjustment?** *(i.e. is it a non-controllable, non-recurring or efficiency adjustment)*	**What kind of adjustment have we reviewed it as?**
Cost Escalation & Provisions		
Employee costs (c$10.5M)	No	Potential trend

[12] Based on figures provided during the interviews, WaterNSW has removed the effect of vacancies in FY23 as part of its 'operating model' adjustment. This increased costs by $14.7M. It has then partially removed some of these vacancies ($12.2M) as part of its overhead allocation. All these costs are combined across the three Determinations. No breakdown was provided.

Base year adjustment (effects on total opex across the three Determinations)	**Meets definition of a base year adjustment?** *(i.e. is it a non-controllable, non-recurring or efficiency adjustment)*	**What kind of adjustment have we reviewed it as?**
Insurance ($0.6M)	No	Potential trend
Land tax ($5.3M)	No	Potential step change
Digital ($9.8M, broken down as below) *NB: part of 'cost escalation & provisions' in the submission*	No	Potential step change
Software licensing ($6M)	No	
Organisational growth (just under $2M)	No	
Microsoft renewal ($2M)	No	
Other applications new features for security: just under $0.5M	No	
Remainder (approx. $1.5M) = escalation for other software licenses	No	
Telecomms ($2.0M)	No	
Cloud computing costs ($0.5M)	No	
People related costs ($1.3M?)	No	
"Operating model" ($24.7M, broken down as below)	No	Potential step change
FTE[13] increases ($10M)	No	
Vacancy "normalisation" ($14.7M)	No	
Efficiency improvement (-$2.4M)	As an efficiency adjustment this does appear to be in line with the definition of a potential base year adjustment	Potential base year adjustment
Overhead allocation (-$14.1M, broken down as below)	No	Potential step change
Overhead movements (-$1.4M)	No	
Vacancies removal (-$12.7M)	No	
Ongoing compliance ($1.4M, broken down as below)	No	Potential step change
Cold Water Pollution strategy ($0.8M)	No	
Strategic flood modelling ($0.6M)	No	

[13] Full Time Equivalent

Base year adjustment (effects on total opex across the three Determinations)	Meets definition of a base year adjustment? *(i.e. is it a non-controllable, non-recurring or efficiency adjustment)*	What kind of adjustment have we reviewed it as?
Non-recurrent	As a non-recurrent adjustment this does appear to be in line with the definition of a potential base year adjustment	Potential base year adjustment
Flood (-$4.8M)		
Reg submission ($2.5M)		

Source: "Detailed BTS", Attachment 8 and information received at interviews

We review the proposed adjustments which we consider meet the definition of a base year adjustment below.

3.4.2.2.1 Efficiency improvement

As outlined above WaterNSW has made an adjustment of -$0.8M at Rural Valleys level or -$2.4M across the three Determinations. In its submission it explains that this relates to its cost transformation program and that it proposes *"an efficiency target of 1% of total operating expenditure per annum starting in 2024-2025 to ensure that customers continue to receive the benefit from our transformation program over the next five years and to provide a strong incentive to WaterNSW to continue to find productivity improvements"*[14]

As noted above, the Handbook sets out an expectation that businesses will *"remove additional cost savings or efficiency improvements expected or committed to in the final year of the current determination period, including **any continuing efficiency improvement expectations set by IPART for the current period**"*.

In its 2021 Determination, IPART applied a continuing efficiency factor of 0.7% p.a. and a catch-up efficiency factor of 1.1% p.a. This resulted in an efficiency challenge of $3.7M for Rural Valleys in FY25 compared to $2.8M in FY24[15] or an efficiency challenge of approximately $0.9M (in $FY21, equal to $1.1M in $FY25) between FY24 and FY25.

To align with the Handbook we consider an efficiency adjustment of -$1.1M (in $FY25) is appropriate if FY24 opex is used as the base year. This is to reflect the expected efficiency improvement in the current period between the base year of FY24 and FY25. We note that this is only $0.3M greater than that proposed by WaterNSW. However, WaterNSW's proposed adjustment was intended to be applied to FY23 base year opex i.e. to reflect two years of efficiency rather than one.

3.4.2.2.2 Non-recurrent costs

Flood related costs

WaterNSW has applied an adjustment of -$0.5M at Rural Valleys level to reflect the effects of storms in FY23 on its operating costs. It explains:

> [during FY23] *Significant resourcing efforts were required to undertake the planning and response to these events, resulting in an increase in contractors to repair damaged assets and assist with the insurance claims process. In addition, there were significant additional staffing costs and overtime required monitor and respond to flood related activities over our area of operation.*

[14] Attachment 8 to the Pricing Proposal
[15] Table 3.2, Final Report: Review of WaterNSW's rural bulk water prices, September 2021

We have not been provided with the background calculations for how this adjustment has been derived. It does not appear unreasonable in principle to apply a negative adjustment if FY23 is adopted as the base year.

We consider that **no adjustment is required if FY24 is adopted as the base year** as flood operations opex was at a more standard level of $0.4M in year compared to $3.7M in FY23 for example.

Regulatory submission costs

WaterNSW has applied an adjustment of +$0.8M at Rural Valleys level to reflect the fact that the business expects costs of preparing and submitting its pricing proposal to be higher than those experienced in FY23:

> *Increased consultancy and support costs were incurred to meet the requirements of IPART's 3Cs framework, including self-assessment against the 3Cs, guiding principles, and grading rubric, customer consultation and early engagement, business case development, and compliance with the base-trend-step framework.*

If FY23 were being used as the base year then a positive adjustment may well have been justified. However, expenditure on the regulatory submission was significantly higher in FY24.

WaterNSW's spreadsheet 'RA-34' sets out that WaterNSW spent $1.8M in FY24 and expects to spend a total of $3.6M from FY26 to FY30 inclusive i.e. an average of $0.7M p.a.

We therefore consider that a base year adjustment of -$1.0M p.a.[16] should be applied if FY24 is adopted as the base year. This adjustment reflects the average costs of the regulatory submission over a five year period.

3.4.2.3 Recommended base opex

Our view, summarised from the above is that:

- WaterNSW has adopted FY23 as the base year. However, it is not the most recent full year of accounts and does not comply with the Handbook. It has not removed non-controllable costs from its analysis.
- Adoption of FY24 as the base year would comply with the Handbook. However, expenditure in year was significantly ($6.7M or 11%) higher than the 2021 Determination allowance. WaterNSW has not provided detailed explanations of this variance at a Determination level. In particular, we do not have a clear statement as to why exactly overheads were so much higher than the Determination allowance.
- Given this we consider FY24 to be an upper estimate of base opex. We consider that adjustments for efficiency and regulatory submission costs are reasonable. We have made our own assessments of these figures based on the 2021 Determination efficiency challenge and the average rate of regulatory submission spend.
- For the lower range of base opex, we consider that IPART's 2021 Determination allowance, adjusted for well justified variance, is a reasonable starting point. WaterNSW has indicated that the $0.7M positive variance in 'administration' costs in FY24 is due to insurance and land tax. We consider that it would be reasonable to assume that insurance and land tax are exogenous factors. WaterNSW has not provided a detailed explanation and justification for the other variances (e.g. to what extent they are exogenous or how customers benefit). As such we consider that IPART's 2021 Determination allowance, adjusted for insurance and land tax is a reasonable lower estimate of base opex.

Our recommended base opex is stepped through numerically as follows.

[16] $1.8M minus $0.7M is $1.0M rather than $1.1M in this case due to rounding.

Table 3-8 – Derivation of base opex ($FY25M except where stated)

	Upper (adjusted FY24 actuals)	Lower (adjusted 2021 Determination allowance)
FY24 actuals ($nominal)	64.9	
FY24 actuals ($FY25M)	66.9	
2021 Determination allowance for FY25 ($FY21M)		48.7
2021 Determination allowance for FY25 ($FY25M)		58.6
Efficiency adjustment	-1.1	n/a
Regulatory submission	-1.0	n/a
Justified variance	n/a	0.7
Base opex	**64.8**	**59.3**

Source: Analysis of AIR/SIR

We also summarise the advantages and disadvantages of both approaches below.

Table 3-9 – Our view of base year opex

Base year adjustment	WaterNSW proposal	Upper range	Lower range
Approach	FY23 actuals + many adjustments largely reflecting FY25 "budget"	FY24 actuals + CPI + IPART efficiencies from FY24 to FY25 + adjustment for regulatory submission costs	IPART's FY25 allowance adjusted for well justified variance
Opex (all valleys)	78.2	64.8	59.3
Advantanges	The business's view	Based on revealed costs	Explanation of variance is weak. Avoids effects of flooding and overstatement of overheads. Customers only pay for justified costs
Risks/disadvantages	Not the most recent year FY23 overheads "may be overstated[17]" Complex and mixes step/trend with base year adjustments	Costs are significantly (11%) higher than the allowance with limited robust explanation of the variance. Floods in FY23 led to the deferral of programs to FY24 and may have increased costs in year[18]	Weaknesses in the business's variance analysis limits confidence in the extent to which variance is justified/exogenous/in customers' interests

[17] Source: RFI SA-63&64
[18] Section 4.2.7 Attachment 8, Pricing Proposal

Base year adjustment	WaterNSW proposal	Upper range	Lower range
		as might the April 24 floods.	

Source: "Detailed BTS", Attachment 8 and information received at interviews

3.4.3 Trend

IPART's guidance defines a trend as *"any predictable change in the efficient level of recurrent controllable opex due output growth, productivity improvements and real input price changes"*.

WaterNSW has applied trend adjustments for five cost areas:

- Land tax valuation – based on an 8.4% p.a. real terms increase every year
- Labour – based on a 1% p.a. real terms increase every year
- Insurance – based on a 7% p.a. real terms increase every year
- Digital – variable %s ranging from +2.2% in FY26 to -4.9% in FY30.
- Efficiency savings – based on a 1% p.a. real terms reduction every year

The net effect of these proposed adjustments is a $6.9M increase in opex over the Determination period with the savings from the efficiency savings being outweighed by the proposed real price changes especially land tax and labour costs as shown below.

Table 3-10 – WaterNSW's proposed trend adjustments for Rural Valleys ($FY25M)

FY ending:	2026	2027	2028	2029	2030	Total
Area						
Land Tax Valuation	0.4	0.9	1.4	2.0	2.5	7.2
Labour	0.4	0.8	1.2	1.6	2.0	6.0
Insurance	0.3	0.6	0.7	0.8	0.9	3.4
Digital	0.4	0.4	0.6	0.9	0.0	2.2
Efficiency Improvements - Cost Transformation Program	-0.8	-1.6	-2.5	-3.4	-3.5	-11.9
Total	**0.8**	**1.0**	**1.4**	**1.9**	**2.0**	**6.9**

Source: SIR Opex 2 bts

We comment below on each of these proposed trend adjustments.

3.4.3.1 Land tax

WaterNSW makes the case that land tax has seen increases in costs driven by increases in the market value of land. It quotes a report by an advisor, JLL, to explain its projections and provides the data points below. WaterNSW has applied 8.4% p.a. annual increase to its cost projections.

However, we understand from the response to SA-52 and the lack of mention of inflation in the JLL report that the growth rate derived by JLL is a nominal growth rate. We have therefore netted off our estimate of inflation for the same period as shown below.

Table 3-11 – Land value growth

Measure	Compound annual growth rate	Average inflation rate over the same period	'Real' growth
JLL: long term growth rate (1996-2022)	8.4%	2.6%	5.9%
JLL: recent growth rate (2013-2022)	13.7%	2.5%	11.2%
WaterNSW land valuations (10 years)	11.7%	2.5%	10.2%

Source: Table 6, Attachment 8 (and JLL report) and analysis of CPI data (series ID A2325847F, based on December to December figures). NB figures may not add due to rounding

We have considered three potential scenarios:

- An 'upper' range which assumes real cost growth of 5.9% p.a.
- A 'lower' range which assumes no real cost growth with tax minimisation and divestments used to mitigate any land price increases.

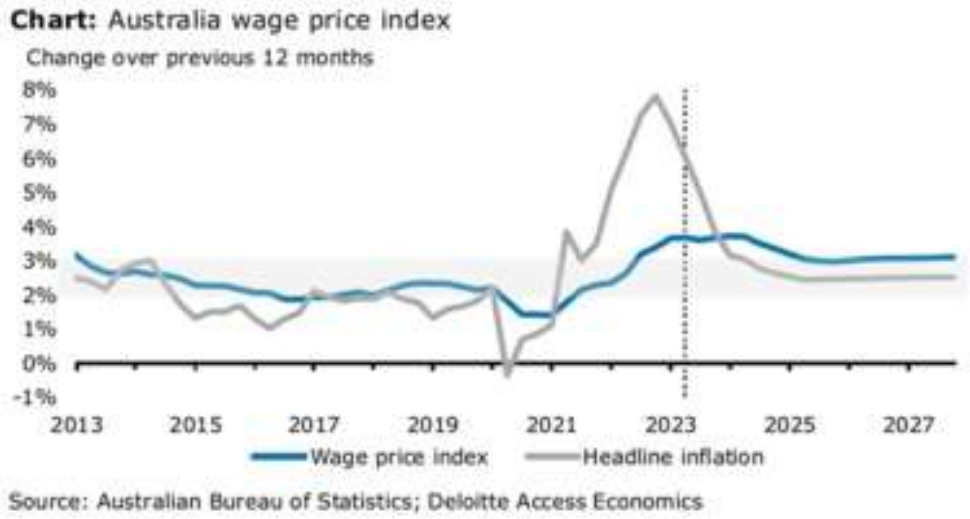
3.4.3.2 Labour

WaterNSW has incorporated a 1% p.a. real change in the price of labour in its submission, stating:

> *We are forecasting an impact of 1.0% per annum 'real' change (i.e. excluding the impacts of inflation) in the future price of labour. The outcomes of the August 2023 Enterprise Agreement (EA) negotiations have formed the basis of our salary and wage cost rates for the length of the agreement, which terminates after the first year of the 2025 Determination period (2025-26).*
>
> *Salary and wage cost changes for the remaining four years of the 2025 Determination period are based on a forecast of the wage cost index which averages 1.0% in real terms over the four years. Wage costs for these years' increases are currently aligned to the NSW Government Fair Pay and Bargaining Policy 2023 of up to 4.5% inclusive of superannuation guarantee increases of 0.5% in real terms ($2023-24). Superannuation costs have increased in accordance with the Super Guarantee legislative requirements and are scheduled to progressively increase to 12% on 1 July 2025.*

It also provides a figure summarising the trends and projections for the wage price index (WPI) and inflation.

Figure 3-17 – Australia wage price index change



Source: Figure 4, Attachment 8

We have compared the annual growth rate for WPI and CPI for the medium and longer term below. In the long run analysis WPI is slightly higher than CPI. However, in more recent years WPI has been below CPI.

Table 3-12 – Comparison of wage price growth and CPI

Time period	WPI compound annual growth rate	CPI compound annual growth rate	Difference
FY06 to FY24	3.0%	2.7%	+0.3%
FY14 to FY24	2.4%	2.7%	-0.3%

Source: Analysis of CPI data (series ID A2325847F, based on December to December figures) and WPI data (All sector WPI, quarterly and annual movement (%), seasonally adjusted (a))

We are not convinced that WaterNSW has made a case for real terms increases in labour costs. WPI has been below CPI in the medium term and the references to 4.5% increases are 'up to' rather than exactly 4.5%.

We have not therefore included a wage price growth trend adjustment.

3.4.3.3 Insurance

WaterNSW has incorporated a 7% p.a. real change in the price of insurance in its submission, stating:

> *Insurance rates are increasing globally due to escalating frequency and severity of global risks, including major weather events, climate change and instances of cybercrime.…WaterNSW is required to be a TMF [Treasury Managed Fund] member for its insurance requirements and is required to obtain cover for its insurable assets and liabilities through the TMF, managed by icare. This provides government agencies with access to cost effective insurance.*
>
> *Historically, insurance rates have increased by 17.4% p.a. (FY2021 – FY2025). We expect this trend to continue and have estimated an increase in insurance rates by 8.6% p.a. (FY2025 to FY2030).*

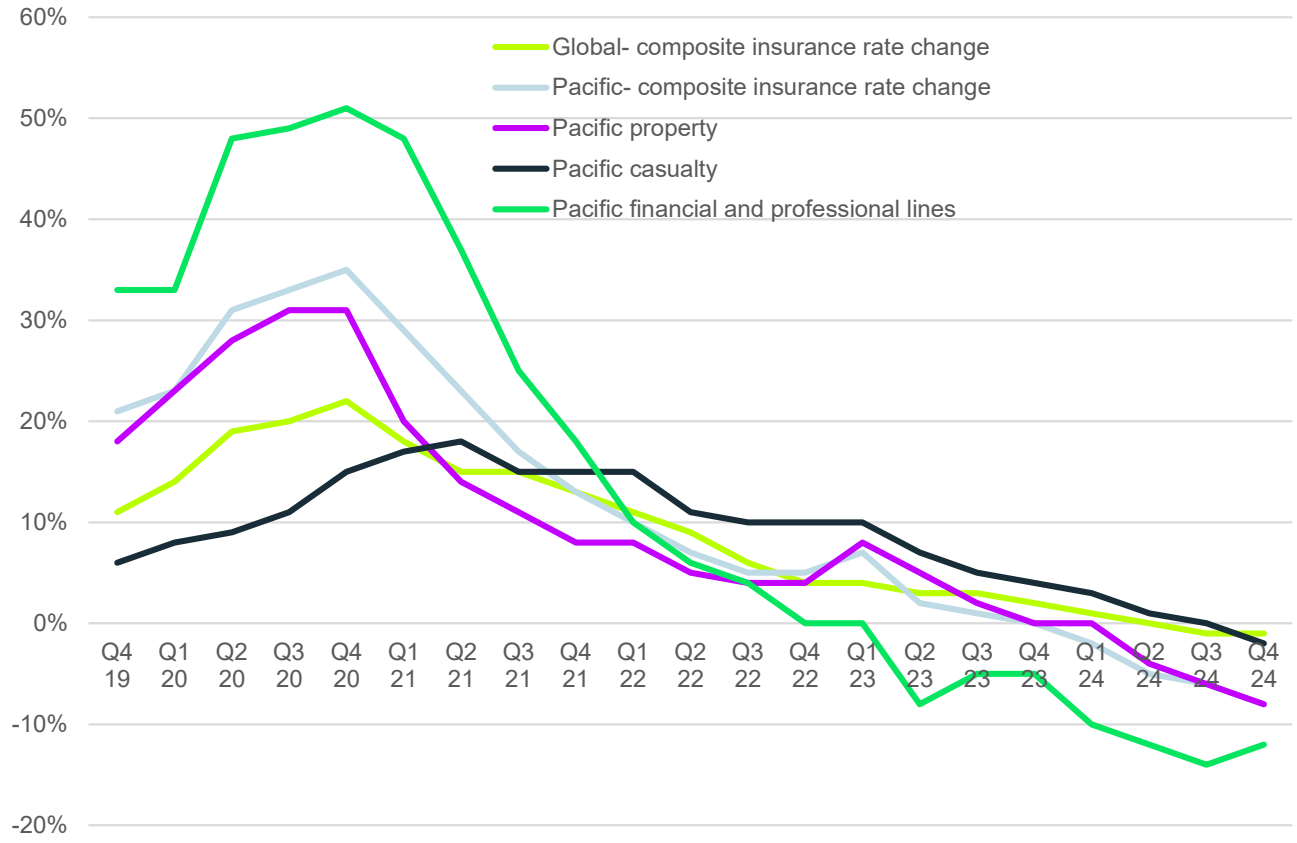
During the period FY20 to FY23, which has been impacted by significant weather events, WaterNSW has made average annual insurance claims of $14.4 million per annum, which are significantly higher than the current Property insurance premium / contribution ($5.2 million in FY25).

With effect from 1 July 2024, a deductible of $10,000 per occurrence (previously $nil) for Property claims applies, which has resulted in a reduction in insurance contributions of approximately $60,000 in FY25.

WaterNSW has provided a copy of icare's Contribution Forecast. This provides an estimate of 7.98% Compound Annual Growth Rate (CAGR) and states that the estimated increase *"is primarily driven by the commercial cost and availability of reinsurance to cover associated risks as well as increased frequency and severity of weather events".*

We find this projected increase surprising. If WaterNSW were securing its own insurance, outside of icare, we understand that it may well see significant premium increases because of its recent claims history. However, WaterNSW is accessing insurance through icare and the market has shifted significantly since the highs of 2020 to negative premium trends in recent periods as can be seen below.

Figure 3-18 – Insurance premium changes



Source: analysis of Marsh insurance premium data

Given the wider market data and in the absence of any more concrete information about WaterNSW's future premiums we are not in a position to recommend real terms increases in insurance costs. We have considered whether a negative price change could be applied but consider that we cannot project forward negative premium changes with confidence so have not incorporated this as a trend adjustment.

3.4.3.4 Digital

We have reviewed digital expenditure holistically in Section 5 and the recommended expenditure is taken into account through a step change as set out in Section 3.4.5.2.

3.4.3.5 Efficiency savings

WaterNSW has applied a 1% p.a. adjustment for efficiency. It has not provided much justification for the choice of this efficiency level beyond describing its focus on cost efficiency. In Attachment 9 of its submission, it sets out the three key business transformation initiatives in its ongoing efficiency program:

1. Operational transformation: with plans for field work improvement, remote operations, process design, asset planning and asset delivery model improvements.

2. Digital transformation: discussed in the digital chapter below but including things like a strategic vendor management framework.

3. Land strategy: on both the revenue side of things (e.g. leasing and credits), cost efficiencies and divestment.

In its 2021 Determination, IPART noted that WaterNSW could take a number of initiatives to improve its efficiency including greater management focus on cost performance, clearer internal accountability for performance of each regulated business, profit and loss accountability for corporate expenditure and improved procurement.

IPART applied a continuing efficiency factor of 0.7% p.a. and a catch-up efficiency factor of 1.1% p.a., leading to challenges of 3.3% (catch-up efficiency) and 2.8% (continuing) from FY21 to FY24, equal to a combined $2.8M or 5.4% reduction (in $FY21).

Rather than having reduced from FY21 the actual spend in FY24 is 6.4% above it and is higher than in any other years with the exception of the (highly unusual because of Covid) FY20 and FY23 which was affected by flood response and overheads potentially being overstated. As discussed above, spend was 11% above the 2021 Determination allowance with only limited explanation of the drivers for variance (exogeneity and/or customer benefits for example). **We therefore consider that it is reasonable to conclude that the business has not delivered against the net efficiency challenge set for it.**

We also consider that the business should be well positioned to deliver efficiencies having already started a process of transformation and identifying key themes such as its land strategy.

We have applied two scenarios:

- An ‘upper’ scenario which adopts WaterNSW’s proposed efficiency challenge of 1% p.a.
- A ‘lower’ scenario which maintains the magnitude of efficiency challenge from the 2021 review i.e. equivalent to 1.8% p.a.

These have been applied to all costs on the basis that WaterNSW has not identified any costs as non-controllable.

3.4.3.6 Recommended trends

We have reviewed WaterNSW’s proposed trend adjustments and concluded that we cannot recommend trend adjustments for labour or insurance. We have recommended the following trend adjustments:

- Land tax: the long term land value increase (adjusted for inflation) of 5.9% p.a. in the 'upper' case and no increase in the 'lower' scenario assuming that actions such as tax minimisation and divestments can be used to minimise the cost impact on customers.
- Efficiency savings: equal to WaterNSW's proposed 1% p.a. in the 'upper' case and 1.8% p.a. in the 'lower' scenario.

We comment now on the proposed step changes.

3.4.4 Step changes

The IPART Handbook defines a step change as:

> *forward-looking changes in the recurrent controllable operating costs of providing services. Proposed step changes would reflect changes that have occurred since the completion of the base year or that will predictably occur over the next determination period.*

It sets out areas that potential step changes could relate to including changes in regulatory obligations and customer outcomes, substitution between opex and capex and opex resulting from new capex.

WaterNSW has proposed step changes under eight areas as set out below. The largest of the proposed step changes relates to compliance with existing regulatory requirements and the largest negative adjustment relates to 'other step changes'.

Table 3-13 – WaterNSW's proposed step adjustments ($FY25M)

	FY ending:	2026	2027	2028	2029	2030	Total
Area	**Step change**						
New Operating Licence conditions	Regional Water Strategy	0.0	0.0	0.0	0.0	0.0	0.1
	New Operating Licences	0.8	3.7	5.1	5.1	5.1	19.7
Increased compliance with existing regulatory requirements	Catchment Planning & Land Management Programs	3.3	3.7	4.1	4.8	5.2	21.2
	Crane Safety	1.0	0.7	0.7	0.7	0.7	3.6
	Electrical Safety Improvements	1.0	0.8	0.3	0.1	0.1	2.2
New Regulatory Requirements	Environmental Water	0.4	0.4	0.4	0.4	0.4	1.9
New recurrent controllable opex resulting from new capex	Chaffey Pipeline O&M	0.2	0.2	0.2	0.2	0.2	0.8
	Chaffey pipeline environmental monitoring	0.7	0.8	0.8	1.0	0.6	3.9
	Fish river dosing and sludge lagoons	0.1	0.1	0.1	0.1	0.0	0.6
	Opex from major capex	0.2	0.3	0.2	0.5	0.2	1.4

Area	FY ending: Step change	2026	2027	2028	2029	2030	Total
	New hydrometric sites O&M	0.1	0.1	0.1	0.1	0.1	0.7
Grant Expiry	Water Delivery Programs due to grants expiring	1.2	1.2	1.2	1.3	1.3	6.2
Regulatory Submission - IPART	Regulatory Submission - IPART 3c Framework	-0.7	-0.6	0.0	0.3	-0.4	-1.4
Other Step Changes	Other	-3.6	-4.0	-3.7	-5.0	-4.3	-20.7
	Water carting	0.2	0.2	0.2	0.2	0.2	1.2
	Network enhancement work	0.2	0.2	0.2	0.2	0.2	0.9
Overhead Allocation Adjustment	Overhead allocation	0.1	-1.8	-1.4	0.4	2.2	-0.6
Total		4.8	5.5	8.0	9.5	11.3	39.2

Source: WaterNSW spreadsheet "Detailed BTS". Note: except for Chaffey Pipeline O&M all other costs in this category have been inferred from the tab called "Ops steps". Totals may not sum due to rounding

Each of these is examined below.

3.4.4.1 New Operating Licence Conditions

This proposed step change relates to the new Operating Licence which came into force on 1 July 2024 for a period of four years. WaterNSW has identified five areas of the new licence driving a step change in opex:

- Water Quality Management System
- Water quality monitoring enhancement program
- Early warning system
- Expanded education program
- Expanded research program

WaterNSW has not provided calculations of the cost estimates of complying with the new Operating Licence conditions but has provided an explanation of how it has derived the costs.

We discuss each of the areas below. We note that the "Detailed BTS" spreadsheet also includes a line for 'regional water strategy'. However, this is very small and does not appear to be mentioned in the narrative explanation of the proposed step changes so we have not reviewed any further.

Water Quality Management System

The explanation provided for this step change is simply *"Water NSW is required to maintain a management system for water quality that complies with health requirements specified by NSW Health"*[19].

In SA-24 WaterNSW explains that it assumes it will be phased in gradually over the Determination period, applying to 31 local water utilities by the end of the period. The costs are based on the assumption that one additional FTE will be required in addition to some external support in the first two years.

We note that this relates to Clause 9 of the new Operating Licence. We also note that Clause 9(2) of the licence states that Clause 9(1) (the one requiring a management system to be maintained) "*does not apply to non-declared catchment areas until 1 July 2025 or another date nominated by Water NSW and approved by IPART*".

Based on our discussions at interview we understand that WaterNSW has a Water Quality Management System in place already but that it just covers Greater Sydney.

In summary we accept that the establishment and maintenance of a water quality management system is a new requirement for Rural Valleys. We consider that the proposed costs do not appear unreasonable and have therefore included the full proposed step change in both the 'upper' and 'lower' range of expenditure.

Water quality monitoring enhancement program

WaterNSW's explanation for this step change is that:[20]

> *Water NSW must, from 1 July 2026, maintain an ongoing water quality monitoring enhancement program that enhances risk-related monitoring of raw water and identify locations where monitoring equipment needs to be installed, replaced or relocated.*
>
> *Water NSW must, by 30 November each year commencing 2026, submit an annual report to IPART and the Department detailing its program-related activities for the preceding financial year and the implementation timeline for outstanding activities.*

In SA-24 WaterNSW explains that it assumes it will put in place two monitoring points at each of 31 nominated local water utilities. It sets out opex costs of $1.64M p.a., increasing to $2.68M p.a. when the program is fully implemented. These costs are based on the need for grab sampling, laboratory analysis and staff time equal to 4.65 FTEs[21] when monitoring is in place at all 31 utilities.

We note that the timing and extent of the monitoring required by the Operating Licence appears to leave significant room for flexibility, requiring WaterNSW to:

- enhance "risk-related monitoring of raw water";
- put in place a program that identifies locations where monitoring equipment needs to be installed, replaced or relocated in consultation with the Department;
- and "consider how priority is to be determined including the costs and benefits of different sampling locations and methods".

WaterNSW appears to agree with this view, stating in SA-24 that the *"flexibility in licence clause that program is to be developed based on priority determined by cost and Dept support – could be used to de-scope areas as*

[19] Attachment 8, Pricing Proposal
[20] Attachment 8, Pricing Proposal
[21] Based on the 0.15 FTEs quoted in SA-24 and 31 local water utilities.

non-priority LWUs [local water utilities]. It is also not clear that there is a requirement for two monitoring points for each local water utility as this is just WaterNSW's working assumption at this point.

There appears to be significant flexibility under this Operating Licence requirement to deliver a different scope of works. We also consider that 4.65 additional FTEs appears generous on an ongoing basis for a water quality monitoring enhancement activity.

Whilst we accept that the water quality monitoring enhancement program represents a step change obligation for Rural Valleys, it is clear that there is significant scope flexibility and we have not been given sufficient information to be confident that the proposed expenditure (e.g. 4.65 FTEs) is a necessary and efficient response. We have therefore included the full cost in the 'upper' range and 25% in the 'lower' range, representing a smaller scope and more efficient FTE response.

Early warning system

WaterNSW's explanation for this step change is that:[22]

> *Water NSW must, from 1 July 2026, maintain an effective system for providing advance notification.*
>
> *• significant changes to flow from its works*
>
> *• changes to water source*
>
> *• changes to offtake levels that significantly impact water characteristics.*
>
> *• exceedance, or forecast exceedance, of the water quantity.*
>
> *to all persons, including customers, who have registered for notifications (early warning system). To meet these requirements it will require a significant IT system and modelling for forecasting exceedances.*

In SA-24 WaterNSW explains that it is linked to the implementation of the water quality monitoring enhancement set out above. Its cost estimates are based on six additional FTEs ($1.0M p.a.) and $0.1M p.a. of licensing costs. It has allowed for IT system capex separately.

We note that WaterNSW already has an Early Warning Network which provides alerts about dam and supply activities[23]. It therefore seems likely that, as indicated by WaterNSW's linkage to the water quality monitoring enhancement, this will relate primarily to the addition of water quality data.

It appears to us that there is significant flexibility in the scope of this program linked to that of the water quality monitoring enhancement. It also seems very unlikely that six FTEs would be required as an efficient response to administer the addition of an alert system for water monitoring to the existing Early Warning Network.

Whilst we accept that the early warning system represents a step change obligation for Rural Valleys, it is clear that there is significant scope flexibility and we consider it very unlikely that the proposed expenditure (e.g. six FTEs) is a necessary and efficient response. We have therefore included half of the proposed increase in the 'upper' range and 25% in the 'lower' range, representing a smaller scope and more efficient FTE response.

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[22] Attachment 8, Pricing Proposal

[23] See Early Warning Network - WaterNSW for example

Expanded education program

WaterNSW's explanation for this step change is that:[24]

> *Water NSW must, from 30 November 2025, maintain a strategy for an ongoing statewide community education program. To meet this requirement, it will require.*
>
> *• Targeted (mid-level) rollout of outreach community education projects outside declared catchment.*
>
> *• Assessment to determine key target areas.*
>
> *• Creation of resources for a mobile exhibition.*
>
> *• Adaptation of materials for regional areas.*
>
> *• Leveraging existing and new projects e.g. Ops major projects incl hydro, Stakeholder Engagement program and calendar of events, TWRRP, collaborations with water sector/ agency partners.*

In SA-24 WaterNSW explains that the opex relates to fabrication, design and production of education materials and mobile exhibition and temporary exhibitions, education equipment, interpretative, travel costs and online learning resources. It envisages initial costs of $0.5M of opex and $0.8M of capex followed by $0.7M p.a. of opex.

We note that the extent of the community education program required by the Operating Licence appears to leave significant room for flexibility, requiring WaterNSW to first develop then implement a community education strategy *"considering the costs of community education and availability of funding"* and *"identifying geographical priority areas in its area of operations that are most likely to benefit from education".*

WaterNSW appears to agree with this view, highlighting the *"flexibility in the licence for prioritisation of education programs"* in SA-24.

There appears to be significant flexibility under this Operating Licence requirement to deliver a different amount of engagement.

In summary we accept that the expanded education program is a new requirement for Rural Valleys. However, there is significant flexibility in the scale of the program. As such, we have included the full proposed step change in the 'upper' range and 50% of the proposed increase in the 'lower' range of expenditure.

Expanded research program

WaterNSW's explanation for this step change is that:[25]

> *Water NSW must, by 30 November 2025, develop a strategy, maintain and implement an ongoing research program for catchment health and downstream river health. Water NSW must by 30 June 2027 submit a report to IPART detailing the outcomes of the ongoing research program.*

In SA-24 WaterNSW explains that it can "manage within current research team". It sets out opex of $0.2M in FY26 and $0.6M p.a. thereafter. According to the presentation given to us, it appears that this is based on one

[24] Attachment 8, Pricing Proposal
[25] Attachment 8, Pricing Proposal

additional FTE and an estimate of research partner costs based approximately on what is spent in Greater Sydney.

We note that the extent of the community education program required by the Operating Licence appears to leave significant room for flexibility, requiring WaterNSW to first develop then implement a strategy for ongoing research *"considering the costs of research and availability of funding"* and *"identifying geographical priority areas in its area of operations that are most likely to benefit from research".*

There appears to be significant flexibility under this Operating Licence requirement to deliver a different amount of engagement.

In summary we accept that the expanded research program is a new requirement for Rural Valleys. However, there is significant flexibility in the scale of the program. As such, we have included the full proposed step change in the 'upper' range and half of the proposed increase in the 'lower' range of expenditure.

3.4.4.2 Increased compliance with existing regulatory requirements

Catchment Planning & Land Management Programs

WaterNSW's explanation for this step change is as follows:[26]

> *In 2015 the Biosecurity Act was introduced. The new Act brought with it new obligations on landholders to manage pests and weeds. WaterNSW responded well to those changes across its Declared Catchment holdings in its 2018-2022 price path submission, however, these responses were not replicated across its rural land holdings. Similarly, following the 2019-20 bushfires and the subsequent State and Federal inquiries, significant changes were introduced to standards regarding bushfire management. Again, WaterNSW requested and received additional funding in the Declared Catchment but did not seek additional funding for its rural land holdings. The result is that WaterNSW is not currently managing its lands and associated recreational facilities to meet the Australian Building Code, Fire Trail Standards mandated by the Rural Fire Service or meeting its general biosecurity duty under the Biosecurity Act. The lands management program would be undertaken across all the Rural Valleys. Key improvements arising from this activity will benefit users of WaterNSW recreational facilities, surrounding communities and farmers.*

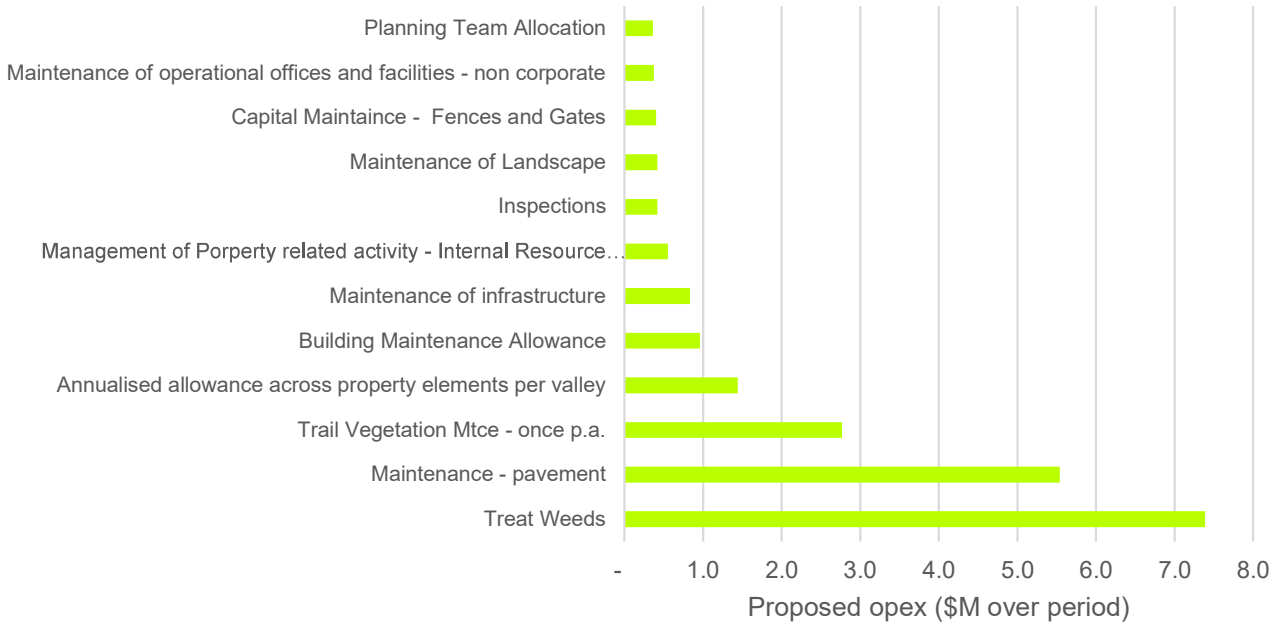
In discussions during the interviews WaterNSW stated that the original estimate was for a response of $70M but that it had scaled back its response, giving examples such as only undertaking weed management within 100m of access fences rather than all land and stepping up maintenance of key access roads rather than all of them.

We asked how the business had decided what to deliver in the next Determination period. WaterNSW explained that it was based on an assessment of what was achievable but also based on a number of anticipated cyclical activities.

Based on the spreadsheet provided in response to SA-47, it appears that the majority of the proposed expenditure relates to weed treatment and road (pavement)/trail maintenance as can be seen below.

[26] Attachment 8, Pricing Proposal

Figure 3-19 – Proposed land management expenditure by task



Source: Analysis of 'Budget MaintenancePlan ver 7" provided with SA-47. Note the period included and price base are not clear. This figure only includes tasks with >$0.25M spend

We also asked what had been spent on land management recently so that we could understand the step change. WaterNSW's response in SA-47 was:

> *WaterNSW does not budget separately for land management in its rural valleys. Budgets are part of an overall site maintenance budget and land management budgets have not been separately apportioned. FY26 will see land management budgets separately identified.*

It has, however, derived an estimate using hours booked to preventative maintenance under land management type codes. This suggests that WaterNSW spent $1.8M (against a budget of $2.2M) in FY23 and $1.3M (against a budget of $1.5M in FY24).

Our view is that:

- WaterNSW is a significant landholder with responsibilities for ensuring compliance with legislation and regulations. We recognise that activities such as bush fire management can have significant spill over effects for the community.
- The proposed step change appears to be a response to a 2015 Act and guidelines emerging following the 2019-20 bush fires such as (presumably) the 2019 bush fire protection planning guidelines[27].
- WaterNSW has not set out in a clear precise form what standards, regulations or similar it is not complying with and how we can be sure that the proposed activities will ensure compliance.
- If WaterNSW is not complying with important requirements it is not clear to us why it is awaiting a new Determination period to step up the activity levels. It is also not clear why it underspent its own budgets in FY23 and FY24 and reduced spend between these years rather than ramping it up.

[27] See Planning for Bush Fire Protection 2019 for example

In summary therefore we accept that activities which reduce the risk of things like bushfire and biosecurity hazards have wider benefits. However, we have limited confidence in the appropriateness of the proposed response and costs.

We have therefore included the full proposed step change in the 'upper' range and removed it from the 'lower' range (i.e. assuming that WaterNSW has already been spending an appropriate amount in recent years levels given the changes happened a number of years ago)**.**

Crane Safety

WaterNSW's explanation for this step change is as follows:[28]

> *…The development of the WaterNSW Cranes and Lifting Equipment Asset Class Strategy identified a number of improvement opportunities around the management of cranes assets. This included alignment of existing maintenance strategies to industry best practice and Australian Standard Requirements. WaterNSW places a priority on the Health and Safety of our employees, contractors and general public. Completion of this activity will ensure compliance with Australian Standards, the Work Health Safety Act 2011 and Work Health Safety Regulation 2017, and actively reduce one of our safety risks that can have significant consequences if left untreated.*

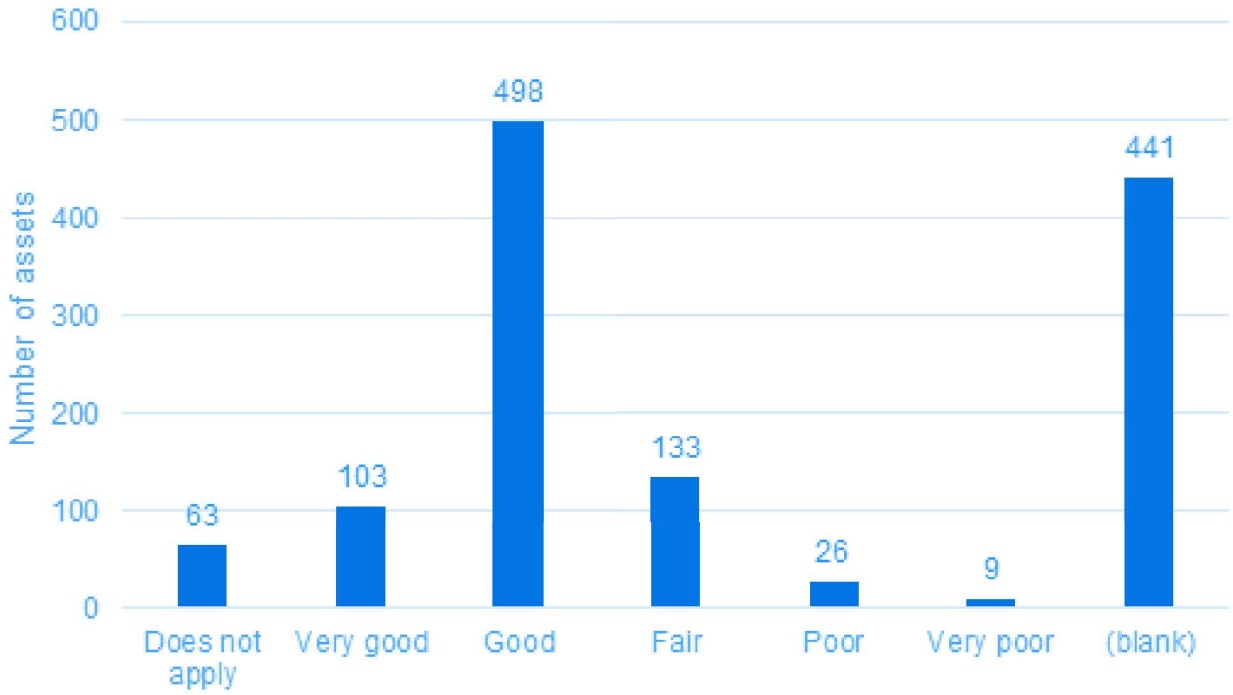
In discussions during the interviews WaterNSW explained that it now had a deeper understanding of the relevant standards and had moved from a situation where each site had accountability for looking after its crane and lifting equipment to a more structured and systematic approach across all of these assets.

The Asset Class Strategy[29] found that cranes and lifting equipment are generally "*in good condition. However, a large proportion of the asset class has no recent asset condition rating. This is concerning for an asset class which has inherently high criticality*" as can be seen below.

[28] Attachment 8, Pricing Proposal

[29] Asset Class Strategy- Cranes and Lifting Equipment, undated by assumed to be 2024 (given the 3 year recommended review period indicates a review in 2027).

Figure 3-20 – Crane asset condition



Source: Asset Class Strategy - Cranes and Lifting Equipment

It also found that only 19% of assets had the date of construction recorded, suggesting a poor understanding of asset age.

The spreadsheet provided in response to SA-48 indicates that only 37% of Rural Valleys cranes have a maintenance plan. The cost breakdown also suggests that an average of approximately $0.1M p.a. of the proposed step change relates to training and the rest to maintenance.

Our view is that:

- It appears that the business lacks information about an asset type which represents one of its highest health and safety risk items. A program of inspecting these assets and development of maintenance plans does appear reasonable.
- The asset class strategy states that training is provided *"to crane operators and maintenance personnel to ensure they can use and maintain the upgraded equipment correctly"*[30]. No existing training costs are netted off the proposed step change. It would be surprising to us if WaterNSW was not already providing this training on an ongoing and recurring basis already.
- We consider it reasonably likely that the additional costs of carrying out the proposed additional maintenance work have been over-estimated. The current maintenance costs have not been used to derive the step change. Instead, the calculation of the net increase assumes that cranes which do not have a maintenance plan attracted only 10% of the costs of those with a plan in FY23[31]. It would seem surprising to us if the lack of a maintenance plan meant that maintenance is only being undertaken at 10% of the expected level.

[30] Under 'current asset management approach' Page 51, Asset Class Strategy
[31] See the figures in column E of 'Baseline Maintenance Increase' tab of the WaterNSW spreadsheet 'OPEX Step Change Breakdown - Cranes'

In summary therefore we consider that there is a reasonable case for stepping up inspection and maintenance activities on some of WaterNSW's highest health and safety risk assets. However, we consider that there is a reasonable case for assuming that the net increase in costs is lower than estimated. This is because the step change is not based on current actual costs and it would be surprising if much or all of the proposed training is not already being provided (as per WaterNSW's asset class strategy).

We have therefore included the full proposed step change in the 'upper' range and removed the training element and 50% of the maintenance activities in the 'lower' range.

Electrical Safety Improvements

WaterNSW's explanation for this step change is as follows:[32]

> *The primary objective of the Electrical Safety Improvement (ESI) program is to identify, quantify and manage major electrical safety risks across WaterNSW powered sites. This is a continuation and expansion of the electrical safety program previously allowed for by IPART in its 2021 price determination for Rural Valleys. The risk of not addressing the current state is potential harm to workers and plant and breach of Work Health and Safety Act and Regulation requirements as well as non-compliance with ISO 55001.*

In discussions during the interviews WaterNSW explained that the work in the current Determination had focused on Rural Valleys and the higher risk sites and that the opex activities relate to investigative works such as arc flash assessments and safety audits.

The business has provided cost estimates for the program in response to SA-49 as summarised for Rural Valleys below. These suggest that if FY24 is used as the base year the program actually constitutes a negative step change of -$4.6M because of the higher spend in FY24.

Table 3-14 – WaterNSW's projected electrical safety improvement costs ($FY25M)

	Actuals		Proposed					
FY ending:	**2023**	**2024**	**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
Actuals	0.1	1.4						
Proposed spend			1.0	0.8	0.3	0.1	0.1	2.2
Step compared to FY23			0.9	0.7	0.2	0.0	0.0	1.8
Step compared to FY24			-0.4	-0.6	-1.1	-1.3	-1.3	-4.6

Source: analysis of WaterNSW spreadsheet "ESI Stage 1 Phase 2 3 Cost Estimation by Valley for IPART Submission'. Actuals are assumed to relate to Rural Valleys spend as per our discussions with WaterNSW at interview. Note that actuals have been assumed to be in $FY25. If they are nominal then the step changes will be smaller/more negative.

[32] Attachment 8, Pricing Proposal

As discussed in Section 3.4.2, our view is that FY24 is a more appropriate base year than FY23. We have therefore included the negative step change implied by the cost estimates provided relate to the higher spend in FY24. We have applied this to both the 'upper' and 'lower' range.

3.4.4.3 New Regulatory Requirements: Environmental Water

WaterNSW's explanation for this step change is as follows:[33]

> *Changes in government policy and legislation have seen the rapid increase in environmental water holdings. Namely the Commonwealth Water Amendment (Restoring our Rivers) Bill which is legislation that aims to improve the health of the Murray-Darling Basin by recovering more water for the environment. This legislation and the resulting increase in environmental water holdings and associated targeted flows planned and ordered by environmental water holders requires dedicated and specialist skills to manage and coordinate the planning and delivery of environmental water. As such, WaterNSW seeks to employ two dedicated resources to ensure that obligations relating to environmental water are met.*

The business has not provided much detail about what the two additional FTEs proposed (compared to the one existing FTE) would actually be required to do. It appears that it relates to a team focused on systems and processes to enable environmental water holders to make decisions about how their actions interact with system environmental outcomes.

At interview we asked the business to explain why and how the proposed activities would be different in future compared to the level of activities in recent years (e.g. FY24). It did not provide a strong clear response except to say that the work would be bigger and more substantive.

We consider that we have not been given sufficient explanation, information and justification to confidently recommend this as a material step change. However, recognising that there is likely to be a drive towards greater environmental water including as a result of legislation such as the Restoring Our Rivers Act 2023, we have **included the equivalent of one FTE (i.e. half the proposed spend) in the 'upper' range and no additional spend in the 'lower' range.**

3.4.4.4 Opex resulting from new capex

Chaffey Pipeline O&M

WaterNSW's explanation for this step change is as follows:[34]

> *As a drought measure WaterNSW constructed an 18.2km pipeline from Chaffey dam to Tamworth, allowing water to be transferred to the Dungowan pipeline by piping it into Tamworth Regional Council's Calala Water Treatment Plant. The Chaffey to Tamworth Pipeline eases pressure on the Chaffey Dam supply by directly piping water to Tamworth Regional Council for treatment and distribution to reduce transmission losses. An allocation of $0.16 million per year will enable the pipeline to be tested on an annual basis, ensuring it remains in a stand-by state should it be needed for operation.*
>
> *To explore the long-term operations of the pipeline outside of drought conditions there is also an urgent need to undertake a range of biodiversity offset and monitoring activities while allowing the pipeline to*

[33] Attachment 8, Pricing Proposal
[34] Attachment 8, Pricing Proposal

remain operational when required. An additional allowance is also forecast of $0.6 million over the first four years of the next regulatory period.

Based on the presentation given and discussions during the interviews we understand that Chaffey pipeline was constructed in 2020 as a drought measure. It is envisaged to only operate during drought periods.

WaterNSW is proposing additional costs to enable care and maintenance measures including annual testing. When asked if the pipeline was not already being maintained the business said that it was "barely" being maintained with only inspections being carried out not testing.

Our view is that, if it is practical and a proportionate cost, it makes sense to test a drought pipeline occasionally to ensure that the business knows whether it can be used if needed. However, the business has not made it clear why an annual frequency has been chosen and it is not clear how practical and feasible it will be to test given we understand it is not yet clear how the water used will be disposed of.

We have therefore included the full costs in the 'upper' range and a fifth of these costs in the 'lower' range, assuming that the pipeline is tested once every five years (also roughly consistent with the fact that the business has not tested it in the five years since it was constructed).

Chaffey pipeline environmental monitoring

WaterNSW has not provided a written explanation of this step change in its pricing proposal. The presentation given to us provides information including the following:

Environmental monitoring conditions tied to planning approvals obligations (biodiversity offset and monitoring activities) for the construction of the Chaffey pipeline.

Environmental approvals under the EPBC (act) have committed WaterNSW to a monitoring program across a 5 year period. This obligation is to assess the effectiveness of the biodiversity offset actions (installation of snags and pump screens) and report via annual compliance reporting requirements (EPBC 2019/8590).

Annual monitoring activities are undertaken to assess the "commitments to maintain or improve the extent and quality of habitat and populations of other EPBC Act listed threatened species and ecological communities in the offset area".

We understand from the discussions at interview that logs/snags have been installed in a river to create fish habitat and that the associated environmental approval obliges WaterNSW to carry out monitoring and annual reporting.

WaterNSW is currently in the process of scoping out the monitoring activities. They had not started as of the time of interview as the snags had been installed within the previous 12 months.

As this is an obligation associated with a recently constructed scheme and the costs do not appear unreasonable we have included the proposed step in both the 'upper' and 'lower' ranges.

Fish river dosing and sludge lagoons

WaterNSW's explanation for this step change is as follows:[35]

[35] Attachment 8, Pricing Proposal

To support improved Water Quality outcomes following the capital expenditure upgrade at Fish River, additional dosing will occur using the potassium permanganate plant. Additional activity will also be required to manage the sludge lagoons including desludging a pond every 5 years, resulting in increased monitoring and sampling activities.

Based on the presentation given and discussions during the interviews we understand that the plant (potassium permanganate dosing at Molloy Water Treatment Works (WTW) to deal with water quality issues) was nearly complete and close to operation.

These proposed costs are to cover power, chemical, labour, sampling and maintenance costs. In FY29 it also includes for desludging a pond.

These costs are associated with a soon to be constructed scheme and do not appear unreasonable. We have included the proposed step in both the 'upper' and 'lower' ranges.

Opex from major capex

WaterNSW has not provided a written explanation of this step change in its pricing proposal. The presentation given to us provides information including the following:

From 2026 onwards, WaterNSW will be responsible for the ongoing operations and maintenance resulting from the SDLAM [Sustainable Diversion Limit Adjustment Mechanism] *asset upgrades. Additional operations and maintenance expenditure has been included for the capital expenditure upgrades*

•Northern Basin Toolkit

•Yanco Creek Modernisation…

These costs are understood to include water delivery, maintenance and dam safety compliance.

These costs are associated with an apparent regulatory obligation and do not appear unreasonable. We have included the proposed step in the 'upper' range. However, we have not included it in the 'lower' range as it has not been made fully clear to us that this is an essential part of WaterNSW's Rural Valleys' service especially given their link to the Murray-Darling Basin Plan[36]**.**

New hydrometric sites O&M

WaterNSW's explanation for this step change is as follows:[37]

The Yanco Creek System Hydrometric capital project is being delivered by WaterNSW in the current regulatory period. Ongoing operations and maintenance costs will include water quality (Temp, DO, EC and turbidity) and flow monitoring. The introduction of these sites will support the efficient operation of the Yanco Creek system as an initiative under the Sustainable Diversions Limit Adjustment Mechanism (SDLAM).

The presentation given to us elaborates further:

[36] See Sustainable Diversion Limit Adjustment Mechanism | NSW Government Water for example
[37] Attachment 8, Pricing Proposal

The Yanco Creek System Hydrometric capital Project is being delivered by WNSW in the current regulatory period on behalf of DCCEEW, who is delivering the Yanco Creek modernisation project.

The introduction of these sites will support the efficient operation of the Yanco Creek system as an initiative under the Sustainable Diversions Limit Adjustment Mechanism (SDLAM).

WaterNSW will be the asset owner of the Hydrometric sites and as such be required to operate and maintain the assets.

We understand that the activities relate to water quality and flow monitoring.

These costs are associated with an apparent regulatory obligation and do not appear unreasonable. We have included the proposed step in the 'upper' range. However, as with 'opex from capex' above, we have not included it in the 'lower' range as it has not been made fully clear to us that this is an essential part of WaterNSW's Rural Valleys' service especially given their link to the SDLAM and Murray-Darling Basin Plan.

3.4.4.5 Grant Expiry: Water Delivery Programs due to grants expiring

WaterNSW's explanation for this step change is as follows:[38]

The Water Modelling Team are currently funded under a grant (funding expiring June 2025) to develop hydraulic and hydrologic modelling into CARM (Computer Aided River Management)…. The CARM model is a tool used in river management and flood operations. It is a computer-based system that assists in the planning, design, and decision-making processes related to water delivery and the operation of river systems. …On expiry of the grant funding, additional operating expenditure not included in the base year, will still be required to provide essential:

• maintenance and support of the developed models

• analysis and assessment of resultant model data

These ongoing core activities are vital to ensure the continued and effective functioning of the CARM model in enhancing the understanding of river systems, supporting river management decisions and ensuring water is delivered when and where it matters for our customers and communities.

The presentation given to us elaborates further:

A detailed CARM roadmap of proposed improvement activities has been developed, to address the challenges around ensuring that the system continues to meet existing and future operational, business, regulatory and customer requirements and expectations with relevant data, fit-for purpose models, suitable workflows, and organizational capability and support.

At the completion of the current grant fund, it is proposed that the existing modelling team, consisting of 6FTEs, provide this organisational capability, support and ongoing enhancements detailed in the CARM roadmap. Additionally, the modelling team would continue to provide specialised modelling and advice in business specific applications.

The CARM model appears to be playing an important role in Rural Valleys. However, it appears from the pricing proposal and presentation given that the purpose of the expenditure to date has been to **develop** the model. To

[38] Attachment 8, Pricing Proposal

maintain the same level of expenditure suggests that the intention is to continue its development as opposed to simple operation and maintenance of it.

Whilst this may be appropriate if customers are willing to pay for further development of the tool and any benefits this may bring (or if it generates sufficient revenue benefits through reduced losses), the justification provided relates to maintenance of the system and WaterNSW has not justified the benefits of further development. As such **it is not clear to us that the case has been made that continuation of the same level of expenditure is warranted.**

We have included the proposed step in the 'upper' range and included half of the proposed step in the 'lower' range as an allowance for ongoing maintenance as opposed to further development of the system.

3.4.4.6 Regulatory Submission

Following its proposed base year adjustment of +$0.8M p.a. for regulatory submission costs, WaterNSW has proposed a negative step adjustment of -$1.4M over FY26 to 30, i.e. an average of -$0.3M p.a.

As set out above we have applied an adjustment to base year opex to take account of the average costs of the regulatory submission over a five year period.

The business has provided cost estimates for the program in response to RA-34 as summarised for Rural Valleys below. Having adopted the average proposed level of expenditure the average step change is zero as shown below.

Table 3-15 – WaterNSW's projected regulatory submission costs ($FY25M)

	Base year assumption	Proposed					
FY ending:		**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
Average proposed spend	0.7						
Proposed spend		0.3	0.4	1.0	1.3	0.6	3.6
Step compared to FY23		-0.4	-0.4	0.3	0.6	-0.1	0.0

Source: analysis of WaterNSW spreadsheet "RA-34.

We have included the net neutral step change implied by the cost estimates provided to both the 'upper' and 'lower' range of expenditure.

3.4.4.7 Other

Water carting

WaterNSW's explanation for this step change is as follows:[39]

[39] Attachment 8, Pricing Proposal

WaterNSW manages Private Water Supplies at 15 regional dam and 2 weir sites. Users at each site are a combination of employees (workers and tenants), private tenants and third-party tenants.

A review of system performance identified that some of the private water supplies did not always meet the requirements of the Australian Drinking Water Guidelines (ADWG). Treatment systems were treating raw water in-line with Quality Assurance Plans, however there were heightened risks posed to the quality of drinking water due to in adequate treatment relative to source water risks. Based on a detailed options assessment, water carting was identified as the most balanced and cost-effective option for the regional sites when compared to the other options. Based on the options assessment this step change is new current controllable opex resulting from capex from the new tanks.

In discussions during the interviews WaterNSW explained that there are boil water notices in place at some sites.

The costs in themselves do not appear to be an unreasonable allowance for carting and are likely to be lower cost than a capital solution. **We have included the full costs in the 'upper' range and none of the costs in the 'lower' range as it appears likely (given this is the approach being taken by WaterNSW already) that the current arrangement could be maintained.**

Network enhancement work

WaterNSW's explanation for this step change is as follows:[40]

Lake Brewster and Lower Lachlan will have an increase in the number of surface water/hydrometric sites so that these systems can be managed more efficiently. This will result in better information on Lake Brewster water levels which leads to more efficient use of available water (particularly for pelican breeding season). The 6 additional hydrometric assets will lead to additional associated operations and maintenance costs.

The presentation given to us elaborates further:

The 6 additional hydrometric assets within Lake Brewster and 3 additional hydrometric assets in the lower Lachlan will lead to additional associated operations and maintenance costs

A 'time of flight' flow meter will be installed to provide more accurate real-time inflow data from the Lachlan River offtake. Due to its complexity, it will incur additional operational and maintenance costs to ensure the continued accuracy of flow measurements.

These costs are associated with soon to be constructed equipment and do not appear unreasonable. We have included the proposed step in both the 'upper' and 'lower' ranges.

'Other'

WaterNSW has proposed an average negative adjustment (i.e. step reduction) of $4.1M p.a. over the period FY26-30, varying from -$3.6M to -$5.0M. The pricing proposal does not provide an explanation of this 'other' adjustment line. However, in response to SA-77, WaterNSW provides the following explanation:

Step change Other is made up of, noting that this is a negative step (lower cost) vs the adjusted base year:

[40] Attachment 8, Pricing Proposal

- *There are numerous bespoke projects (over 40 in total) ,which have either been completed or are ongoing at a lower forecasted cost compared to the base year.*

- *The reduction in ops model costs from lower FTE changes, noting that FTEs in FY27 and beyond are lower than FY25*

- *Normalise for labour related projects which were water modelling grant expiry and environmental & cultural water. This adjustment is to ensure it is only counted once. (in ops model and separate step)*

To the extent that the bespoke projects constitute the end of an obligation or an explanation for the overspend in the current period, we consider that the description laid out in the first dot point (end of projects) constitutes a valid potential step change.

On the second dot point (reduction in operating model costs) we have considered this as a standalone step change below (and not as a base year adjustment) so do not consider that a separate adjustment is required under this category.

The third dot point appears to suggest that, without this cost reduction, there is duplication of some of the costs of the operating model cost increase and other step changes. This was also the conclusion we arrived at when reviewing the explanation for the operating model step change as set out in Section 3.4.5.3. Given that we have not recommended incorporating the operating model step change we do not consider that a negative adjustment is required under this category to avoid this duplication.

It is difficult to evaluate this adjustment without the calculations. However, based on the explanation above, we have made an estimate of the effect of the projects which have or will be completed compared to the base year below. This is based on the assumption that WaterNSW has fully removed the grant and environmental & cultural water step changes through this adjustment and that all of the projects are complete by FY26.

This indicates that a negative adjustment of -$2.0M is required to take account of projects which will have completed by FY26. We have included this adjustment in the 'upper' range. We have not included it in the 'lower' range as the lower base opex is based on the adjusted 2021 Determination allowance and not actuals.

Table 3-16 – WaterNSW's 'other' step change ($FY25M)

FY ending:	2026	2027	2028	2029	2030	Total
WaterNSW proposed step changes						
'Other' step change	-3.6	-4.0	-3.7	-5.0	-4.3	-20.7
Grant expiry	*1.2*	*1.2*	*1.2*	*1.3*	*1.3*	*6.2*
Environmental and cultural water	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*1.9*
Residual 'other' step change after removing the effect of the grant expiry and environmental/cultural water	**-2.0**	**-2.4**	**-2.1**	**-3.4**	**-2.7**	**-12.6**
Assumed effect of projects completed by FY26 ***(FY26 figure from row above)***	**-2.0**	**-2.0**	**-2.0**	**-2.0**	**-2.0**	**-10.2**
Assumed effect of FTE changes in WaterNSW proposed operating model (difference between the two rows above)		-0.3	-0.1	-1.4	-0.6	-2.4

Source: analysis of WaterNSW spreadsheet "Detailed BTS".

3.4.4.8 Overhead allocation

The pricing proposal does not provide a succinct explanation of the proposed overhead allocation changes but describes a number of items under the heading of 'other step changes'. We note that these are not included as direct step changes so are likely to be drivers for overhead changes. These include[41]:

- Enterprise Asset Management System's roadmap: the uplift of capability and capacity in the Enterprise Asset Management System's team '*to support the increase in demand on core activities as a result of the implementation of the Field Service Optimisation and Safety Platform in the Technology Roadmap'.*
- Operations Performance & Support Initiatives: *"additional costs for a new team which was not incorporated in the 2023 base year"* to deliver consistent reporting and insights to drive integrated decision support, effective business process management and consolidated data governance.
- ESG program: "an increase in expenditure to address increased obligations on the business particularly related to managing climate change obligations and emissions reduction".

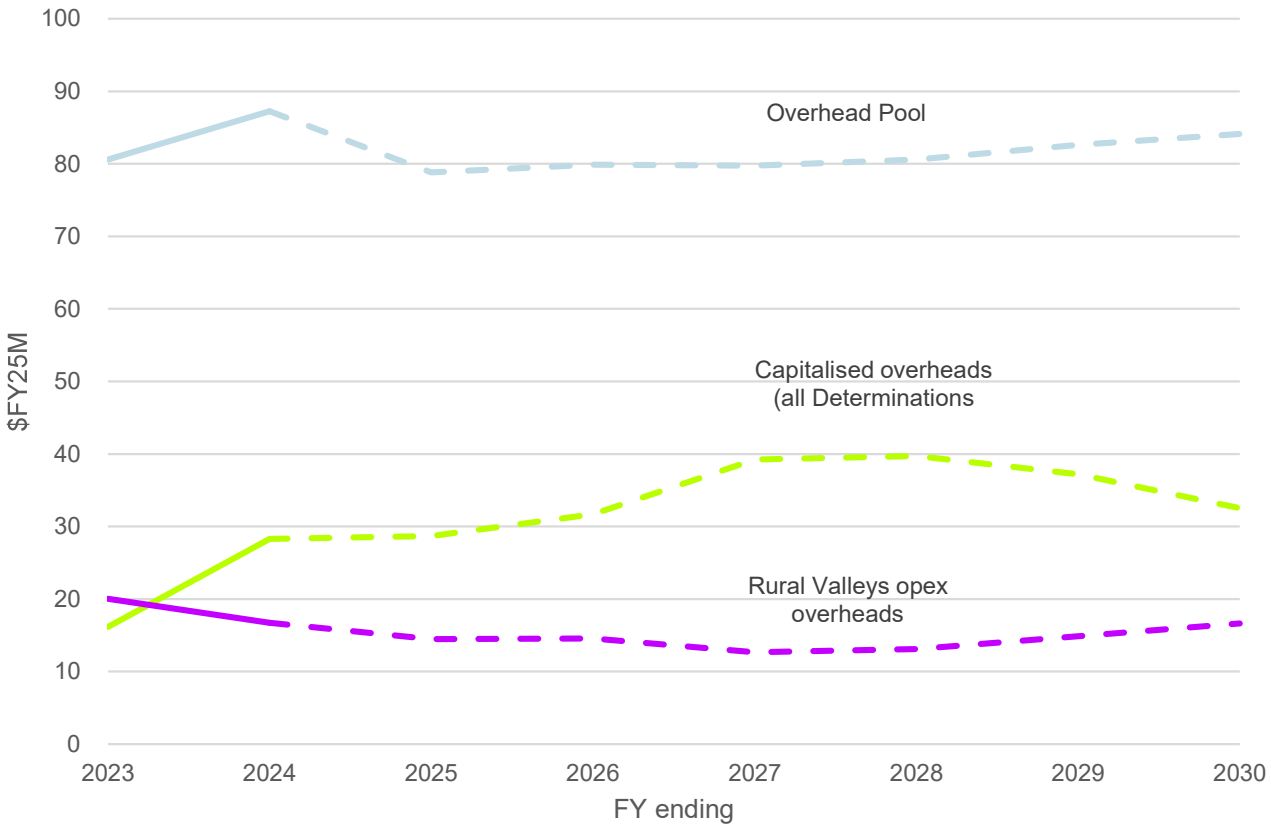
During discussions at interview WaterNSW explained that the overhead adjustment was an output from a corporate cost allocation model and is affected by the scale of the capital program and opex across the Determinations which attract overheads which would otherwise hit Rural Valleys' opex.

[41] Attachment 8, Pricing Proposal

Recent historical and projected total overheads are shown below along with capitalised overheads and the allocation to Rural Valleys opex. This suggests that:

- Total overheads were relatively high in FY24. WaterNSW expects them to reduce by approximately $8.4M in FY25 and then increase at approximately 1.3% p.a. from FY25 to 30.
- The effect of this on Rural Valleys' opex appears to have been mitigated in FY24 (compared to FY23 at least) by the increased allocation to capitalised overheads.
- Capitalised overheads are projected to increase as a percentage of the overhead pool, presumably because of WaterNSW's proposed increased capital program.

Figure 3-21 – WaterNSW's recent and projected overheads (WaterNSW level)

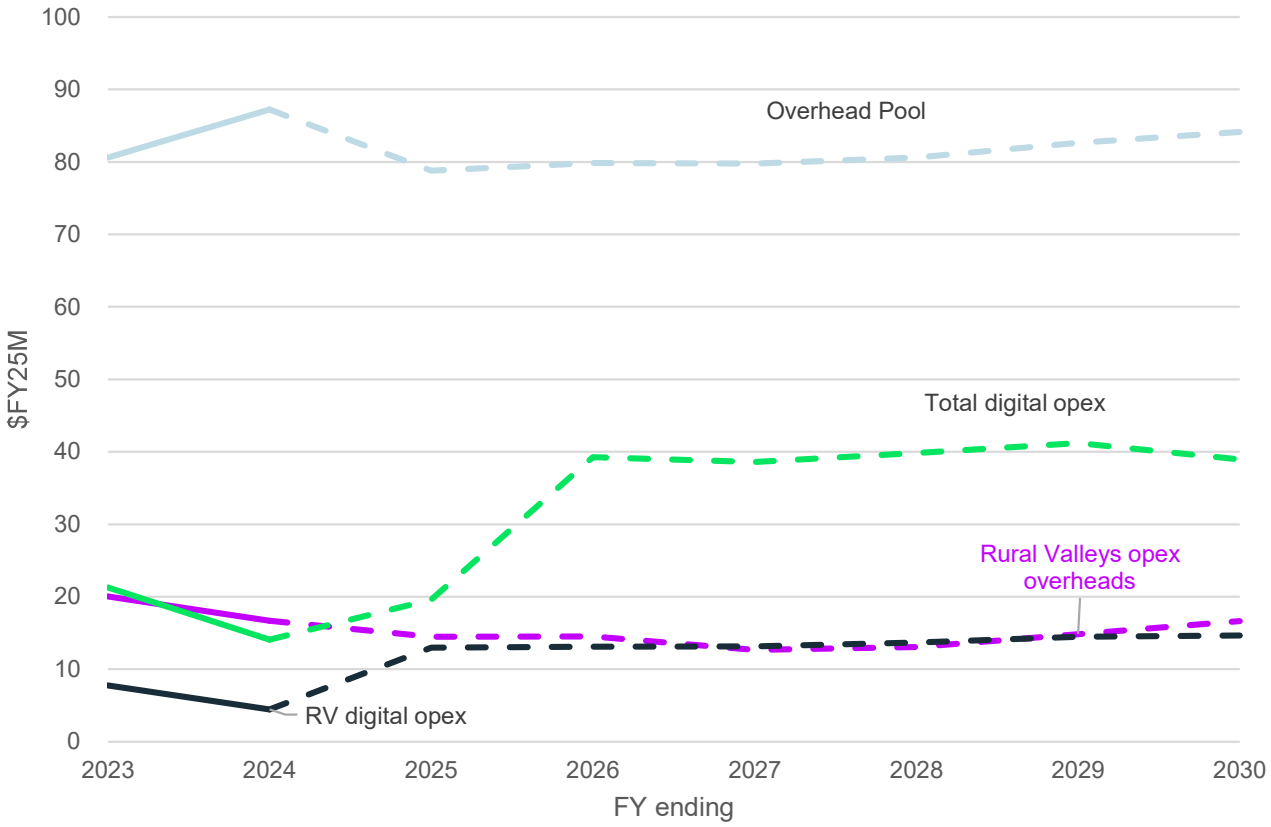


Source: Analysis of WaterNSW spreadsheet "Detailed BTS"

We have also compared WaterNSW's projected digital opex with these overheads as summarised below. There appears to be an inconsistency between the projected digital opex and overheads.

WaterNSW projects an increase in total digital opex by $19.7M between FY25 and 26 when total overheads increase by $1.1M. This seems inconsistent unless the proposed increase in digital opex is included in direct rather than overhead cost centres in the projections. Our interpretation of WaterNSW's proposed base year digital adjustment is that this is the case i.e. **it appears that WaterNSW has included all its proposed increase in digital costs in direct costs rather than overheads** even though they are likely to feed through to each Determination through overheads**.**

Figure 3-22 – WaterNSW's recent and projected overheads and digital opex



Source: Analysis of WaterNSW spreadsheet "Detailed BTS" and digital opex from Attachment 11

Given the complexity of cost allocation and that the level of expenditure (both opex and capex) across each Determination will depend on the Tribunal's and (later) the business's decisions as well as external factors, it is clear that there is uncertainty in the amount of overheads.

We have therefore adopted the following approach:

'Upper' range:

- Adjust base opex (largely based on FY24 actuals) for Rural Valleys' share of the $8.4M reduction in overheads projected by WaterNSW in FY25.
  - We have considered if this may double-count the base year efficiency adjustment. We do not consider it does because the reduction in overheads between FY24 and FY25 brings overheads back to a level which is closer to FY23 levels, suggesting that the high spend in FY24 was atypical and the change thereafter is a reversion to previous figures rather than an efficiency.
  - We have assumed that Rural Valleys opex receives 19.1% of total overheads based on the allocation in FY24[42].
- We have not made any adjustment for our view of digital opex as this appears to have been entirely taken into account in the proposed direct digital adjustment.
- We have not applied WaterNSW's trend increase in overheads consistent with our view of the proposed trends set out above.

[42] Source: 'Overheads Allocation' tab of WaterNSW spreadsheet "Detailed BTS"

- This results in a reduction of $1.6M p.a. from FY25 onwards.

Lower range:

- We have assumed that no adjustment is necessary as we are using IPART's 2021 Determination figure to inform the base opex as opposed to FY24 actuals.

3.4.5 WaterNSW base year adjustments reviewed as potential step changes

As discussed above, we have also reviewed a number of potential step adjustments which WaterNSW had proposed as base year adjustments. These are set out below.

3.4.5.1 Land tax

WaterNSW makes the case that it will need to pay more land tax stating that:[43]:

> *There has been a significant increase in the land value of the portfolio in the last two valuation years of 2021 and 2022, increasing by 17% in 2021 and 30% in 2022 respectively. This has resulted in a 22% increase in WaterNSW 2023 land tax obligations."*
>
> *Further, WaterNSW has significant holdings of land which have not historically been valued by the Valuer General (which mainly relates to Rural Valleys land) but which Revenue NSW has advised it will request the Valuer General to value as part of WaterNSW land tax assessment process. This is expected to increase land tax expense from 1 January 2025 by approximately $4 million per annum.*

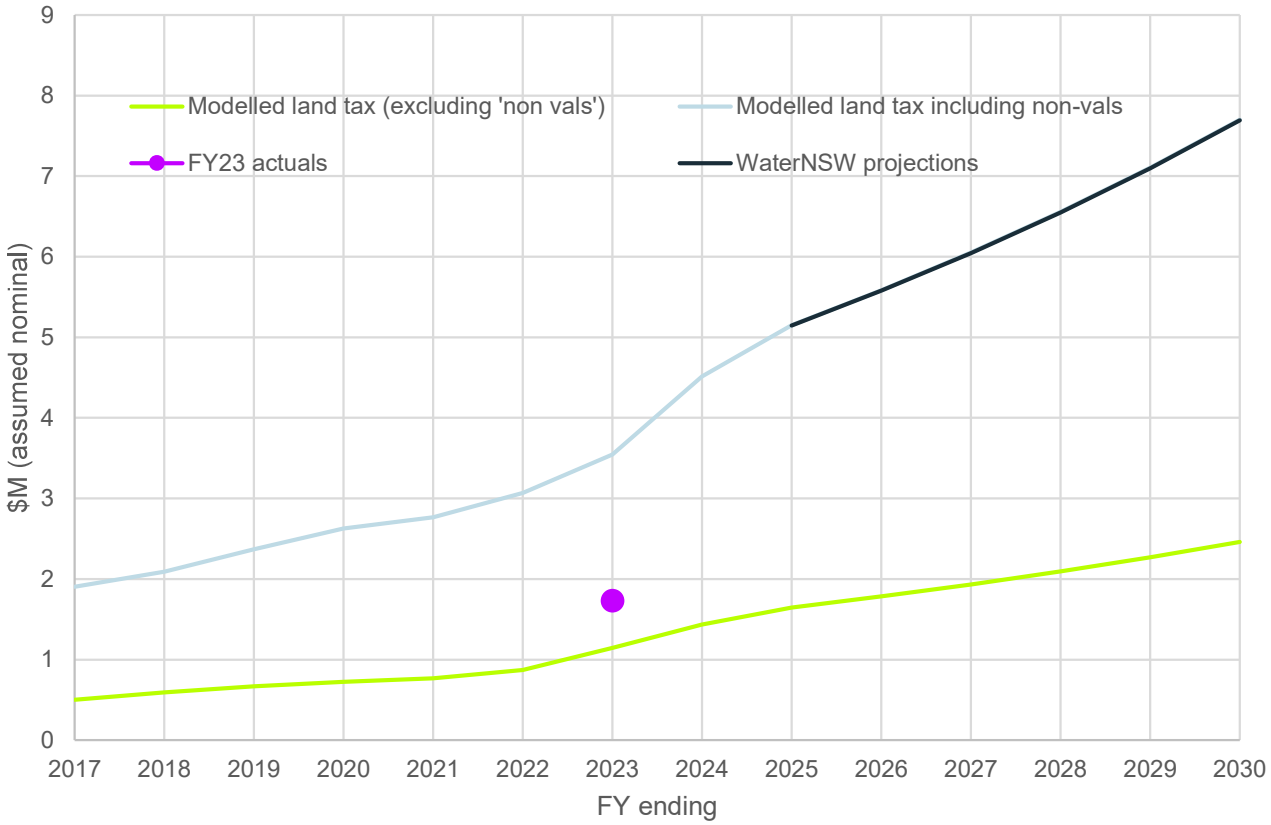
WaterNSW has provided a report by an advisor, JLL, to explain its projections[44]. It sets out an assessment of the taxable land value by Determination (and valley). It also sets out a valuation of 'non-vals' which it explains as properties *"currently considered to be non-valued land (Non-Vals) by the NSW Valuer, and so no land tax can be calculated with this land"*. It also states that *"We understand based on conversations between WaterNSW and both Revenue NSW and NSW Valuer General that this land will be valued in the future and subject to land tax"*.

There are complexities around the dates of billing for land tax and provisions in year. We have attempted to reproduce the basic logic of JLL's projections (e.g. 2% tax, 3 year rolling land value calculations, 8.37% land value increases) to be able to understand WaterNSW's projected costs. The results are summarised below.

[43] Attachment 8, Pricing Proposal

[44] Land Tax Forecasting: Submission to the Independent Pricing and Regulatory Tribunal, February 2014.

Figure 3-23 - Land tax projections



Source: JLL report, WaterNSW spreadsheet "Detailed BTS" and AtkinsRéalis modelling

This model (including 'non-vals') is nearly identical to WaterNSW's submission as shown above. It highlights that the primary driver for the proposed increase is actually the assumption that all 'non-vals' are subject to taxation from FY25 onwards.

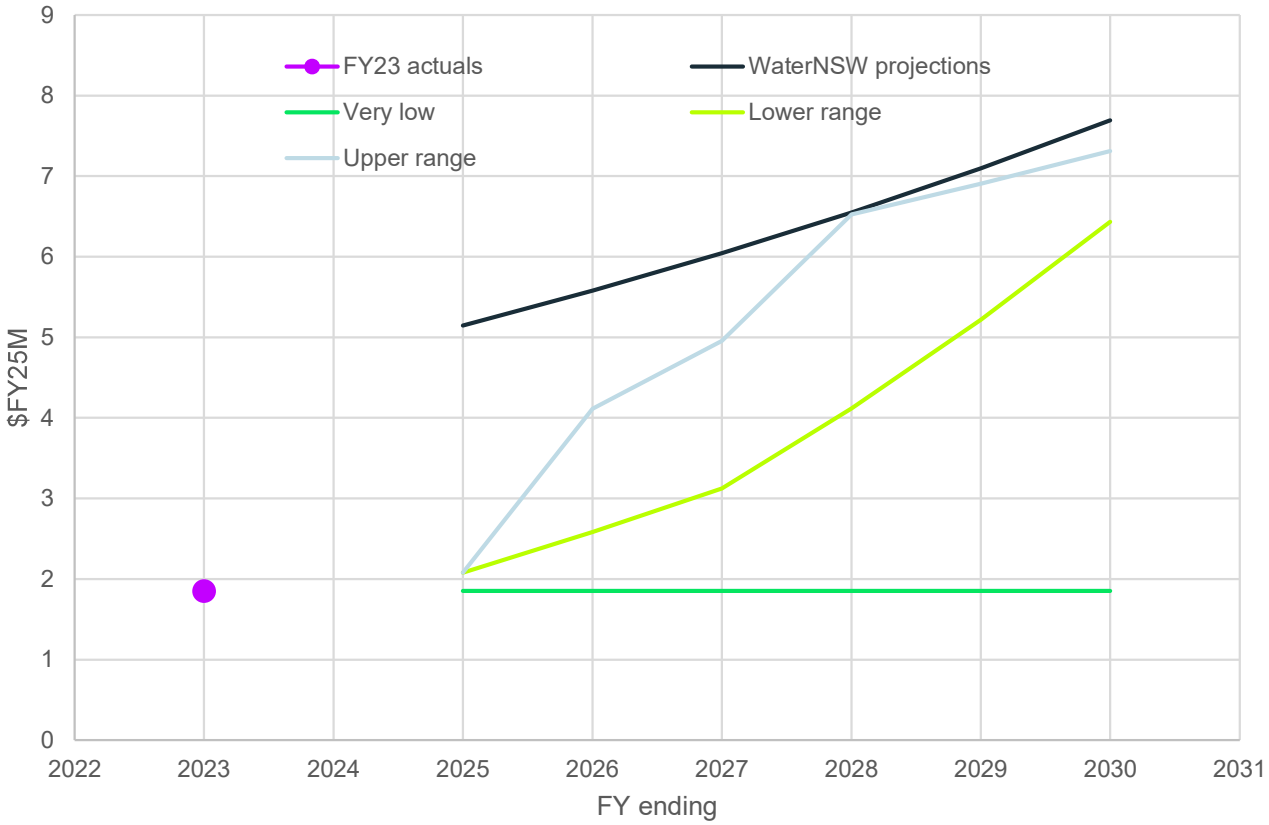
We do not have much insight on the discussions between NSW Valuer General and WaterNSW. However, it appears unlikely that the full taxable amount should fall due in FY25 given that the pricing proposal submitted in October 2024 indicates that the Valuer General did not currently assign a value to these properties.

We have considered three potential scenarios:

- An 'upper' range which assumes that non-vals are fully valued in 2025 and become subject to land tax immediately. Because tax is based on a three-year rolling average in arrears we have assumed that this takes time to build up to its full cost impact. This is combined with the 'upper' trend rate.
- A 'lower' range which assumes a gradual phasing in of taxation of non-vals over four years with no new land transfers. This is combined with the 'upper' trend rate.
- A 'very low' range which assumes that no non-vals become subject to land tax in the coming period. This could be because of a policy change or similar for example. This is combined with the 'lower' trend rate i.e. no real price effects.

We have also applied the trend adjustments discussed above and assume no new land transfers. The results are presented below.

Figure 3-24 - Land tax scenarios



Source: JLL report, WaterNSW spreadsheet "Detailed BTS" and AtkinsRéalis modelling

3.4.5.2 Digital expenditure

We review WaterNSW's proposed digital capex and opex in Section 5. The resulting step change is summarised below.

Table 3-17 – Step change in Rural Valleys digital opex ($FY25M)

	Actuals		Proposed					
FY ending:	**2023**	**2024**	**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
Actuals	7.7	4.5						
Proposed spend			13.1	13.2	13.7	14.5	14.7	69.1
Upper range			10.8	10.8	11.3	11.9	12.1	56.9
Lower range			6.6	6.6	6.6	6.6	6.6	32.8
'Upper' step compared to FY24			6.3	6.4	6.8	7.5	7.6	34.6
'Lower' step compared to FY24			2.1	2.1	2.1	2.1	2.1	10.4

Source: analysis of Attachment 11 of the pricing proposal

3.4.5.3 Operating model

WaterNSW has proposed a $6.5M p.a. increase in opex under the title of 'operating model' in the form of a base year adjustment. We are reviewing it as a potential step change because it does not meet the definition of a base year adjustment.

Although it is termed 'operating model' WaterNSW's proposed adjustment is made up of two parts (at WaterNSW level as we do not have the breakdown of these numbers for Rural Valleys):

- FTE increases: at WaterNSW level an increase of 52.5 FTEs is proposed at a cost of $10.0M p.a.
- 'Vacancy normalisation' of $14.7M: WaterNSW uses this adjustment to reflect the costs that would have been incurred if it had not had any vacancies in FY23, its proposed base year. This is then partially ($12.7M) removed in its proposed 'overhead allocation' adjustment.

We do not consider that vacancy normalisation meets the definition of a step change or trend. Except in highly unusual circumstances organisations of WaterNSW's size always have some vacancies. We also note that WaterNSW has made a separate adjustment to remove (nearly all of) these vacancies under its proposed overhead adjustment, suggesting that it does not view this as a net step change.

In its submission WaterNSW details its new operating model which has consolidated a number of its operational, corporate, regulatory and strategy functions into consolidated 'Portfolios', revised business unit charters and executive role descriptions and made changes to management committees and other governance structures to help streamline decision making. To strengthen its commitment to regional communities and be a visible and accessible part of these, WaterNSW has also created senior roles based in the regions. It has also acquired new talent *"to foster innovation and new ways of thinking*".

It states that:

> *An objective of the operating model was to partially offset these front-line employee increases by the reductions in senior leader numbers, as well as cost efficiencies through insourcing labour (further details are provided below). This change was also in response to customer preferences and needs. In addition to the restructure, which created several positions that were filled throughout 2023-24, the increase in employee numbers is partially offset by reductions in contractors.*

We asked WaterNSW to elaborate on the purpose of the proposed increase in FTEs and to map these to new obligations. It has provided the matrix reproduced below.

WaterNSW has mapped these FTEs to an impressive number of 'areas'. However, **it is not clear to us that any of the areas listed are associated with new regulatory obligations (since the base year), customer benefits or opex from capex which have not already been reviewed as a step change above.**

We would normally expect a business to prepare and provide a robust business case for such a significant increase in expenditure. Instead the mapping provided is very high level and unclear.

WaterNSW has not made the case that any of the regulations listed (SOCI[45], Dam Safety Act, etc) represent a change from the base year (or that they are in any way linked to the operating model). The operating licence requirements listed below are already covered by WaterNSW's other proposed step changes which already incorporate FTE increases, and again, are not driven by an operating model change but a change in operating licence. Similarly, we would expect SOCI and cyber security to be part of the digital adjustments reviewed

[45] Security of Critical Infrastructure Act 2018, which regulates critical infrastructure assets from 11 industries in Australia, including water: Security of Critical Infrastructure Act 2018 (SOCI)

separately and not also part of an operating model adjustment. **We are therefore of the view that further justification is needed for this proposed operating increase.**

One possible explanation is that the adjustment was made in error or as a mistaken duplication of other adjustments. This theory is partially supported by the fact that the business has removed some of this duplication in its 'other' step change addressed above.

We are not satisfied that the business has explained why the expenditure provided by the Base plus Trend allowance (and other step changes) is insufficient. In the absence of clear benefits to customers, a clear change in regulatory obligation or some form of new opex from capex (not already covered) we are not in a position to recommend including these additional costs as a step change.

Table 3-18 – WaterNSW's mapping of proposed 52.5 FTE increases to new obligation drivers

Area	PORTFOLIO						
	Corporate Affairs	Customer Services	Digital	Finance Legal & Risk	Operations	Safety People & Culture	Strategy & Performance
SOCI Act Requirements	X		X	X	X	X	X
Cybersecurity Risks/new Cyber Act	X	X	X	X	X	X	X
Stakeholder Engagement (IPART)	X	X	X	X	X	X	X
Customer Engagement (IPART)	X	X	X	X	X	X	X
Modern Slavery	X		X	X	X	X	X
Disclosures (Public Interest Disclosures)	X			X		X	X
Expanded Education to Regional Locations	X	X			X		
WHS Requirements Public Safety & Psychosocial	X	X	X	X	X	X	X
Legislative & Reg Reviews including the WaterMgt Act, NSW Act etc				X			X
Dam Safety Act				X	X		
Operating License Requirements:							
1. Water Quality Management System					X		X
2. Policy on raw water Quality for Drinking Water suppliers					X		X
3. Water Quality parameters for Drinking Water suppliers					X		X
4. Expanded WQMS to non-declared catchment					X		X
5. Early warning system	X	X			X		X

Area	PORTFOLIO						
	Corporate Affairs	Customer Services	Digital	Finance Legal & Risk	Operations	Safety People & Culture	Strategy & Performance
6. Summary of service commitments to Drinking water suppliers					X		
7. Water Quality Monitoring Enhancement Program (non-declared catchment)					X		X
8. Engagement with Customers & Community	X	X	X	X	X		X
9. (Customer) Family Violence Policy	X	X	X		X		
10. Internal complaint handling		X		X	X		
11. Research Strategy							X
12. Education Strategy	X						
13. System yield for declared catchment area							X
14. Review of system yield							X
15. Water conservation plan					X		X
16. Climate related planning					X		X
17. Water supply augmentation planning					X		X
18. Long Term Capital & Operational plan			X	X	X		X
19. Water Strategies					X		X
20. Data Management Framework		X	X	X	X		X
21. NSW Gov access to water data & information		X	X	X	X		X
22. Roles & Responsibilities agreement (RRA) bet WNSW, the Department, NRAR and WAMC	X	X	X		X		X
23. Cooperation protocol with NRAR	X	X			X		X
24. Cooperation protocol with NSW Fisheries	X				X		X
25. Climate related disclosures	X			X	X		X
26. Performance standards on trades		X	X		X		X
Privacy Act	X	X	X	X	X	X	X
TOTAL NEW OBLIGATIONS- 138 in total	17	17	14	16	33	8	33
FTE impacts to support these (52.5 additional FTE's)	12	7	5		19.5		9

Source: WaterNSW document "SA-38"

3.4.5.4 Ongoing compliance

WaterNSW has proposed a $0.8M p.a. increase in opex related to its Cold Water Pollution Strategy in the form of a base year adjustment. We are reviewing it as a potential step change because it does not meet the definition of a base year adjustment.

WaterNSW's explanation for this adjustment is that:[46]

> *Works Approvals made under the Water Management Act may include requirements (conditions) to manage cold water releases from our dams. The NSW Government has agreed on a strategy to investigate and, where possible, mitigate the impacts of cold-water pollution at the eight high priority dams (identified by the NSW Cold Water Pollution Strategy, 2012) where it is technically and economically feasible to do so.*
>
> *WaterNSW Cold Water Pollution Mitigation Asset Options Report (Nov,2020) identified option studies for Blowering, Copeton and Keepit Dams. Investigation of these three high risk sites is progressing to completion in FY24. Additional cold water pollution mitigation options studies (CWPMOS) for the next priority sites - Wyangala Dam and Hume Dam - are required by WaterNSW to ensure we continue to demonstrate compliance with our Works Approvals. These studies will include:*
>
> *• Assessing mitigation options for highest priority Rural Dams and high CWP risk sites – Wyangala Dam and Hume Dam*
>
> *• Deliver Implementation Plan studies for current CWPMOS to improve ecological, sociological cultural benefit values for future cost benefit analysis to support future delivery funding.*
>
> *This program is supporting the delivery of the NSW Water Strategy priority action 3.3. to "address cold water pollution through interventions such as temperature monitoring, new operating protocols and cold-water pollution mitigation technology at priority dams where cold water impacts are severe" and is aligned with the draft NSW Government's CWP Strategy being updated (draft received by WaterNSW Nov 2023)*

It is not clear to us how this represents a base year adjustment or step change as the description suggests that new studies are being initiated now that others are finished i.e. a rolling program. We have not been given a full breakdown but note that the labour costs for "rural CWP strategy" appear to be minor and are already occurring in FY23 and FY24[47].

In the absence of any demonstration that this is a necessary increase in activity (as opposed to a rolling program of similar size) due to a change in regulatory obligation or similar, we are not in a position to recommend including this as a step change in opex.

3.5 Our view of WaterNSW's proposed opex

3.5.1 Summary

We summarise below the range of recommended opex based on the assumptions set out in the previous sections. These are summarised in graphical form below:

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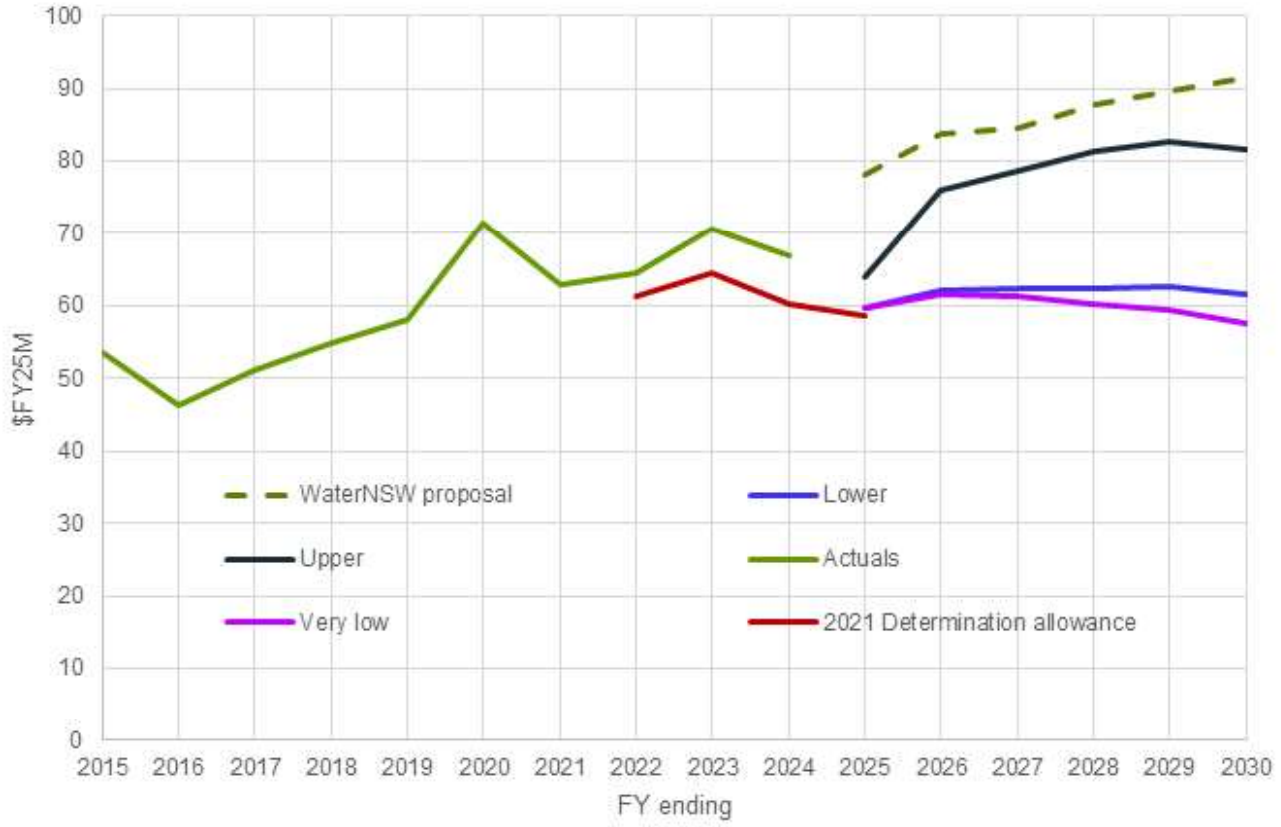
[46] Attachment 8, Pricing Proposal
[47] In the 'Salary – detail' tab of WaterNSW spreadsheet 'Detailed BTS'

Figure 3-25 – Opex ranges



Source: AtkinsRéalis analysis

The advantages and disadvantages of these projections is set out below.

Table 3-19 – Our view of the range of opex

Base year adjustment	WaterNSW proposal	Upper range	Lower range	Very low range
Summary of approach	FY23 actuals + CPI + adjustments largely to FY25 "budget" - efficiency +non-recurrent adjustment + trend adjustments (including labour and insurance) + numerous step changes	FY24 actuals + CPI – FY25 efficiency - regulatory submission costs + land tax trend - efficiency trends + numerous steps	2021 Determination allowance for FY25 + CPI + justified variance + land tax trend - efficiency trends + numerous steps	As per lower range but without land tax increases
Opex (all valleys) in FY30	$91.5M	$81.6M	$61.6M	$57.5M

Base year adjustment	WaterNSW proposal	Upper range	Lower range	Very low range
Advantanges	The business owns these projections	Builds on the revealed costs in FY24	Ask customers to only pay for justified variance compared to the previous Determination	As per 'lower' but also customers are not asked to pay higher bills to cover land tax on land some of which has been transferred without a case being made about customer benefit
Risks/disadvantages	Many of the large cost increases do not appear to have a business case or similar justification. The business has not followed the base-trend-step approach Overheads will depend on allowances/spend in other Determinations and capex	It is difficult to tell how representative FY24 is and how efficient the variance from the 2021 Determination is based on the information provided We have had to build our own view of the base-trend-step model Overheads will depend on allowances/spend in other Determinations and capex	Requires significant efficiencies to be realised quickly if WaterNSW is going to spend within the allowance Overheads will depend on allowances/spend in other Determinations and capex	As per 'lower' but also the allowance is unlikely to be sufficient if land taxes increase

Source: AtkinsRéalis

The resulting opex are summarised on an annual basis below.

Table 3-20 – Recommended opex ranges by year ($FY25M)

FY ending:	2026	2027	2028	2029	2030	FY26 to 30 average
Range						
Upper	75.9	78.7	81.4	82.5	81.6	80.0
Lower	62.1	62.4	62.4	62.6	61.6	62.2
Very low	61.5	61.3	60.3	59.6	57.5	60.0

Source: AtkinsRéalis analysis

In the following sections we summarise the approach taken to assessing these ranges and the derivation of the resulting level of opex at the end of the next Determination period (FY30).

3.5.2 Upper range

The approach taken is summarised below.

Figure 3-26 - Approach to the 'upper' range of opex

Source: AtkinsRéalis analysis

The results are summarised below.

Table 3-21 – 'Upper' range opex ($FY25M except where stated)

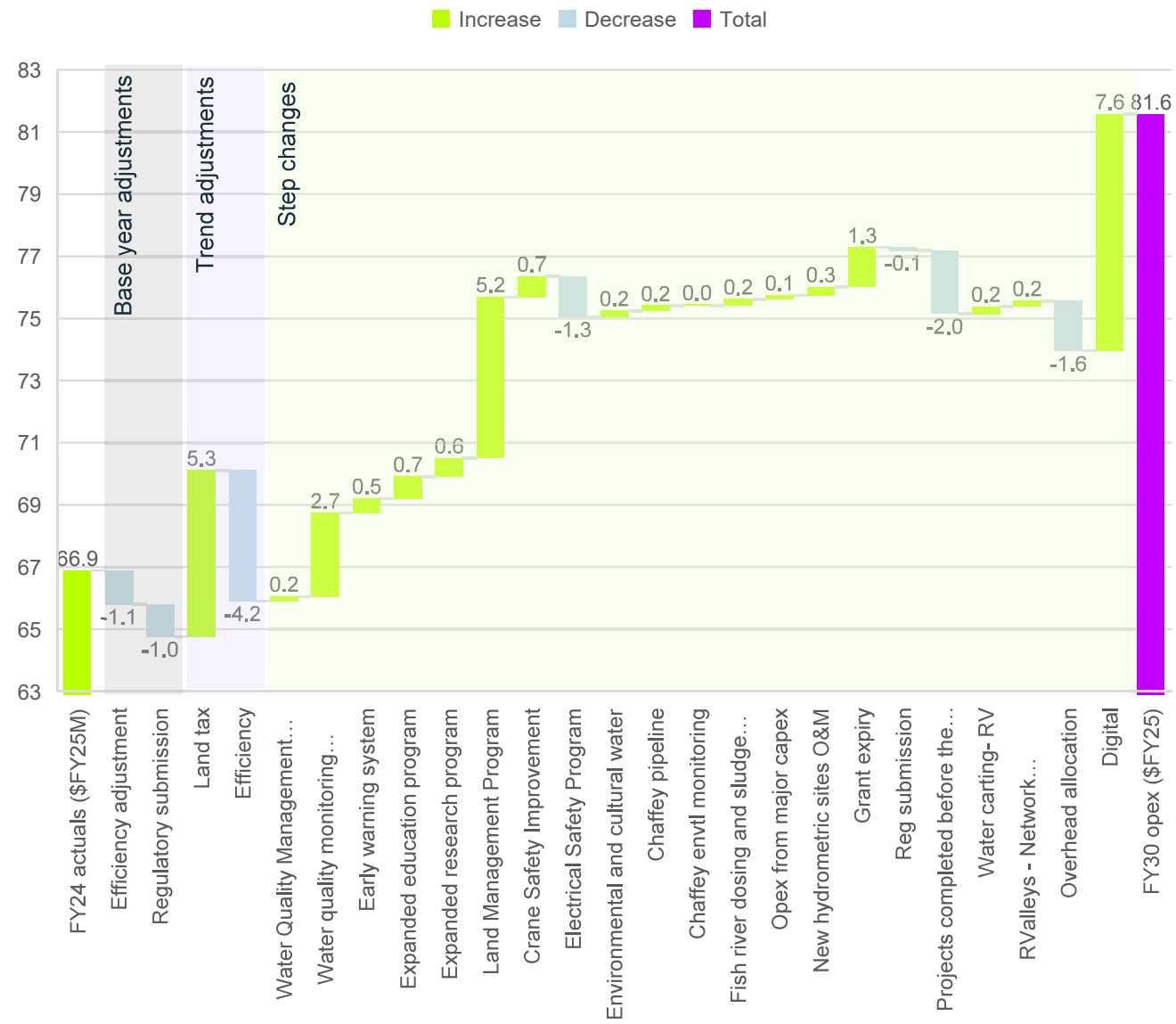
Category	Opex ($M)
FY24 actuals ($nominal)	**64.9**
Base year adjustments	
CPI -> FY24 actuals ($FY25M)	66.9
Efficiency adjustment	-1.1
Regulatory submission	-1.0
Base opex	**64.8**
Trend adjustments (by FY30)	
Land tax	+5.3
Efficiency	-4.2
Step change adjustments (by FY30)	
Water Quality Management System	+0.2
Water quality monitoring enhancement program	+2.7
Early warning system	+0.5
Expanded education program	+0.7
Expanded research program	+0.6
Land Management Program	+5.2
Crane Safety Improvement	+0.7
Electrical Safety Program	-1.3
Environmental and cultural water	+0.2
Chaffey pipeline	+0.2
Chaffey environmental monitoring	+0.0

Category	Opex ($M)
Fish river dosing and sludge lagoons	+0.2
Opex from major capex	+0.1
New hydrometric sites O&M	+0.3
Grant expiry	+1.3
Reg submission	-0.1
Projects completed before the start of the Determination	-2.0
Water carting - RV	+0.2
RValleys - Network enhancement work	+0.2
Overhead allocation	-1.6
Digital	+7.6
Upper range of opex in FY30	
FY30 opex (in $FY25)	**81.6**

Source: Analysis of AIR/SIR

This is also summarised graphically below.

Figure 3-27 – Bridge between FY24 actuals and proposed upper range opex in FY30 for Rural Valleys ($FY25M)



Source: AtkinsRéalis analysis

3.5.3 Lower range

The approach taken is summarised below.

Figure 3-28 - Approach to the 'lower' range of opex

Source: AtkinsRéalis analysis

The results are summarised below.

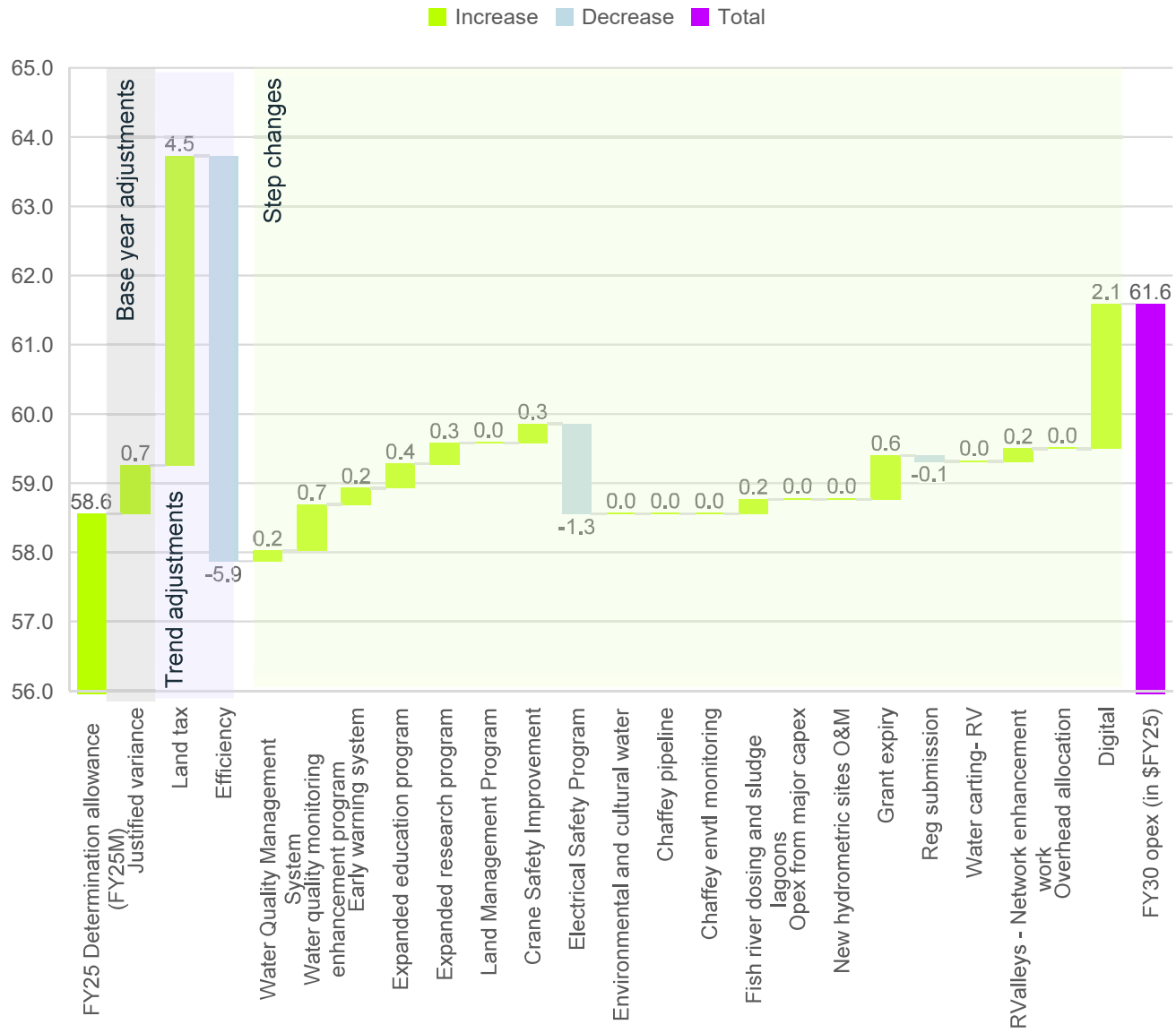
Table 3-22 – 'Lower' range opex ($FY25M except where stated)

Category	Opex ($M)
FY25 Determination allowance ($FY21)	**48.7**
Base year adjustments	
CPI -> $FY25M	58.6
Justified variance	+0.7
Base opex	**59.3**
Trend adjustments (by FY30)	
Land tax	+4.5
Efficiency	-5.9
Step change adjustments (by FY30)	
Water Quality Management System	+0.2
Water quality monitoring enhancement program	+0.7
Early warning system	+0.2
Expanded education program	+0.4
Expanded research program	+0.3
Land Management Program	+0.0
Crane Safety Improvement	+0.3
Electrical Safety Program	-1.3
Environmental and cultural water	+0.0
Chaffey pipeline	+0.0
Chaffey environmental monitoring	+0.0
Fish river dosing and sludge lagoons	+0.2
Opex from major capex	+0.0
New hydrometric sites O&M	+0.0
Grant expiry	+0.6
Reg submission	-0.1
Water carting - RV	+0.0
RValleys - Network enhancement work	+0.2
Overhead allocation	+0.0
Digital	+2.1
Lower range of opex in FY30	
FY30 opex (in $FY25)	**61.6**

Source: Analysis of AIR/SIR

This is also summarised graphically below.

Figure 3-29 – Bridge between FY24 actuals and proposed lower range opex in FY30 for Rural Valleys ($FY25M)



Source: AtkinsRéalis analysis

3.5.4 Very low range

The approach taken is summarised below. The only difference between this and the 'lower' range is the exclusion of land tax increases. This also has a minor effect on the efficiency applied as this is based on a percentage of expenditure.

Figure 3-30 - Approach to the 'very low' range of opex

Source: AtkinsRéalis analysis

The results are summarised below.

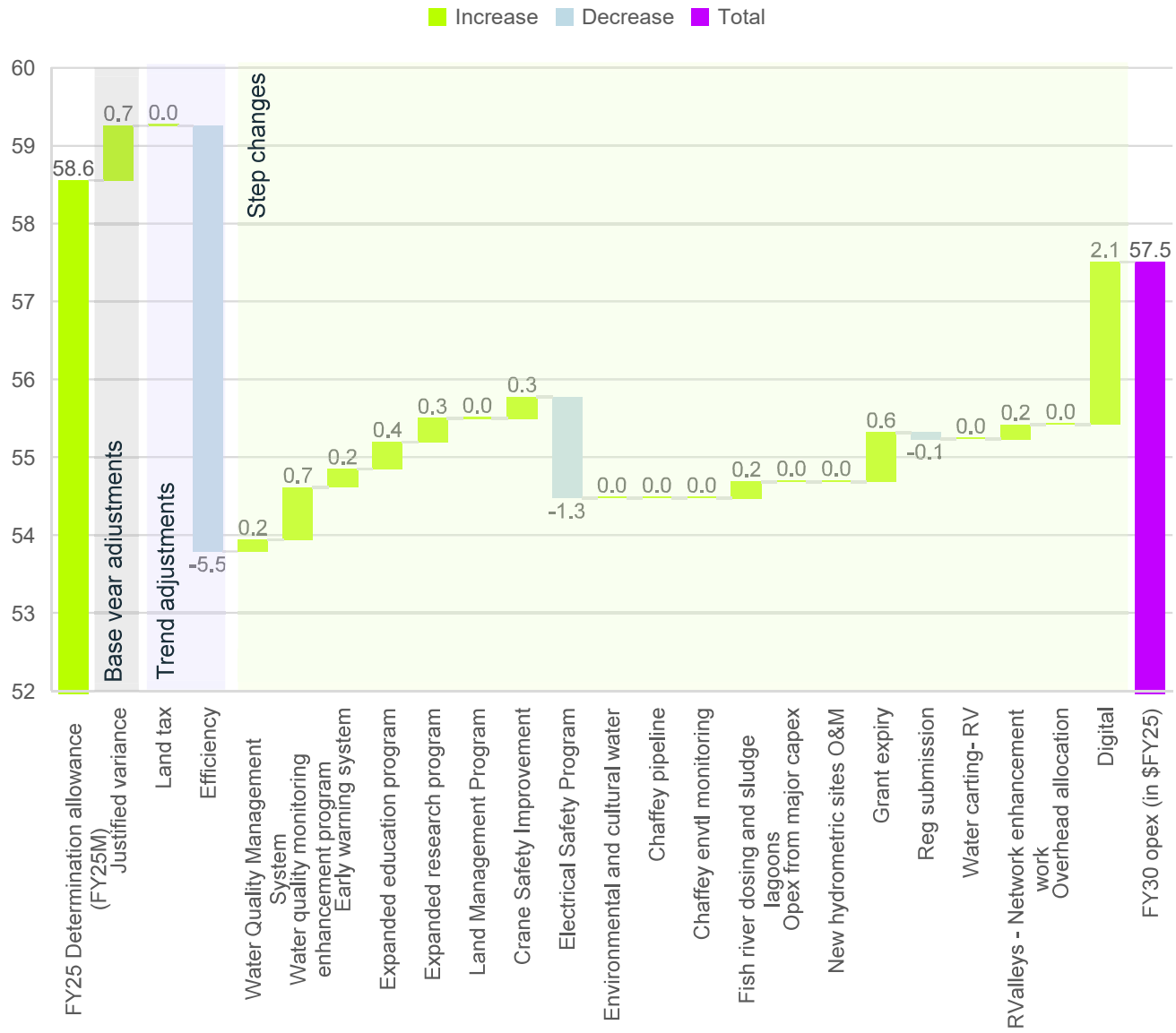
Table 3-23 – 'Very low' range opex ($FY25M except where stated)

Category	Opex ($M)
FY25 Determination allowance ($FY21)	**48.7**
Base year adjustments	
CPI -> $FY25M	58.6
Justified variance	+0.7
Base opex	**59.3**
Trend adjustments (by FY30)	
Land tax	0.0
Efficiency	-5.5
Step change adjustments (by FY30)	
Water Quality Management System	+0.2
Water quality monitoring enhancement program	+0.7
Early warning system	+0.2
Expanded education program	+0.4
Expanded research program	+0.3
Land Management Program	+0.0
Crane Safety Improvement	+0.3
Electrical Safety Program	-1.3
Environmental and cultural water	+0.0
Chaffey pipeline	+0.0
Chaffey environmental monitoring	+0.0
Fish river dosing and sludge lagoons	+0.2
Opex from major capex	+0.0
New hydrometric sites O&M	+0.0
Grant expiry	+0.6
Reg submission	-0.1
Water carting - RV	+0.0
RValleys - Network enhancement work	+0.2
Overhead allocation	+0.0
Digital	+2.1
Very low range of opex in FY30	
FY30 opex (in $FY25)	**57.5**

Source: Analysis of AIR/SIR

This is also summarised graphically below.

Figure 3-31 – Bridge between FY24 actuals and proposed very low range opex in FY30 for Rural Valleys ($FY25M)



Source: AtkinsRéalis analysis

3.5.5 Treatment of property leases

WaterNSW has proposed to add property leases to the balance sheet (as a $5.8M addition to Regulatory Asset Base (RAB) in FY26) and no longer treat it as opex. We understand that the purpose of this change is to better align with WaterNSW's statutory accounting.

We understand that IPART's preference is to treat property leases as opex unless, by exception, there is a good case for the change. **We do not consider that a strong case has been made for treating these costs as capex rather than opex in this case so have not recommended this change.** We note in particular that property leases do not generally need financing in the same way as outlays for capex expenditure might so the case for them attracting a return on capital would appear weak.

If, however, IPART were to accept the change, we note that a negative step change (i.e. reduction) of c$1.3M p.a.[48] of opex (for Rural Valleys) would be appropriate to take account of the savings from no longer facing this opex charge in the regulatory accounts in future years.

We have not applied this adjustment in the figures set out above and have not needed to reverse WaterNSW's proposed adjustment because we have used either historical actuals (the "upper" range) or previous allowance (the "lower" and "very low" range) neither of which incorporate this proposed change.

We have made an adjustment to proposed FY26 capex of $5.8M in FY26 to remove this proposed change as set out in Section 4.12.

3.5.6 Allocation to valleys and activities

The general approach to recommending opex for specific activities and valleys is the same as set out above i.e. by using either FY24 actuals (for the 'upper' range) or the 2021 Determination FY25 allowance (for the 'lower' range).

The recommended changes in expenditure have been allocated to different activities first and then to different valleys pro-rata to the amount of expenditure against the activity in each valley in either FY24 actuals or the adjusted FY25 Determination allowance. Efficiencies have been applied as a percentage across all expenditure lines.

[48] This is based on WaterNSW's response to SA-44 which identified $0.7M of direct Rural Valleys property leases in FY24 and $1.9M of shared overhead leases, 33% of which we assume would impact on Rural Valleys (based on its share of corporate opex in the AIR/SIR.

4. Review of capital expenditure

4.1 Summary of findings

WaterNSW has proposed a 32% increase on an annual basis in its capital program from that it delivered in FY24, and a 77% increase on an annual basis of the actuals and remaining forecast for the 2021 Determination period. The significant increase in the program is dominated by increases in Renewals & Replacement, Environmental Planning & Protection, and Dam Safety Compliance activities. We note, however, that part of the Dam Safety Compliance increase may be explained by the fact that WaterNSW informed us that it previously allocated some of these costs to general activities.

The Environmental Planning & Protection and Dam Safety Compliance programs are driven by legislative requirements. The Environmental Planning & Protection activity largely consists of a program of fishways that WaterNSW was supposed to deliver during the 2021 Determination but little progress has been made in that Determination period. Whilst the Renewals & Replacement activity is subject to a benefit assessment and prioritisation, the projects do not appear to be closely linked to asset condition or performance data. We therefore consider that there is not sufficient justification for such an increase in renewals in comparison to historic and current levels.

WaterNSW has taken a view on the envelope for its renewals by using a long term trend for the replacement of all assets at their end of book life. This approach for longer life assets can overstate the expenditure as it does not take into consideration the performance or condition of the assets to operate beyond their book life. Given that Rural Valleys have a significant long life asset base we consider that these inappropriately drive a higher view of renewal requirements than what is required to maintain serviceability. The list of projects under renewals has not been particularly constrained by price or delivery constraints resulting in a significant increase in the proposed expenditure compared to historical levels. Coupled with significant programs for Environmental and Dam Safety Compliance works, this has resulted in the substantial increase in the overall capital expenditure that the business is proposing.

In line with the methodology outlined in Section 1.2.4 for reaching a view on an upper and lower range scenario for the recommended level of expenditure, we present our views of these in relation to capital expenditure in the sections below for each activity area. The outcome of these views is for a recommended level of capital expenditure for the upper range scenario that is 19% below that requested by WaterNSW (but still 53% greater than the average actuals between FY22 and FY24) and a lower range scenario recommendation that is 61% below that requested (27% lower than the average actuals between FY22 and FY24).

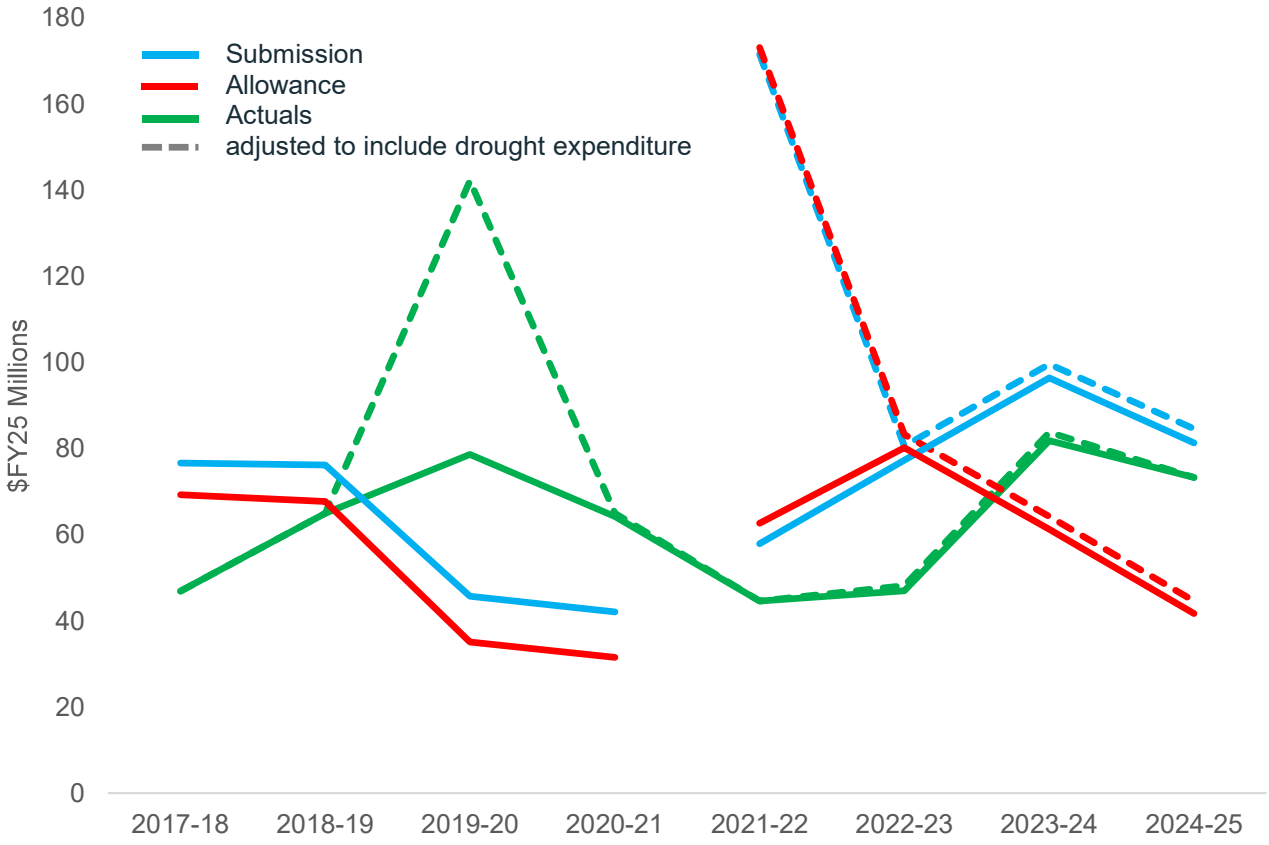
4.2 Context: historical capex

Figure 4-1 below shows the level of actual expenditure during both the 2017 and 2021 Determination periods against what was requested and allowed for in each determination. Note that the FY25 figure for actuals is a forecast figure. This shows that for the 2017 period WaterNSW overspent its allowance, even adjusting for significant drought expenditure that was not foreseen at the Determination. For the 2021 Determination period adjusting for the major project drought expenditure WaterNSW marginally overspent its allowance over the period.

As can be seen from the profiles in the figure below, WaterNSW at the last two determinations for Rural Valleys submitted capital expenditure proposals that were front end loaded. The actual spend it has incurred, however, has been back end loaded within the determination periods. As shown in Section 4.3 WaterNSW for the 2025 Pricing Proposal has submitted a capital expenditure profile that is again front end loaded despite the evidence from the previous price paths that it does not or is not able to deliver front end loaded capital programs. This is

not uncommon in regulated markets where often planning and procurement is paused until the outcome of a Price Determination is known, at which point decisions are made. However, due to lead in times for various works it is challenging to ramp activity back up to where it needs to be to deliver the front end loaded capital program that was previously envisaged.

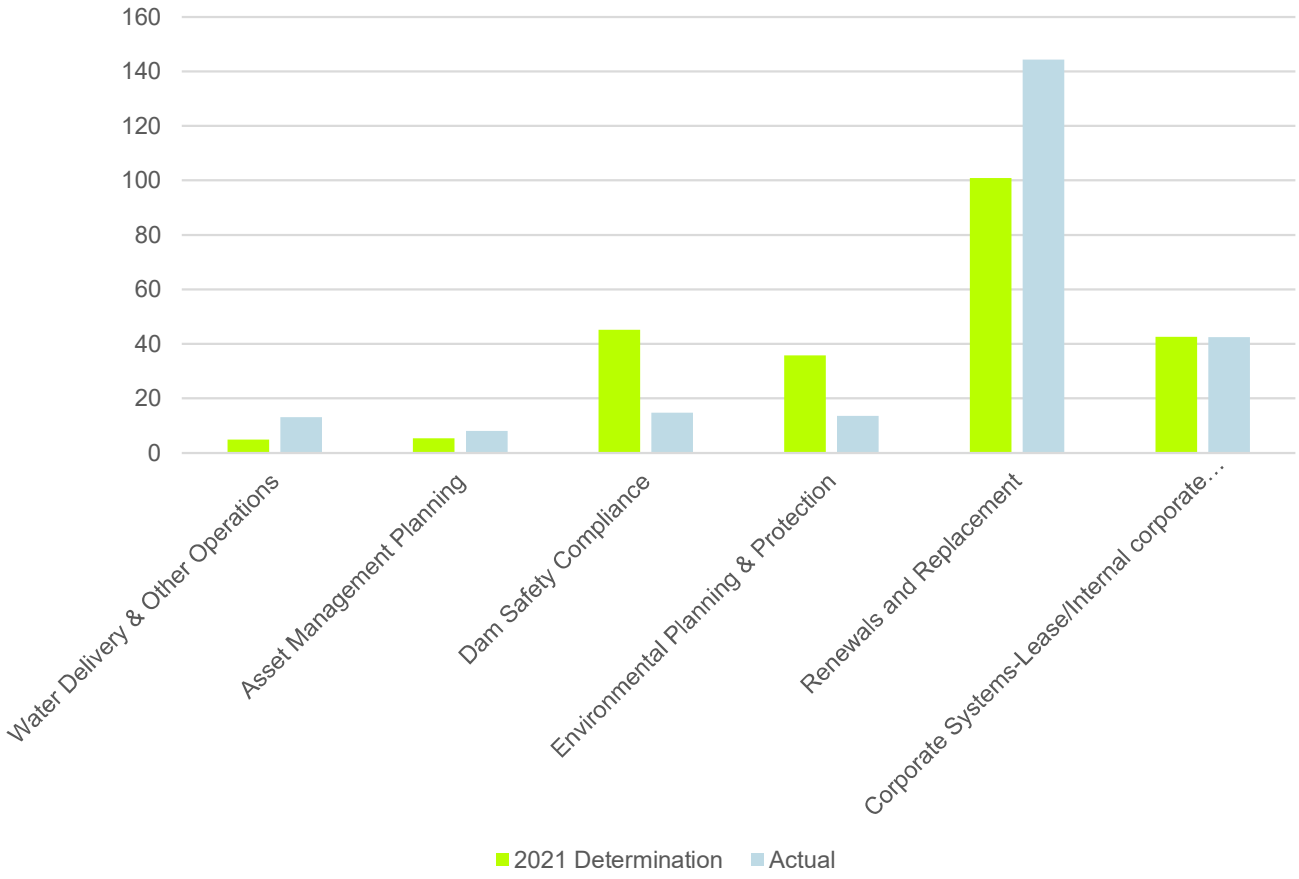
Figure 4-1 - Historical actual capital expenditure versus allowed capital expenditure 2018 to 2025 (FY25 $M)



Source: Analysis of 2017, 2021 and 2025 WaterNSW (Rural) SIRs. Nb: the solid lines reflect the situation excluding expenditure on the three major drought projects that have been transferred from Rural Valleys

The figure below shows for the major activity areas, the capital expenditure allowances made at the 2021 Determination against the actual costs incurred by WaterNSW for Rural Valleys for FY22 to FY24 and forecast to spend in FY25. This shows that it significantly underspent its allowances on Dam Safety Compliance and Environmental Planning & Protection (by $30.4M and $22.2M respectively) and conversely overspent its Renewals and Replacement allowance by $43.5M. Overall Rural Valleys is forecast to have an underspend of $115.4M; however, if the three large dam infrastructure projects for drought that have been transferred over to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) are excluded we note that the overall 2021 Determination was actually overspent by approximately $984k.

Figure 4-2 - 2021 Determination (FY22 to FY25) allowance for major activities versus actuals ($FY25 M)



Source: Analysis of 2021 Determination and 2025 WaterNSW (Rural) SIR

The WaterNSW Pricing Proposal for 2026 to 2030 provides the following reasons for the underspend. As noted above if the three dams for drought that have now been transferred are excluded there is a very small overspend. The following sections therefore document the reasons for the overspend in some areas and underspend in others. The figures quoted represent the total difference in expenditure over the period FY22 to FY25 compared to the 2021 Determination allowances.

Strategic deferrals and cancellations

As outlined above three large dam infrastructure projects for drought have been transferred over to DCCEEW. Removal of the schemes from the equation results in a situation whereby Rural Valleys has spent its allowance and an additional $984k.

Strategic deferrals included the fishways at Wyangala Dam, Marebone Break Regulator and Gunidgera Weir at a total capex of $29.1M.

Delays

Delays accounted for $21.8M according to WaterNSW. As noted above excluding the three drought dam projects the overall allowance has been marginally overspent. Therefore whilst there may have been delays due to COVID-19, bushfires and floods these have not impacted WaterNSW spending its allowance. Any delays to projects were infilled by the advance of other projects and/or by new projects during the determination.

Changes in Scope

WaterNSW reports an increase in expenditure over the allowance of $11.4M due to scope changes on the Lake Cargelligo Embankment Upgrade and to the Copeton Dam electrical renewals projects. An ex-post review is not within the scope of this report and therefore we have not commented on this except to note that the Copeton Dam electrical renewals project is due to complete in FY26.

Carryover from previous determination

Increased expenditure of $10.1M is reported due to carryover of projects, in particular the Pamamaroo Inlet Regulator Long Term Works project.

Cost increases

WaterNSW reports that scope changes led to increased expenditure of $14.8M due predominantly to the Lake Cargelligo Embankment Upgrade project.

New Projects

Additional $7.3M expenditure reported due to the manganese dosing plant in Fish River, the Burringjack Dam High Level Outlet Emergency Closure Gates Upgrade and the Chaffey Pipeline as an emergency drought response measure.

We note that the net impact of the quoted over- and underspend figures during the 2021 Determination period is an underspend of $110.6M, which is different to the $115.4M reported by WaterNSW as its total underspend. We assume that the difference is due to some differences in expenditure not being significant enough to be reported at an individual level.

4.2.1 Delivery of output measures

In IPART's 2021 Determination Final Report it lists a number of output measures that are required in response to the capital expenditure allowances made as shown in the figure below. We provide comment below the figure against the completion of each of the projects.

Figure 4-3 - IPART's 2021 Determination output measures

Table B.2 Output measures for the 2021 Determination

Project	Output measure	Target completion	Activity
Lake Cargelligo Embankment upgrade works	Completion of embankment safety works to bring risk assessment into tolerable zone of SFAIRP ('so far as reasonably practicable')	FY23	Detailed design and construction of embankment raising and filter works.
Fish pass offset pilot projects	Completion of the Gunidgera, Marebone Break Weir and Lake Cargelligo Outlet Regulator fish passage offset schemes to the satisfaction of DPI Fisheries	FY25	Detailed design and construction of the novel fish passage schemes at the 3 weirs and agreed with DPI Fisheries.
Fish pass planning, design, programming	Final business case and detailed designs for the remaining 9 fish passage offset schemes, taking account of the lessons learned from the pilot schemes, to the satisfaction of DPI Fisheries	FY25	On the basis of the construction and evaluation of the 3 pilot fish pass schemes at Gunidgera, Marebone Break Weir and Lake Cargelligo, and following progression of the construction at Tyreel Weir, progress with developing the business cases and detailed design and program for delivery of the remaining 8 fish pass schemes in the 2025 determination period to the satisfaction of DPI Fisheries.
Asset renewals and condition	Report on: a) service orders requiring reactive maintenance, broken down by asset sub-types b) number of assets with a criticality rating of 4 or above, broken down by asset sub-types.	Report annually	
Asset performance and health	Develop asset risk evaluations across all appropriate asset classes	FY25	This will improve understanding of underlying asset risk and ultimately support future expenditure and investment decisions.
Fish river scheme	Develop and implement a customer impact measure (e.g. minutes lost per customer) for water supply interruption events that can be used to measure performance	FY22	This will improve the focus on customer impacts of water supply interruption events rather than only the number of events that take place and drive operational improvements within the scheme. Once baselined this can be used to show performance and impact of events against various asset classes on the scheme.
Implementation of the WAVE Program	Completion of full scope of the programme on budget as per final business case presented to Board 27 May 2020, comprising operational technology, analytics and water market components and providing the benefits identified in the business case(s) used to justify the expenditure	FY24	Program objectives: - service and efficiency improvements by allowing low value tasks to be automated

Source: IPART "Review of Water NSW's rural bulk water prices from 1 October 2021 to 30 June 2025, Final Report, September 2021

Lake Cargelligo Embankment upgrade works

We understand that, whilst some activities have been completed[49], upgrade works have been paused and will now continue into the next Determination period *"due to delivery performance"*[50]. Based on the February 2024 project update we understand that there have been challenges in procurement, environmental and heritage constraints and accessibility.

Fish pass offset pilot projects

None of the three pilot fish passes were completed in the 2021 Determination period. Two of these projects are now proposed to be constructed in the 2025 Determination period (Gunidgera and Marebone Break Weirs) and the third (Lake Cargelligo Outlet Regulator) is now being proposed to be replaced by the Lake Cargelligo Inlet Regulator fish pass in the 2025 Determination period.

Fish pass planning, design, programming

As part of this output measure WaterNSW was meant to have completed final business cases and detailed designs for all the remaining fish passes in the Dam Safety Upgrade (DSU) fishway offset program; however, none of these were completed in the 2021 Determination period. It should be noted that no detailed designs were produced during the 2021 Determination period for any of the three pilot projects. The most advanced project is the Gundigera fish pass that in December 2024 was being tendered for detail design and is forecast for construction completion by February 2028.

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[49] Source: Lake Cargelligo embankment upgrade, February 2024 update Project-update-Lake-Cargelligo-embankment-upgrade-Feb-24.pdf

[50] Source: WaterNSW letter titled "Confidentiality Check of AtkinsRéalis Expenditure Review Report for Rural Valleys" dated 19 June 2025

Asset renewals and condition

WaterNSW provided annual Asset Performance and Health Reports from FY21 to FY24. These document the number of assets with criticality rating of 4[51] and the number of breakdown maintenance work orders by asset class. However, as is evident from the reports there is still a significant gap in condition and performance data, without which it is not possible to take a more risk based approach to targeting and prioritising asset renewals.

Asset performance and health

WaterNSW has developed Asset Class Strategies (ACS) for 28 of its asset classes which it states covers the majority of WaterNSW's asset base. These ACS provide methodologies and definitions for condition assessments; however, it is clear that a large proportion of the asset base currently does not have any condition assessment. The ACS do set out the requirements for increasing the number of assets with asset condition assessments as well as asset management budgets for doing so.

Fish River Pipeline scheme

WaterNSW for the Fish River Pipeline has captured the number of all corrective work orders including the total number of outage events, the duration of these and the capability loss. The capability loss is a measure of total volume by taking the daily capacity of the section of the pipeline and multiplying by the number of days in outage. This data does help support the case for the renewals and replacement of the various stages of the Fish River Pipeline, but it does not include a measure of impact on customer.

Implementation of the WAVE Program

This has been covered in the Digital chapter in Section 5.2.2 WAVE program.

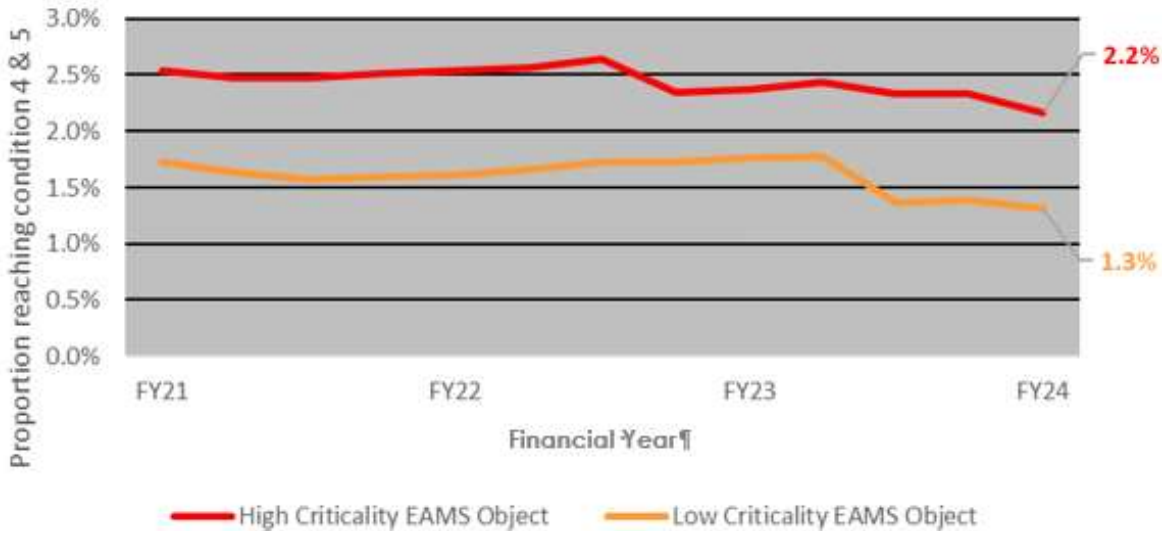
4.2.2 Asset health

WaterNSW produces an annual asset health report, which aims to provide WaterNSW with the necessary information that will support it in decision making in order to target and prioritise current and future investments. The asset health report uses the proportion of assets within the Enterprise Asset Management System (EAMS) that have reached a condition rating of 4 or 5 as a measure of asset health.

The asset health profile that is reported in the FY24 asset health report (see Figure 4-4) shows a decreasing trend in the proportion of water delivery assets that are in poor condition.

[51] Criticality of assets scored from 1 (low) to 5 (high)

Figure 4-4 – WaterNSW assets with poor condition rating FY21 to FY24



Source: D2024 33729 Annual Asset Performance and Health Report FY23-24

The following figure taken from the Annual Asset Performance and Health Report documents the number of high criticality assets that have a poor condition rating, this also reflects the trend of an improving health of the asset base.

Figure 4-5 – Count of High Criticality Water Delivery Objects in Poor Physical Condition (condition rating 4 or 5) by Asset Classes in Recent Years

Asset Class	FY21 Q4	FY22 Q2	FY22 Q4	FY23 Q2	FY23 Q4	FY24 Q2	FY24 Q4	Trending
Access - Ladders, stairs platforms								
Baulks, stoplogs, trashracks and screens	16	17	15	15	15	15	14	↓
Bridges								
Canals, Channels & Cuttings	4	2	1	1	3	0	1	↓
Control Systems	12	14	13	11	10	20	18	↑
Cranes & Lifting Equipment								
Dam Structures	15	8	11	12	14	15	10	↓
Drainage								
Gates	28	26	26	25	29	29	28	
Hoists & Actuators	39	42	42	42	40	40	38	
HV Power Distribution	0	0	1	1	1	0	0	
Hydraulics & Pneumatics	20	23	20	14	13	14	13	↓
Instrumentation	14	18	20	20	20	23	19	↓
LV Power Distribution	9	11	8	10	17	14	13	↓
Pipelines	53	52	58	57	28	22	13	↓
Power Supplies								
Pumps	8	7	7	6	12	6	6	↓
Roads								
Tunnels & Penstocks	4	4	4	5	5	4	3	↓
Valves	87	77	83	103	82	83	88	
VSDs & Motors	11	11	11	11	10	9	4	↓
Water treatment								
Weirs and Regulators	1	0	1	0	0	0	0	
All Asset Classes	**321**	**312**	**321**	**333**	**299**	**294**	**268**	↓

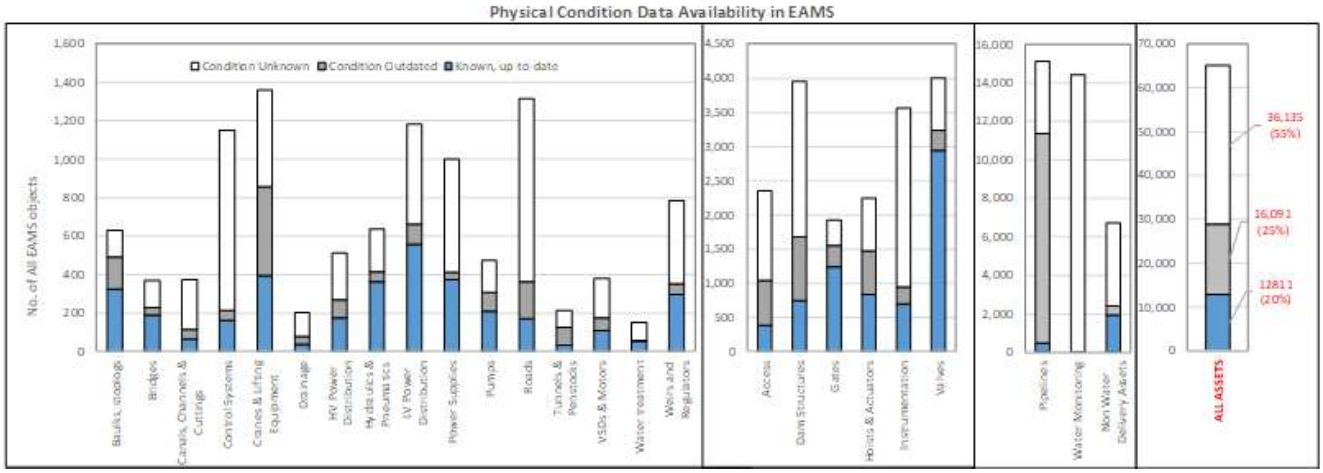
Color Coding

0 **to** **50 objects and above**

Source: D2024 33729 Annual Asset Performance and Health Report FY23-24

The following figure from the Asset Performance and Health Report for FY23-FY24 shows the data availability for physical asset conditions by asset class. It shows that only 20% of assets have a physical condition rating that is up to date (assessed within the last five years). The remaining 80% of assets either have no data available (55%) or the condition data that is available was assessed more than five years ago. With such a significant data gap it is hard to use the data to form a complete picture of asset health. This means that whilst there may be health issues with assets that are not yet known, as noted above for those assets where data is available there is an improving trend in asset health. There is no data availability reporting in previous years of the Asset Performance and Health Reports so it is not possible to see how these data gaps are being targeted and closed over time. However, from discussions with WaterNSW it is clear that it recognises the need to do so.

Figure 4-6 – Physical Condition Data Availability in EAMS by Asset Class



4.2.3 Treatment of insurance-funded work

In response to a request for information on insurance funded work, WaterNSW has confirmed that for Rural Valleys no insurance funded costs are included in RAB and therefore none are included in its capital program.

4.3 Overview of proposed program

4.3.1 Capex by driver and activity

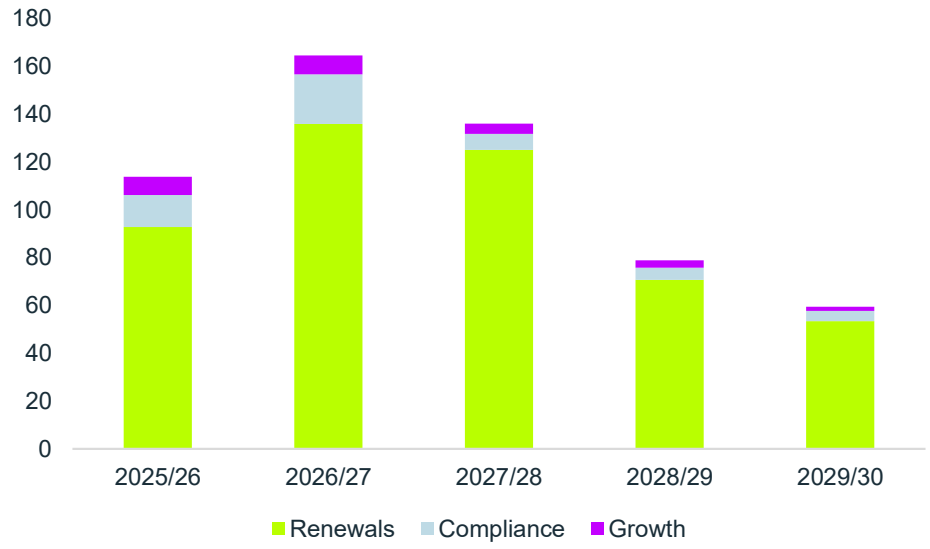
WaterNSW has provided a breakdown of capital expenditure by project/program for the period FY26 to FY35. For FY25 the business has only provided a headline figure for each activity area and there is no detail available for the breakdown of these costs into projects or programs. However, we consider the FY25 forecast ($73.3M) to be reasonable on the basis that it is less than the FY24 actuals ($83.8M).

The total proposed capital program for 2026 to 2030 is for $553.1M inclusive of oncosts and capital efficiencies. The capex program is split across drivers and activities. Within the SIR Capex worksheet there are four cost drivers which can be used to allocate expenditure:

- Renewals – $478.2M
- Compliance – $50.2M
- Growth – $24.7M
- Improvements – WaterNSW has not allocated any costs against this driver.

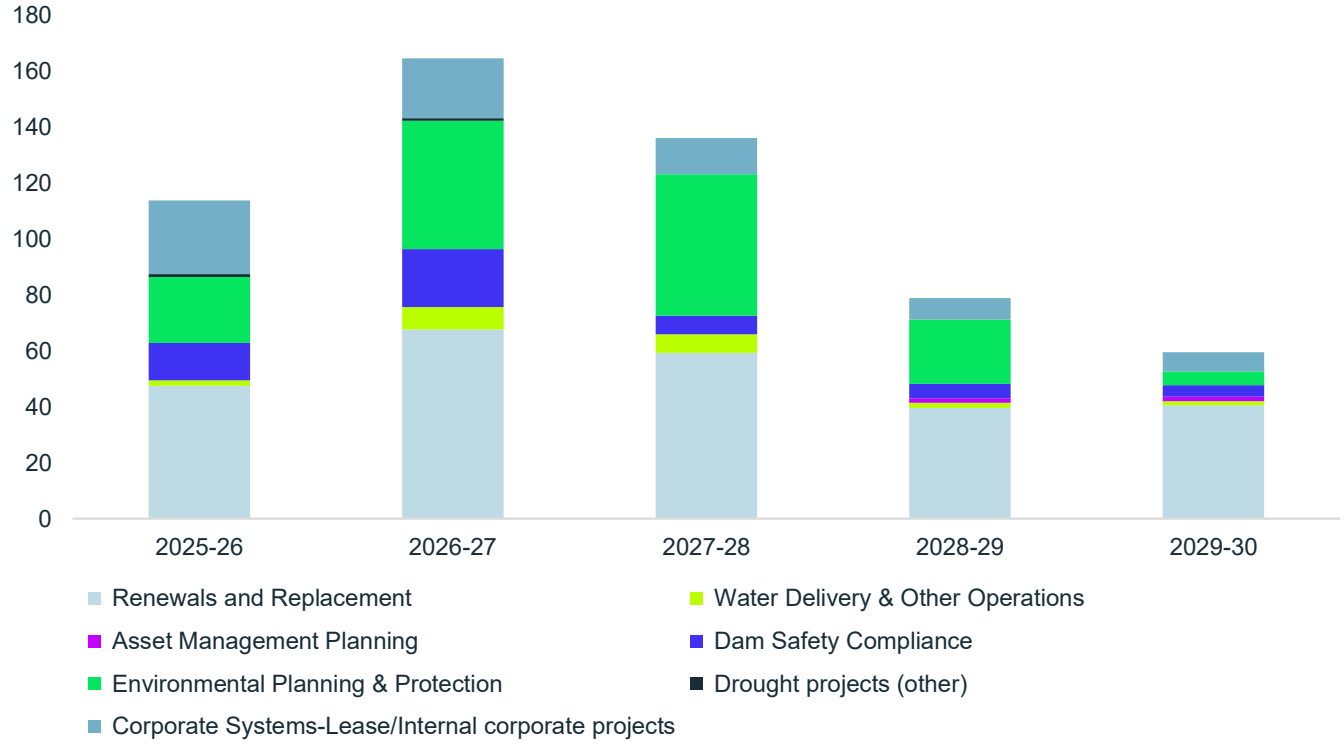
Figure 4-7 and Figure 4-8 show the breakdown of the 2026 to 2030 proposed capital program by driver and by activity. It should be noted that activities can span more than one cost driver.

Figure 4-7 - 2026-2030 proposed capex by cost driver (post efficiency and oncost $FY25 M)



Source: WaterNSW (Rural) Special Information Return

Figure 4-8 - 2026-2030 proposed capex by activity (post efficiency and oncost $FY25 M)



Source: WaterNSW (Rural) Special Information Return

The business's proposed capex program represents an increase of 77% of the rate of expenditure in the 2021 Determination period (FY22 to FY25), with total proposed capex of $553.1M in FY26 to FY30. This increase is

driven by significant step increases in Environmental Planning & Protection, Renewals and Replacement, Dam Safety Compliance, and Internal Corporate Projects (largely digital portfolio).

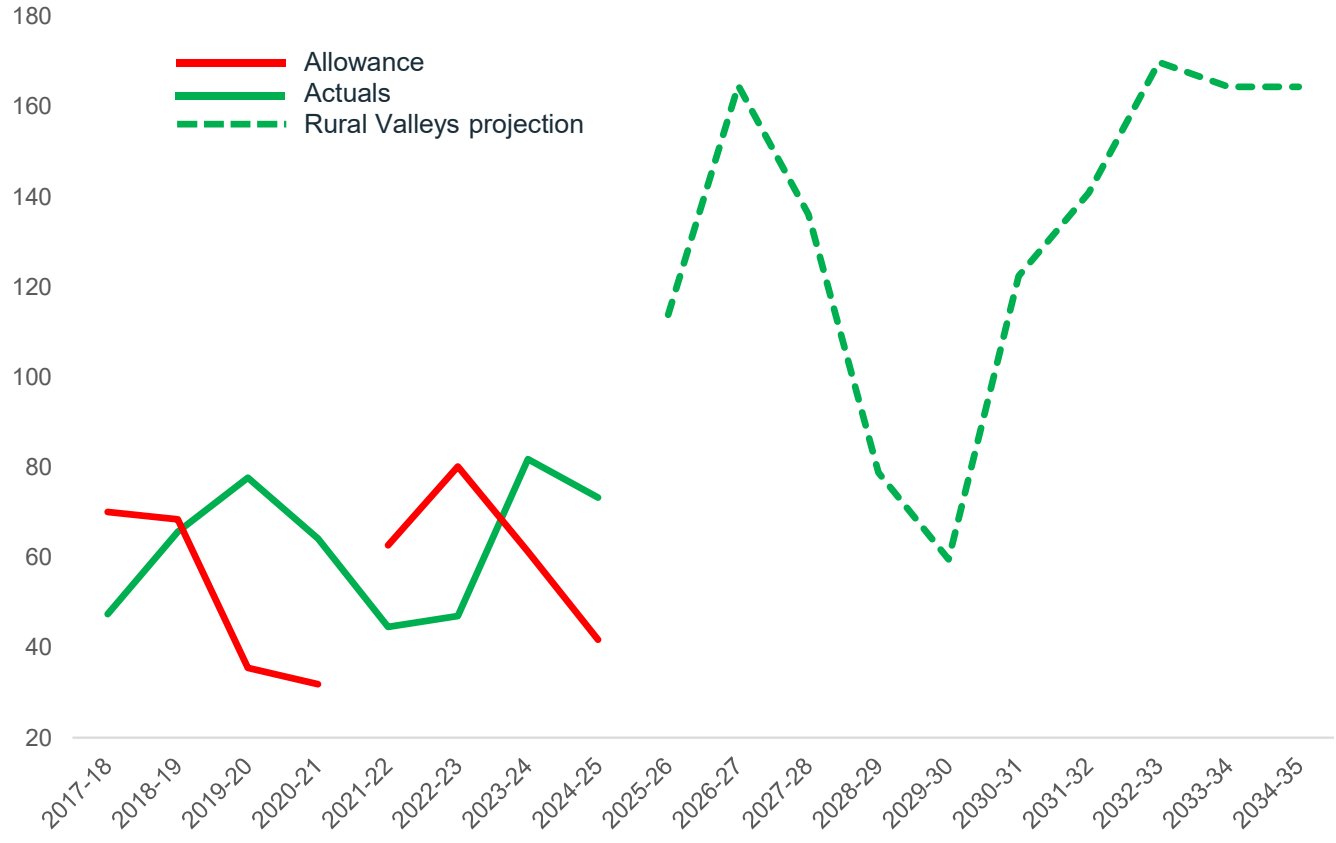
These changes are summarised in table and graphical form below.

Table 4-1 - Comparison of historical and projects capex by activity ($FY25M p.a.)

	FY22 to FY24 average actuals	FY24 actuals	FY25 forecast	FY26-30 projection	Difference from FY22 to 24 actuals	
Total	58.9	83.8	73.3	110.6	51.8	88%
Top four contributing activity areas to the change						
Environmental Planning & Protection	1.8	3.1	8.3	29.6	27.8	902%
Renewals and Replacement	34.0	54.5	42.2	50.9	16.9	31%
Dam Safety Compliance	3.6	7.4	3.8	10.0	6.4	87%
Internal Corporate Projects	9.9	4.7	12.9	15.1	5.2	111%

Source: Analysis of WaterNSW (Rural) Special Information Return

Figure 4-9 – Historical and proposed capex ($FY25 M)



Source: Analysis of AIR/SIR

4.3.2 Capital Efficiencies

4.3.2.1 Overview of proposed efficiencies

Efficiencies are applied by WaterNSW to the capital costs of projects, with the corporate costs (overhead) then added on top. Efficiencies are not applied to overhead corporate costs.

As stated in Section 2.6 WaterNSW has assumed capital efficiencies of 2.5% across the Determination period for 'smaller' valleys (those with capex < $5M); these are Border, Peel, Lowbidgee, North Coast and South Coast. WaterNSW has assumed capex efficiencies of 3.0% across the Determination for 'larger' valleys (those with capex > $5M); these are Gwydir, Namoi, Lachlan, Macquarie, Murray, Murrumbidgee, Hunter and Fish River.

WaterNSW considers that these efficiencies will be provided by:

- Needs and options assessment (optioneering)
- Value engineering during design development
- Procurement efficiency (packaging contracts for competition, economies of scale, geographic synergies etc)
- Project management efficiencies from transferring low complexity projects to Regional Delivery teams

Efficiencies are not applied by WaterNSW to active projects, fleet purchases, plant & equipment purchase and cold water pollution planning projects as it considers that these projects provide limited value engineering and program-level opportunities for efficiency.

4.3.2.2 Our view of efficiencies

Our view is that the capital efficiencies proposed by WaterNSW (2.5 to 3% over the determination period - 0.8% to 1.0% per annum) are in the range that a frontier company (efficient company in a purely competitive market) would be able to achieve on its capital program. Regulators typically apply a frontier shift efficiency of between 0.4% and 1.0%. Ofwat for England and Wales Price Review 2024 Determination has applied a frontier shift efficiency range of 0.8% to 1.2%[52].

For the upper range scenario we have assumed that WaterNSW is a frontier company and have therefore left the proposed efficiencies unadjusted. For the lower range we have adjusted the efficiency target to reflect uncertainty as to whether WaterNSW has achieved the catch-up efficiencies that were set in the 2021 Determination. We have therefore re-applied these to the lower range scenario across all valleys as shown in Table 4-2.

Table 4-2 – Capital expenditure efficiency challenge for the lower range scenario

Efficiency – FY ending	2026	2027	2028	2029	2030
Continuing efficiency at the frontier	0.70%	1.40%	2.09%	2.77%	3.44%
Catch-up efficiencies					
Capital program development, optimisation and prioritisation	*0.11%*	*0.22%*	*0.33%*	*0.44%*	*0.55%*
Value Engineering	*0.50%*	*1.00%*	*1.50%*	*2.00%*	*2.00%*

[52] https://www.ofwat.gov.uk/wp-content/uploads/2024/12/CEPA-Frontier-Shift.pdf

Efficiency – FY ending	2026	2027	2028	2029	2030
Cost Estimating	*0.50%*	*1.00%*	*2.00%*	*2.00%*	*2.00%*
Procurement	*1.00%*	*2.00%*	*3.00%*	*3.00%*	*3.00%*
Total catch-up efficiencies	2.11%	4.22%	6.83%	7.44%	7.55%
Total Efficiency	**2.81%**	**5.62%**	**8.92%**	**10.21%**	**10.99%**

Source: IPART's 2021 Review of Water NSW's rural bulk water prices, Final Report and AtkinsRéalis analysis

4.3.3 Capacity to Deliver

Recent capital expenditure actuals were for an average capex delivery of $58.9M per annum between FY22 and FY24 with a maximum delivery of $83.8M in FY2024. Based on these historical figures, WaterNSW's procurement and delivery strategy, and market conditions we consider that WaterNSW should be capable of delivering a capex program of up to $85M per annum.

Procurement Strategy

Our comments on WaterNSW procurement model and strategy are provided in Section 2.3.2.

Delivery Strategy

WaterNSW has structured its capital works for delivery into different programs, it has created major programs for the fishways and the cold water pollution projects whilst it plans to deliver asset renewal and replacement (ARR) projects as before but now with smaller ARR value projects being delivered by Regional teams. The teams delivering major programs and ARR are separate from each other meaning that the capacity to deliver one is not impacted by the other.

Both the Fishways and Cold Water Pollution programs will be delivered by dedicated project teams supported by WaterNSW's Strategy and Performance Team.

Regional Project Delivery

Regional Project Delivery (RPD) was established in 2024 to support lower complexity projects in delivery and includes the engagement of local supplier and contractors with the RPD teams incorporating qualified Project Managers. The formation of the RPD helps alleviate the central team from these projects and allows them to focus on the more complex projects.

WaterNSW spent the first year building up the capacity of the RDP teams and anticipate that over time as key skills are further built upon that they could potentially also take on some of the medium complexity/size projects as well. WaterNSW considers that the capability of the RDP is to deliver $7-10M per annum.

Regional Project Delivery teams are qualified Project Managers.

Market factors

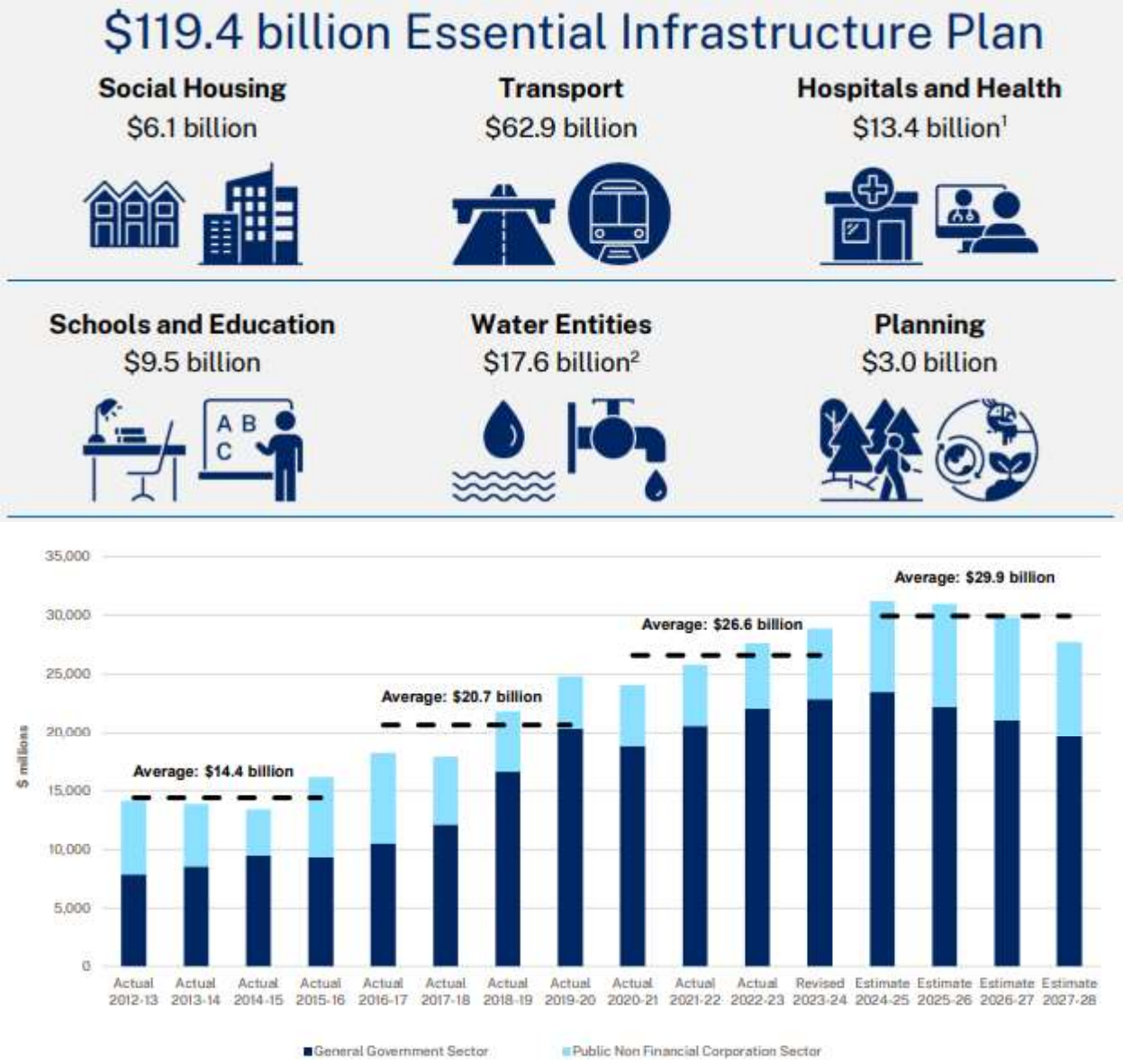
Overall, while there is significant expertise and capability within the water infrastructure sector in NSW, the high demand and scale of projects can stretch industry capacity, not just in technical capability and resources but also in commercial considerations such as insurance levels, portfolio risks and funding needs. As can be seen in Figure 4-10 the capital infrastructure program for New South Wales over the next four years continues to grow on historical levels. This suggests that state-wide constraints on infrastructure contracts are likely to continue, as the pressures from the cross-sector program are due to stay high for at least the next Determination period.

Whilst WaterNSW's proposed capital program for Rural Valleys is larger than in the current Determination period it still makes up a relatively small proportion of state-wide infrastructure spend. Whilst it is possible that industry

capacity may be limited, we consider it more likely that project and program development (e.g. studies, permits etc) are more likely to be limiting factors on capital delivery. As such and because we have already made a number of adjustments to the proposed expenditure, we have not applied a separate adjustment for market capacity.

Nonetheless strategic planning and effective supply chain engagement will also be required to manage the challenges of industry capacity and ensure successful project delivery.

Figure 4-10 – NSW 2024/25 budget four year investment plan ($FY25 M)



Source: NSW Infrastructure Statement 2024-25, Budget Paper No3

4.4 Projects reviewed

A selection of projects were identified for review; these were selected on the basis of significant capital expenditure and across a number of different valleys and project types. These reviews were informative for providing a better understanding the underlying program of works and capital planning processes of WaterNSW. We note that in the main we have made few adjustments at specific project level but rather have made program

level adjustments which are described and detailed in the relevant following sections. The list of reviewed projects is shown in the following table.

Table 4-3 – List of capital expenditure projects reviewed

Project Name	Valley	Cost Driver	Activity	FY26-FY30 post efficiency excl. OH
Gunidgera Fishway	Namoi	Renewals	Environmental Planning and Protection	$29.9M
Burrendong Cold Water Pollution	Macquarie	Renewals	Environmental Planning and Protection	$28.9M
Marebone Break Fishway	Macquarie	Renewals	Environmental Planning and Protection	$11.2M
Tyreel Regulator Fishway	Gwydir	Renewals	Environmental Planning and Protection	$10.7M
Lake Cargelligo Inlet Regulator and Fishway	Lachlan	Renewals	Environmental Planning and Protection	$22.1M
Toriganny Weir Renewal and Fishway	Lachlan	Renewals	Renewals and Replacement	$27.3M
Pamamaroo Regulator Long Term Works	Murray	Compliance	Dam Safety Compliance	$19.8M
Blowering Dam Cold Water Pollution	Murrimbidgee	Renewals	Environmental Planning and Protection	$6.4M
Stage 2 Pipeline Renewal Oberon to Duckmaloi	Fish River	Renewals	Renewals and Replacement	$26.6M
Operational Licence Capex	Rural Valleys	Growth	Internal	$8.2M

Source: WaterNSW (Rural) SIR

4.5 Corporate Systems

4.5.1 Overview

These are the corporate overheads for the capital expenditure program and over the determination period come to a total of $43.9M. No capital efficiencies are applied on overheads. The following table shows the total corporate overheads that were submitted in the SIR.

Table 4-4 - Corporate systems capex ($FY25 M)

FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
5.0	13.1	8.2	10.8	12.2	9.5	6.1	5.4

Source: WaterNSW (Rural) SIR

Following a Request for Information on historical overheads WaterNSW provided the following data:

Table 4-5 - Capex overhead actuals ($FY25 M)

FY21	FY22	FY23	FY24	FY25	FY22 to FY24 average	FY23 to FY24 average
8.3	3.3	4.1	8.2	2.5	5.2	6.1

Source: Analysis of WaterNSW RFI SA-61

4.5.2 Our view

Adjusting the corporate overheads for Rural Valleys following adjustments to the rest of the capital and operational expenditure of WaterNSW is particularly complicated given the allocations across the three regulated entities of WaterNSW (Rural Valleys, Greater Sydney and WAMC). We have therefore chosen to use recent historical averages to set an allowance for the 2025 Determination period and we have used the historic values provided in the RFI-61.

For the lower range value we have used a longer historical average of FY22 to FY24, whereas for the higher range value we have used a more recent historical average of FY23 to FY24. These averages are multiplied by five to derive the allowance over the whole Determination period and then prorated over the years in the period based on the allowed total capital expenditure in each year.

Table 4-6 – Corporate Systems

	WNSW proposal	Not strongly justified this period	Upper range	Bottom of range
Approach		Increase relative to recent actuals	Reduction of $13.3M to continue more recent average actuals - from FY23	Reduction of $18.0M to continue average actuals from FY22
Expenditure	$43.9M		$30.6M	$25.9M
Risks			Not sufficient to cover planned overheads and therefore WaterNSW may not be able to support all programs	
Advantages			Likely to better align with the overall allowance which is significantly less than that proposed	

Source: Analysis of AIR/SIR

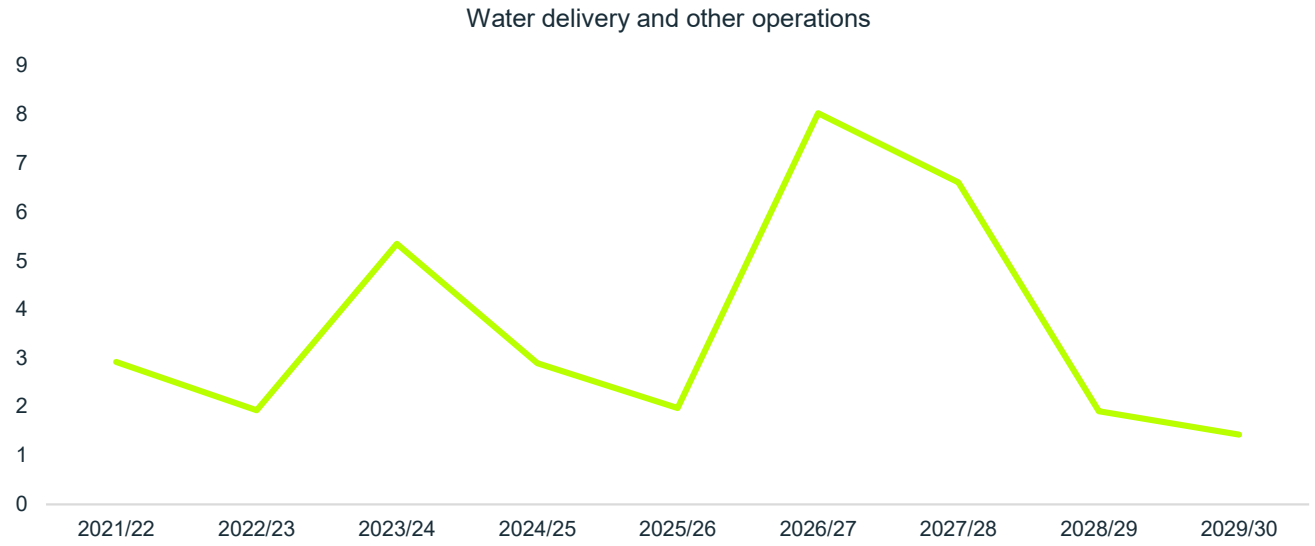
4.6 Water Delivery and Other Operations

4.6.1 Overview

Water Delivery and Other Operations capital expenditure over the Determination period is forecast to be $19.9M post efficiency and includes corporate overheads ($18.3M excluding overhead). The figures are shown in tabular and graphical form below.

Table 4-7 – Water Delivery and Other Operations ($FY25 M, post efficiency and including overheads)

FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
2.9	1.9	5.3	2.9	2.0	8.0	6.6	1.9	1.4



Source: Analysis of AIR/SIR

This expenditure is for renewals of weir, regulator and dam assets as well as a project for raising a weir:

- Desilting 10.4 km of the North Macquarie marshes bypass channel - $9.2M
- Destratification system for Oberon Dam - $3.0M
- Electrical instruments upgrades for Tareelaroi Weir - $2.0M
- Installation and purchase of new Tuffbooms for six sites - $0.9M
- Other renewal works at five sites - $2.4M
- Gunidgera Weir raising - $0.9M and is allocated against growth as a cost driver and not renewals.

4.6.2 Our view

As these projects aim to improve or increase water delivery which is the core activity of the business and are lower in value as a whole than other proposed activities we have left these unadjusted for the upper range scenario. For the lower range scenario we have delayed two of the more significant projects to be undertaken in the following price path period post FY30. These are the North Macquarie Marshes Bypass Channel Desilting and for the Oberon Dam Destratification Project.

Table 4-8 – Water Delivery and Other Operations adjustments

	WaterNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
Approach		Increase on historical levels	No adjustment apart from efficiency	Delay two projects into subsequent price path period
Expenditure	$19.9M		$19.6M	$6.8M
Risks			Assets are being renewed or replaced when there may still be remaining useful life	Water delivery may be impacted
Advantages			Lower risk of not meeting water delivery requirements / KPI	Still allows to meet the growth projects for water delivery

Source: Analysis of AIR/SIR

4.7 Asset Management Planning

4.7.1 Overview

Asset Management Planning capital expenditure over the determination period is forecast for $3.2M post efficiency and includes corporate overheads ($2.9M excluding overhead) and is shown in tabular and graphical form below. This expenditure is solely for the costs that can be capitalised for the preparation of the following price determination submission (2031 to 2035). We note that this does not include $0.2M of expenditure that WaterNSW has allocated under the activity of Renewal and Replacement which we assume should have been allocated to Asset Management Planning.

Table 4-9 – Asset Management Planning ($FY25 millions, post efficiency and including overheads)

FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
0.4	0.3	5.7	1.6	0	0	0	1.6	1.6

Source: Analysis of AIR/SIR

4.7.2 Our view

As can be seen from the forecast expenditure WaterNSW is proposing expenditure for producing the 2030 Pricing Proposal that is significantly less than it spent in FY24 and FY25 in producing the 2025 Pricing Proposal. We have therefore not adjusted the proposed expenditure for the upper range; however, we have adjusted it downwards by 50% for the lower range to reflect the production of a Pricing Proposal that focuses on its core business of water delivery without little enhancement in services.

Table 4-10 – Asset Management Planning adjustments

	WNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
Approach			No adjustment apart from efficiency	Adjusted by 50% for submission of a 'lights-on' Price Proposal
Expenditure	$3.2M		$3.1M	$1.5M
Risks				May not be sufficient to formulate a 2030 Price Proposal based on long-term strategy
Advantages			Allows business to propose a more strategic, risk based and long	Focus on core activity of the business

	WNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
			term Pricing Proposal.	

Source: Analysis of AIR/SIR

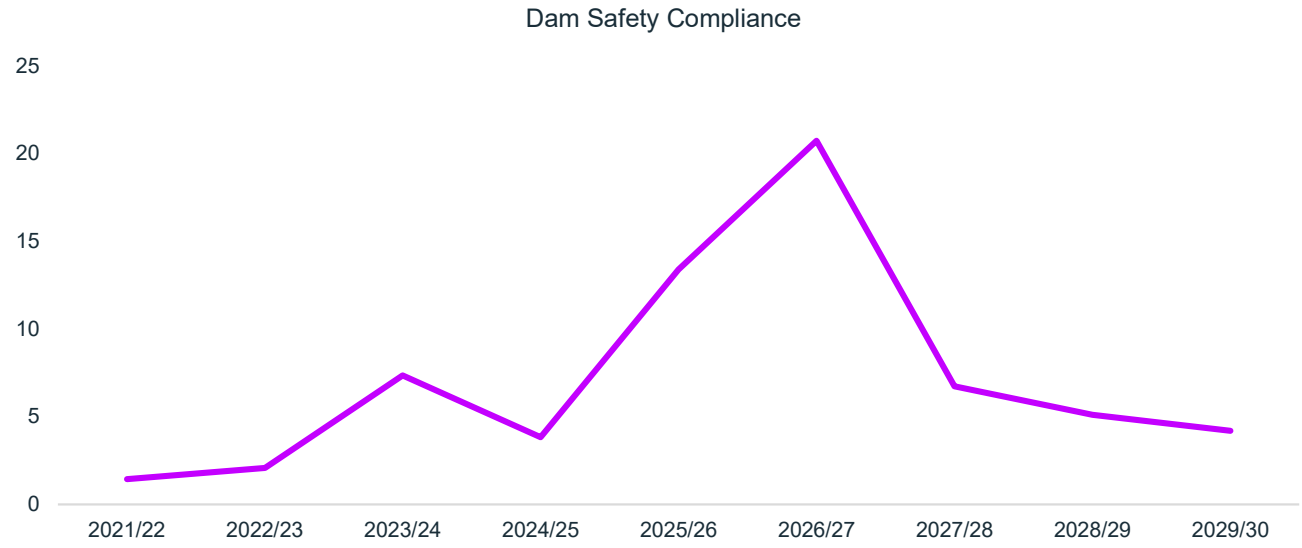
4.8 Dam Safety Compliance

4.8.1 Overview

Water Delivery and Other Operations capital expenditure over the determination period is forecast for $50.2M post efficiency and includes corporate overheads ($46.0M excluding overhead) and is shown in tabular and graphical form below.

Table 4-11 – Dam Safety Compliance ($FY25 M, post efficiency and including overheads)

FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
1.4	2.1	7.4	3.8	13.4	20.7	6.7	5.1	4.2



Source: Analysis of AIR/SIR

This expenditure over the determination is for the following:

- Dam Safety 5 yearly Inspection – $3.1M
- Dam Safety Projects for each of the valleys except for Lowbidgee – $10.0M
- Dam Safety projects – Rural Regions - $3.4M
- Copeton spillway investigations – $9.2M
- Dam safety anchor testing – $2.6M
- Pamamaroo Inlet Regulator Long Term Works – $21.5M
- Pindari Dam low level Flow Duration Curve (FDC) Renewals – $0.2M.

4.8.2 Our view

Due to the critical nature of dam safety compliance, we have not sought to adjust the proposed expenditure under this activity area. However, for the lower range scenario we have delayed the spillway investigations of Copeton dam by two years. This has been done to provide a smoother profile of capital expenditure as significant amounts of capital delivery are forecast for the first two years of the price path period. This allows dam specific expertise within WaterNSW to focus on fewer projects at a time and to incorporate lessons learnt.

Table 4-12 – Dam Safety Compliance adjustments

	WNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
Approach		Need for investigation works at same time as all other capital works on dam safety	No adjustments made due to dam safety being critical issue apart from efficiency	No adjustments made in value (apart from efficiency) due to dam safety being critical issue but one project delayed by two years to avoid too much dam safety capital works at same time
Expenditure	$50.2M ($46.0M excluding overhead)		$49.3M ($46.0M excluding overhead)	$50.0M[53] ($43.9M excluding overhead)
Risks		Not sufficient scrutiny on each project		
Advantages				Easier deliverability and increased focus on projects

Source: Analysis of AIR/SIR

4.8.3 Pamamaroo Inlet Regulator Long Term Works

Western NSW is characterised by its flat landscape, and is a pinch point before water flows out of the Murray-Darling Basin. The relatively shallow water and high evaporation rates can lead to saline issues, and the inlet is crucial for water quality as it allows more oxygenated water to enter the system. Effective water circulation is essential to mitigate these problems.

[53] Lower range scenario value with overheads is higher than the upper range scenario with overheads due to some expenditure being delayed in the lower range scenario to subsequent years in the determination period during which they attract a higher proportion of the overhead costs due to a lower overall capital programme in those years.

The current inlet structure is failing due to shearing of the foundations. This is because the original design did not account for the soil conditions that are found here. As waterbodies saturate soils they can swell (and contract as soils dry out) exerting pressure on these structures.

Issued for Construction (IFC) drawings have been produced with award of the construction contract forecast for May 2025. We note that the project has undergone significant options analysis and is heavily constrained by a number of issues. Given that there is significant evidence of the asset failing and the maturity of the project proposal we consider that no adjustments are necessary to the project.

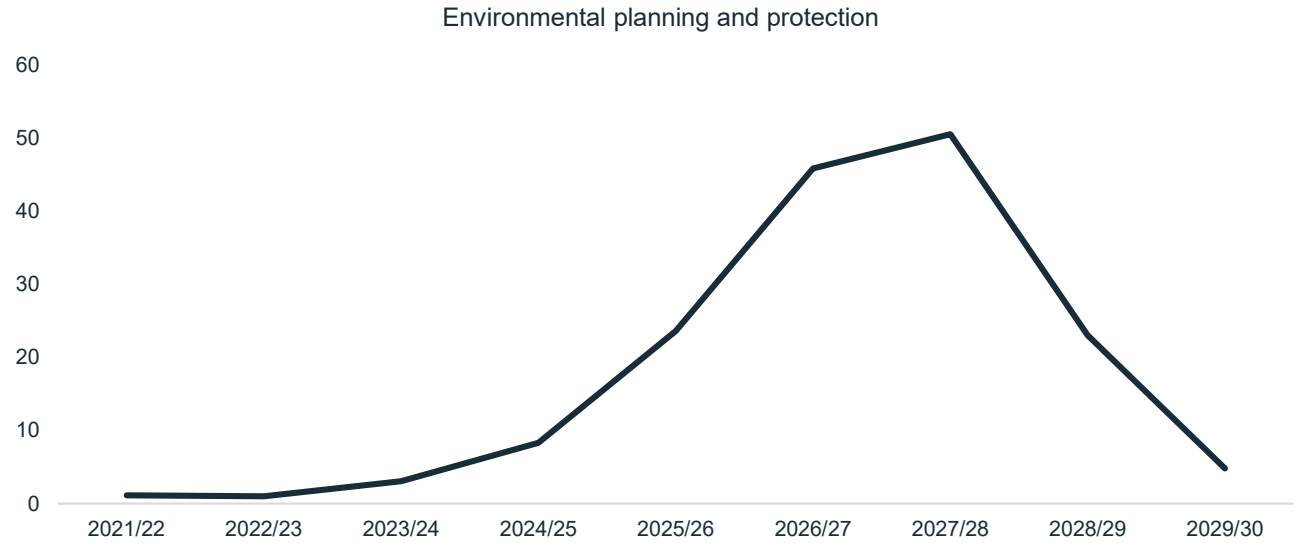
4.9 Environmental Planning & Protection

4.9.1 Overview

Environmental Planning & Protection capital expenditure over the determination period is forecast for $147.9M post efficiency and includes corporate overheads ($136.1M excluding overhead) and is shown in tabular and graphical form below.

Table 4-13 – Environmental Planning & Protection ($FY25 M, post efficiency and including overheads)

FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
FY1.2	1.0	3.1	8.3	23.6	45.8	50.5	23.1	4.8



Source: Analysis of AIR/SIR

This expenditure is for fishway and cold water pollution projects. These are listed below and all have a cost driver of renewals except the first two listed which have a cost driver of growth:

- Boolooaroo Weir fishway - $1.6M
- Tareelaroi Weir fishway - $2.0M
- Tyreel Weir fishway - $9.7M
- Tyreel Regulator fishway - $11.6M
- Gunidgera Weir fishway - $32.3M
- Lake Cargelligo Inlet Regulator and fishway - $24.2M
- Lake Brewster Diversion Weir fishway - $1.9M

- Booberoi Weir fishway - $1.8M
- Marebone Break Regulator fishway - $12.3M
- North Dubbo Weir fishway - $1.7M
- Gin Gin Weir fishway - $1.8M
- Copeton Dam cold water pollution - $5.9M
- Keepit Dam cold water pollution - $2.8M
- Burrendong Dam cold water pollution - $31.2M
- Blowering Dam cold water pollution - $6.9M
- Cold water pollution mitigation program monitoring in six valleys - $0.2M

The following table summarises the projects that were reviewed and our views on these and the wider program are detailed in the following section.

Projects Reviewed

Table 4-14 – Fishway and cold water pollution projects reviewed

Project and capex ($FY25 incl. OH)	Valley	Contract Type	Timing	Stage	Contingency
Gunidgera Fishway $32.3M	Namoi	Design and Construct	Design FY26 Award construct July 2026 Construct FY28	Preliminary business case approved Planning stage, design tenders received	30% of construction cost estimate
Marebone Break Fishway $12.3M	Macquarie	Design and Construct	Design FY26 Award construct Feb 2026 Construct FY27	Preliminary business case approved Planning stage, refine concept design	30% of construction cost estimate
Tyreel Regulator Fishway $11.6M	Gwydir	Design and Construct	Design FY26 Award construct Aug 2026 Construct FY29	Preliminary business case approved Planning stage, design and approvals tender ongoing	30% of construction cost estimate
Lake Cargelligo Inlet Regulator and Fishway $24.2M	Lachlan	Design and Construct	Design FY26 Award construct Feb 2026 Construct FY27	Preliminary business case approved Planning stage	30% of construction cost estimate
Burrendong Cold Water Pollution $31.2M	Macquarie	Design and Construct	Design FY27 Construct FY29	Concept design Strategic assessment stage	25% of P50 estimate
Blowering Cold Water Pollution $6.9M	Murrumbidgee	Design	Design FY26/FY30 Construct post FY30	Optioneering study Strategic assessment stage	n/a

Source: Interviews with WaterNSW

4.9.2 Our view

For both fishways and cold water pollution projects we have removed all proposed expenditure from the lower range scenario. This is to reflect that the regulatory requirements for these projects would appear to not be absolute as evidenced by the fact these have been delayed by WaterNSW in the current price path period, and that these projects do not impact the business's ability to deliver water to customers as its core business. For the upper range we have rephased projects to be more aligned with the timing of the projects as foreseen and allowed for at the 2021 Determination. Only one project has had an adjustment to the forecast expenditure, and this is for the Blowering Dam Cold Water Pollution design project. More detail is provided on adjustments (both in timing and value) against the projects further below. These adjustments are summarised in Table 4-15, with project specific adjustments shown for fishways and cold water pollution in Table 4-16.

Table 4-15 – Environmental Planning and Protection adjustments

	WNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
Approach	Rollover of the program that was allowed for as part of the 2021 determination and phased it to be largely delivered in the first 3 years of the price path period	Not spreading expenditure out to allow for lessons learnt	Reflects the timings of the projects that was allowed for in the 2021 Determination	No allowance as not clear that regulatory requirements for the projects are absolute
Expenditure	$147.9M		$120.0M	$0M
Risks	Lack of opportunity to incorporate lessons learnt into design and construction	Issues are reencountered in subsequent projects	Customer ends up paying for benefits that are enjoyed more widely than just the customer base	Political view is unacceptable for further delay, tempered by issue of who pays
Advantages	Accelerated improvement of the environment		Lessons learnt can be appropriately incorporated in future design and construction	Significant savings on costs and therefore reduction on bill increases

Source: Analysis of AIR/SIR

Table 4-16 – Fishway and cold water pollution projects adjustments for the upper range scenario

Project and FY 26/30 capex ($FY25 incl. OH)	Valley	Phases FY26/FY30	Timing / Stage	2021 Determination	AtkinsRéalis Adjustment
Gunidgera Fishway $32.3M	Namoi	Design & construct	Design FY26 Award construct July 2026 Construct FY28	Construct FY24	Maintain expenditure proposed by Water NSW

Project and FY 26/30 capex ($FY25 incl. OH)	Valley	Phases FY26/FY30	Timing / Stage	2021 Determination	AtkinsRéalis Adjustment
Marebone Break Regulator Fishway $12.3M	Macquarie	Design & construct	Design FY26 Award construct Feb 2026 Construct FY27	Construct FY24	Delay by 1 year
Tyreel Regulator Fishway $11.6M	Gwydir	Design & construct	Design FY26 Award construct Aug 2026 Construct FY29	For post FY25 to apply lessons learnt	Delay by 3 years
Lake Cargelligo Inlet Regulator and Fishway $24.2M	Lachlan	Design & construct	Design FY26 Award construct Feb 2026 Construct FY27	Construct FY24	Delay by 1 year
Booloooaroo Weir fishway $1.6M.	Gwydir	Design	Design FY27/FY28 Construct FY32	For post FY25 to apply lessons learnt	Delay by 3 years
Tareelaroi Weir fishway $2.0M	Gwydir	Design	Design FY28/FY29 Construct FY33	Design in 2021/25 period and construct post FY25	Delay by 3 years
Tyreel Weir fishway $9.7M	Gwydir	Design & construct	Design FY26/FY27 Construct FY29/FY30	Construct FY26	Maintain expenditure proposed by WaterNSW
Lake Brewster Diversion Weir fishway $1.9M	Lachlan	Design	Design FY29/FY30 Construct FY35	Design in 2021/25 period and construct post FY25	Delay by 1 year
Booberoi Weir fishway $1.8M	Lachlan	Design	Design FY29/FY30 Construct FY35	Design in 2021/25 period and construct post FY25	Delay by 1 year
North Dubbo Weir fishway $1.7M	Macquarie	Design	Design FY29/FY30 Construct FY31	Design in FY26	Delay by 1 year
Gin Gin Weir fishway $1.8M	Macquarie	Design	Design FY28/FY30 Construct FY32	Design in 2021/25 period and construct post FY25	Delay by 1 year
Copeton Dam Cold Water Pollution $5.9M	Gwydir	Design	Design FY26/FY30		Delay by 3 years

Project and FY 26/30 capex ($FY25 incl. OH)	Valley	Phases FY26/FY30	Timing / Stage	2021 Determination	AtkinsRéalis Adjustment
			Construct FY35		
Keepit Dam Cold Water Pollution $2.8M	Namoi	Design	Design FY26/FY30 Construct FY35		Delay by 3 years
Burrendong Dam Cold Water Pollution $31.2M	Macquarie	Design & Construct	Design FY26 Construct FY29		Delay by year
Blowering Dam Cold Water Pollution $6.9M	Murrumbidgee	Design			Allow 50% of design costs

Source: WaterNSW Pricing Proposal, Interviews with WaterNSW and IPART 2021 Determination Final Report

Designing and constructing fishway passes can involve several challenges:

- Species Diversity: Different fish species have varying swimming abilities and behaviours. Designing a fishway to accommodate multiple species can be complex.
- Hydraulic Condition: Ensuring the fishway operates effectively across different flow conditions by managing water velocities and turbulence to allow safe passage.
- Entrance and Attraction Flow: The entrance of the fishway must be easily located by the fish. This requires careful design to create sufficient attraction flow that guides fish to the entrance.
- Environmental Factors: Seasonal variations, sediment transport, and debris can impact the functionality of fishways. These factors need to be considered in the design and maintenance plans.
- Structural Constraints: Existing infrastructure can limit the design options for fishways.

In recognition of these challenges the 2021 Determination allowed for a phased program of fishway passes to adopt a pilot approach so that lessons learnt from one project can be carried forward to subsequent ones. The need for this has been demonstrated by the Mollee Weir fishway lock. Since its construction in 2014 it has not been operational. Learning from one project to incorporate lessons learned in the next is key for ensuring efficient expenditure.

The fishway program proposed by WaterNSW is for the same fishways that were allowed for in the 2021 Determination. As WaterNSW was unable to deliver these fishways in the 2021 Determination period it has proposed these projects in the 2025 Determination. Our adjustment for the upper range scenario does not seek to remove any projects but to rephase the works so that there is more time between projects to build in lessons learnt and avoid a large capital program of works at the same time. This will help lessons learned to be incorporated and may also be beneficial from a delivery perspective, as resource availability may be limited due to the specific and multidisciplinary expertise and capability required.

We have adopted a similar approach for the cold water pollution projects for the upper range scenario. For the Burrendong dam we have delayed the project by a year to avoid any potential sunk costs as WaterNSW await the trail of the bubble plume pilot currently installed in Pindari. Two of the projects have been adjusted back by three years so that lessons learnt from both the Burrendong and Blowering projects as well as the Pilot at Pindari can be incorporated in the optioneering and design of the subsequent projects. For Blowering Dam we consider the design costs to be high; these are based on a proportion of the estimated capital costs for the

project. The project option currently selected is a high capex option (to avoid high opex solutions) and it is not clear that the currently scoped capital works will be the final chosen solution. An adjustment downwards of 50% of the estimated design fees has been made to reflect the uncertainty in the proposed solution and that design work may require a more staged approach as the project gets developed further.

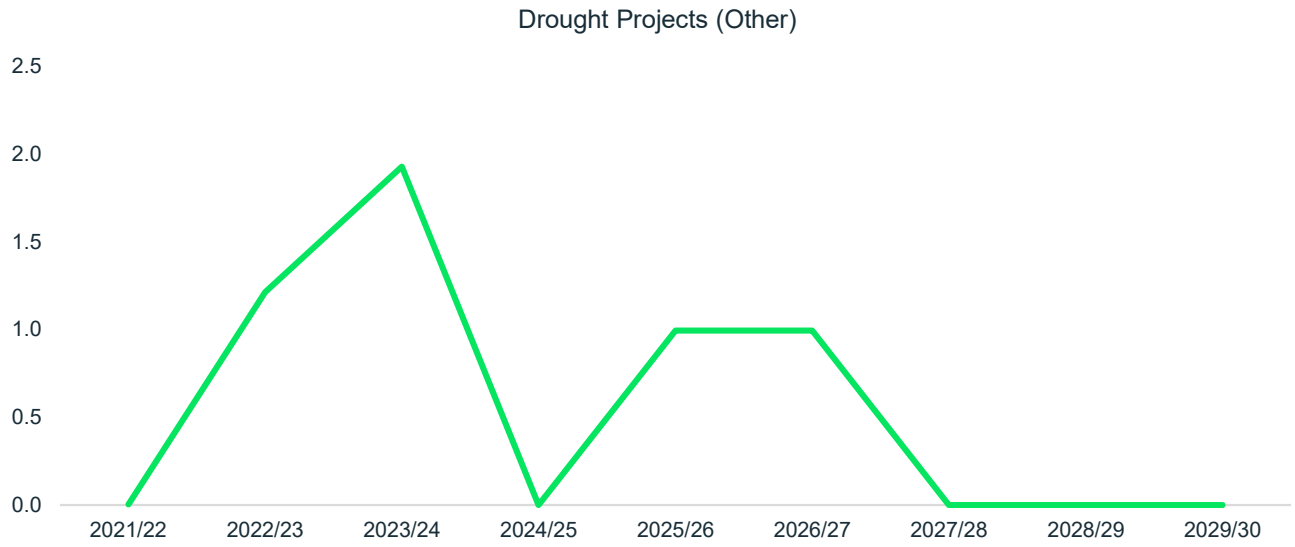
4.10 Drought Projects (other)

4.10.1 Overview

Drought Projects (other) capital expenditure over the determination period is forecast for $2.0M post efficiency and includes corporate overheads (there is no overhead for this expenditure) and is shown in tabular and graphical form below.

Table 4-17 – Drought Projects (other) ($FY25 M, post efficiency and including overheads)

FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
0.0	1.2	1.9	0	1.0	1.0	0	0	0



Source: Analysis of AIR/SIR

Drought Projects capital expenditure over the Determination period is forecast to be $2.0M post efficiency and excludes corporate overheads. This expenditure is for the Chaffey Pipeline Environmental Impact Study (EIS) project. The temporary permit to operate the pipeline has expired and an EIS is required for approvals for operating the pipeline over the long term.

4.10.2 Our view

The Chaffey Dam Pipeline was constructed for drought purposes and was operating temporarily in 2020 severe drought conditions. For the upper range we have included the expenditure to reflect the requirement of an EIS to operate the asset over the long-term. For the lower range we have excluded the project as we note that the operation of the pipeline during the severe drought conditions in 2020 was approved by State and Commonwealth governments. The adjustments are summarised in the table below.

Table 4-18 – Drought Projects (other) adjustments

	WNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
Approach	Only a single project is proposed		No adjustment apart from efficiency	Full removal of project as if an emergency permission may be forthcoming
Expenditure	$2.0M		$2.1M	$0M
Risks			Pipeline is not required and therefore EIS is a sunk cost	State and Commonwealth governments may not grant approval to operate pipeline without EIS
Advantages			Water availability in the events of a drought has higher legislative security	Avoids expenditure where permission may be granted anyway

Source: Analysis of AIR/SIR

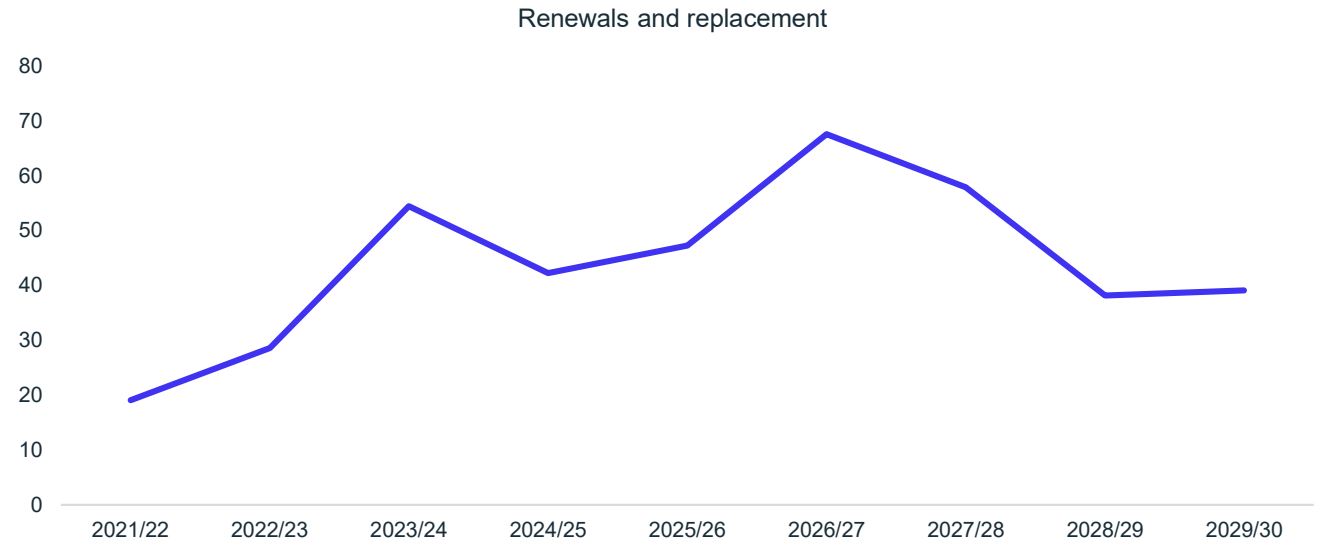
4.11 Renewals and Replacement

4.11.1 Overview

Renewals and Replacement capital expenditure over the determination period is forecast for $250.1M post efficiency and includes corporate overheads ($229.8M excluding overhead). This is shown in tabular and graphical form below.

Table 4-19 – Renewals and Replacement ($FY25 M, post efficiency and including overheads)

FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
19.1	28.6	54.5	42.2	47.3	67.6	57.9	38.2	39.1



Source: Analysis of AIR/SIR

Renewals and Replacement

The ten largest individual renewal and replacement projects are listed below with the top two projects having been reviewed:

- Toriganny Weir Renewal and Fishway – $27.3M (reviewed project)
  - This project is driven by the need of renewals to the weir due to degradation of the assets resulting in structural and operational issues at the site. WaterNSW has included the need to construct a new fishway at this site as Section 218 of the Fisheries Management Act 1994 in New South Wales requires "*a person…who constructs, alters or modifies a dam, weir or reservoir on a waterway to carry out, within the period specified in the order, such works as may be so specified to enable fish to pass through or over the dam, weir or reservoir*".
    Within the business case and the capex review interview, WaterNSW stated it has confirmed with the Ministry that a fishway would have to be constructed at this site under the Fisheries Management Act 1994. In response to a request for the Ministerial Order as required by the Act for any proposed fishways, WaterNSW provided us with copies of some written correspondence from the Ministry. However, these related to the Dam Safety Upgrade (DSU) offset fishway projects, the Toriganny Weir fishway was not mentioned in these communications. Of the total expenditure for the project 46% is forecast for the fishway (but is fully allocated to the renewal driver rather than being allocated to the environmental driver); significant savings could be made if no Ministerial order is put in place for this site.
- Renewal of Remaining Original Stage 2 Pipeline Oberon to Duc – $26.6M (reviewed project)
  - This project is for the renewal of 7.2 km of 750 mm diameter pipeline in the Fish River valley. WaterNSW is able to demonstrate that the failure rate of the pipeline is high, and that failures result in significant durations of outage rather than just presenting as a leakage event. Repairing the bursts is challenging due to the nature of the pipeline material (pre stressed concrete pipe), a material that requires lead joint repairs as the rippling surface of the pipe does not allow for tight collar fits. Repairs using molten lead present a higher health and safety risk than other repair types.
    The chosen option to is to undertake a replacement of the pipeline; due to the undulating nature of the

pipeline a slip lined approach has been discounted. Whilst WaterNSW is unable to report the impact on the performance availability metric it is able to report the average days of service outage which at 10 days is significant. It is clear that this renewal project is a priority and we are broadly supportive of it.

- Wyangala Dam Radial Gates Coating and Seal Replacement Phase - $6.2M
- EXECUTION Burrinjuck Dam Refurbishment of 4 x LL Outlets RFG - $4.8M
- Beavers Creek Regulator and Fishway Renewal – $4.4M
- Copeton Dam, Re-seal roads to improve safe site access – $4.0M
- Lachlan Bridge Renewals Program - $3.4M
- Burrendong Spillway Gates and Reliability Upgrade - $3.2M
- ARR FY23 2.2 General Civil (North) – Gwydir – $3.2M
- ARR FY23 3.4 Combodello Weir Electrical Upgrade – $3.0M

In addition to individual projects there are Improvement projects that are being rolled out business wide across all valleys. These are:

- Provision for Cranes Safety Improvement – $5.9M
- Provision for Electrical Safety Improvement – $4.5M
- Provision for Fleet – $6.6M
- Provision for Rural Determination Hydrometric Renewal – $2.2M
- Provision for Rural Programmable Logic Control (PLC) / Remote Terminal Unit (RTU) Upgrade Projects – $1.6M
- Provision for Plant and Equipment – $6.8M

Catchment Planning and Operations

WaterNSW uses Catchment Planning and Operations as an activity for allocating projects; however, it is not an activity listed by IPART. The total expenditure against this activity is not significant and is assumed is reported against the IPART activity of Renewals and Replacement. Catchment Planning and Operations capital expenditure over the determination period is forecast for $4.0M post efficiency and excludes corporate overheads. This cost relates to a number of projects:

- Recreational Property Upgrade expenditure in all 13 valleys. We note that since this relates to recreation it should not form part of the capital allowance for RAB; however, the value is very small at $10k.
- Provision for State based security legislation – $2.6M
- Public Safety at High Risk sites - $1.3M
- Hazardous Building Materials Survey – $0.2M.

Environmental Delivery

Environmental Delivery capital expenditure over the determination period is forecast for $0.2M post efficiency and excludes corporate overheads. This expenditure is for general civil works in Border, and it is not clear why this has been allocated to Environmental Delivery. We consider that this should have been allocated to Renewals and Replacement as have the other general civils projects.

4.11.2 Our view

As discussed in Section 4.2.2 there is no strong evidence that asset base is deteriorating. Based on the data that is available the asset base is showing as having improved over the current price path period. We have therefore made downward adjustments to the proposed level of expenditure for both the lower and upper range

scenarios. For the lower range we have adjusted the spend to be aligned with that allowed (pre-efficiency) at the 2021 Determination which WaterNSW has overspent. For the upper scenario we have adjusted spend so that it is aligned with recent actuals using the average from FY23 and FY24. These adjustments are summarised in the table below.

Table 4-20 – Renewals and Replacement adjustments

	WNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
Approach	Use of long term asset renewals based on book lives to inform levels of renewals	Increase relative to recent actuals	Continue recent actuals [NB: this is 24% lower than proposed]	Reduce to previous allowance level as asset health has been improving
Expenditure	$254.6M		$194.2M	$122.7M
Risks	As value of Rural Valley assets are dominated by civil works assuming that these assets cannot be extended beyond book life would result in significant overspend on renewals Inefficient spend due to sub-optimal targeting of assets for renewal/replacement	Asset health reporting is in the early stages- limited confidence in trends etc Some asset risks are not generally visible through performance metrics (major civils)		Book life of assets expiring in 2030- increasing risk of asset failure
Advantages	Significant improvement in asset base performance and condition could be achieved		Increased asset condition	Maintain current serviceability / performance

Source: Analysis of AIR/SIR

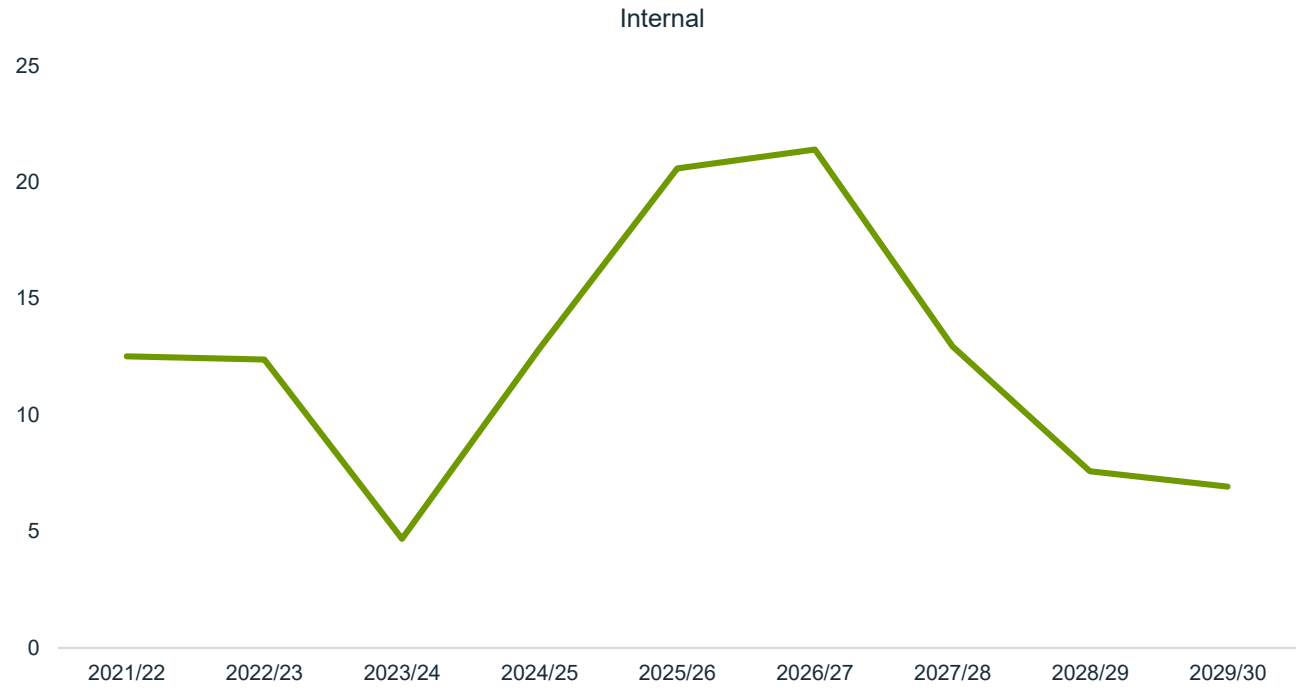
4.12 Corporate Systems - Lease/Internal corporate projects

4.12.1 Overview

This activity is for company-wide projects/programs and for lease costs over the determination period and is forecast for $69.5M post efficiency and includes corporate overheads ($64.1 excluding overhead) and is shown in tabular and graphical form below.

Table 4-21 – Internal ($FY25 M, post efficiency and including overheads)

FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
12.5	12.4	4.7	12.9	20.6	21.4	13.0	7.6	6.9



Source: Analysis of AIR/SIR

The significant majority of the proposed expenditure is digital capital expenditure which is discussed in Section 5.

- Digital projects and programs - $54.4M
  - Asset Lifecycle Management and Planning - $7.7M
  - Communications network upgrade - $12.5M.
  - Cybersecurity Resilience - $1.9M
  - Future Workforce - $2.2M
  - Integration Business Planning and Automation - $3.2M
  - ICT – split across 16 expenditure lines - $19.6M
  - In Vehicle Monitoring System (IVMS) use hardware and installation - $88k
  - Operational Applications - $1.6M
  - Remote Visual Monitoring - $32k
  - Risk Safety and Compliance – $1.6M
  - Water Insights Portal - $3.9M
- Lease costs of $5.8M in FY26. There is no other expenditure in the rest of the Determination period and there is no overhead cost applied to lease costs by WaterNSW. We understand that the regulatory treatment of lease costs is as opex and therefore should not form part of the capex submission.
- The remaining $15.1M is for eight corporate projects of which two account for $14.1M.
  - New Operating Licence - $8.9M
  - Facilities Management - $5.2M
  - Prototype Trailer Project - $0.7M

- Legal team capex budget allocation - $0.3M
- Foreshore Properties - $27k
- Gen Office Establishment and Refurbishment projects - $22k
- Hazardous Building Materials Survey - $18k. We consider that this has been incorrectly allocated and should have been allocated to Catchment Planning and Operations as this is where the vast majority of the costs for this program have been allocated; however, it is an immaterial expenditure.
- Buronga office consolidation - $17k

4.12.2 Our view

For a summary of our views on digital for the 2025 Determination price path period see Section 5.4.2 below.

For the remainder of the capital expenditure under this activity we have excluded the costs of leases from both the upper and lower range scenarios as the regulatory treatment of these costs should be as opex, as noted above.

For the upper range scenario all other projects have not been adjusted. For the lower range scenario we have allowed for 50% of the costs for the New Operational Licence as there is flexibility in the licence requirements and therefore fewer or different project activities could be possible. We did not review the Facility Management project but consider that under a lower range scenario lower expenditure would be possible by only maintaining critical facilities. Other facility/building costs and other project costs under this activity have not been adjusted in either scenario as these costs are insignificant in comparison to the rest of the costs under this activity. The summary of the adjustments are presented in the following table with discussion on the digital allowance included in Section 5.4.2.

Table 4-22 – Corporate Systems-Lease/Internal Corporate Project adjustments

	WNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
Approach		Evidence that New Operational Licences requirements have been sufficiently challenged and lack of justification for level of Facility Management	Removal of lease costs	Removal of lease costs Adjustment of 50% for New Operational Licences due to flexibility and 50% of costs for Facility Management
Expenditure	$75.3M ($54.4M digital) ($20.9M other)		$61.7M ($46.6M digital) ($15.1M other)	$35.6M ($27.2M digital) ($8.4M other)
Risks				Costs for facility management are not sufficient to maintain day to day operations
Advantages				Provides an opportunity to further investigate

	WNSW proposal	Not strongly justified this period	Upper range scenario	Lower range scenario
				flexibility of new licence requirements

Source: Analysis of AIR/SIR

4.12.3 New Operating Licence Requirements

This project is discussed in Section 3.4.4.1 above and relates to the new Operating Licence which came into force on 1 July 2024 for a period of four years. Capital expenditure is proposed for three areas of the new licence:

- Water quality monitoring enhancement program - $5.89M
- Early warning system - $1.35M
- Expanded education program - $1.0M

As commented in section 3.4.4.1 for the first two of the above areas there appears to be significant flexibility under this Operating Licence requirement to deliver a different scope of works. For the expanded education program there appears to be significant flexibility to deliver a different amount of engagement.

4.13 Recommended expenditure scenarios

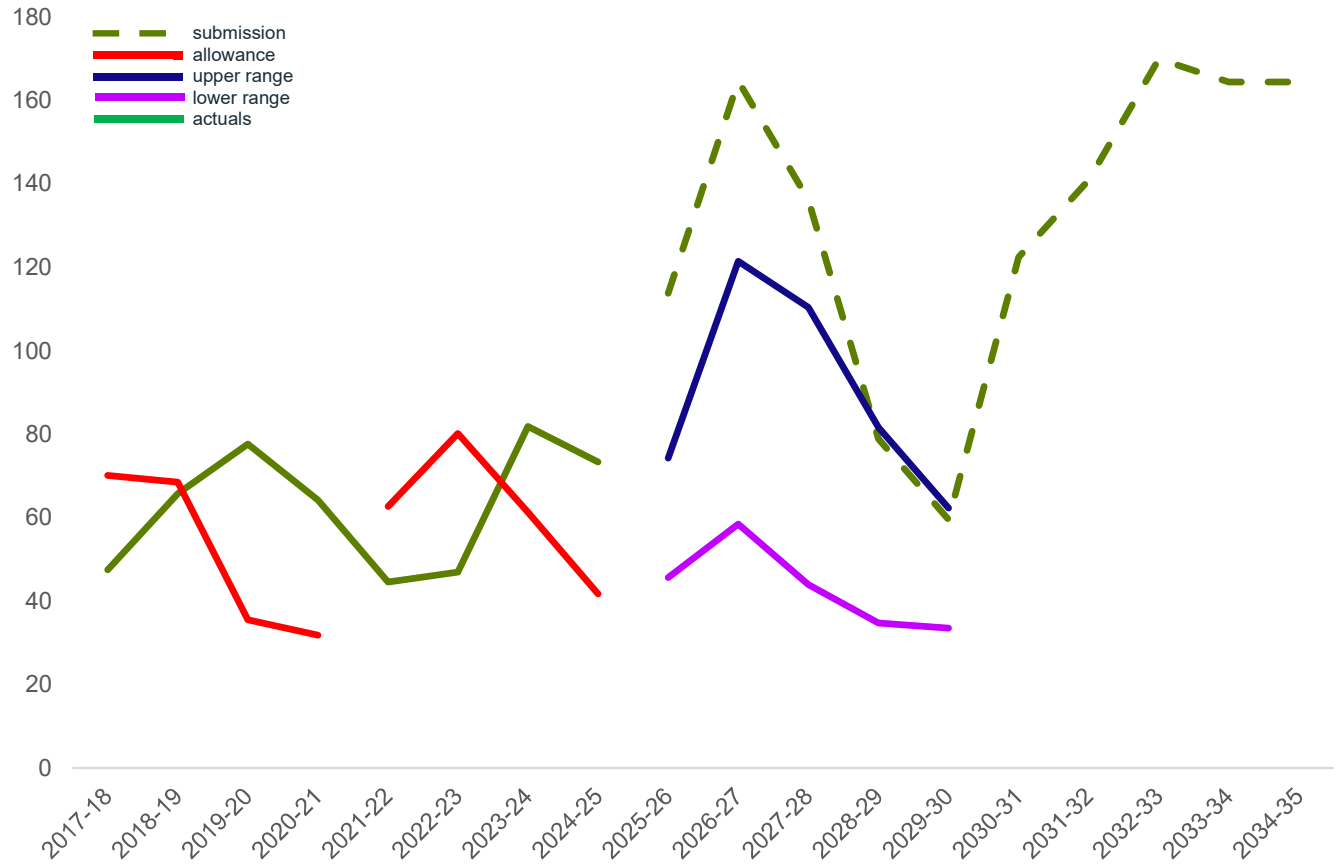
The results of the recommended upper and lower range allowances discussed in the previous sections are summarised in Table 4-23 and Figure 4-11 below. WaterNSW's submission is for an annual average of $110.6M, the recommended upper range scenario is for $90.0M p.a. whereas the lower range scenario is for $43.3M; this range straddles the average actuals incurred between FY21 and FY24.

Table 4-23 – Upper and lower range for 2025 Determination ($FY25 M, post efficiency and including overheads)

Scenario	FY26	FY27	FY28	FY29	FY30	FY26-FY30	Average p.a.	FY22-FY24 average
Water NSW submission	113.8	164.7	136.1	78.9	59.6	553.1	110.6	58.9
Upper range	74.3	121.5	110.4	81.6	62.3	450.1	90.0	
Upper range reduction %	-35%	-26%	-19%	4%	5%	-19%		
Lower range	45.7	58.5	44.0	34.7	33.5	216.3	43.3	
Lower range reduction %	-60%	-65%	-68%	-56%	-44%	-61%		

Source: Analysis of AIR/SIR

Figure 4-11 - Recommended capex ranges ($FY25 M)



Source: Analysis of AIR/SIR

5. Digital

5.1 Summary of findings

We have reviewed the cross-cutting WaterNSW digital capex and opex for Greater Sydney, Rural Valleys and WAMC before they are then allocated to the different price controls. It is outside of our scope to review the standalone WAMC initiatives or any discreet Greater Sydney digital expenditure, which are covered by separate reviews.

Total digital expenditure in the current price path is forecast to be approximately 13% over IPART allowance according to WaterNSW's projections, at $182M or an average $36M per annum between FYs 21 to 25. A step change in total expenditure is proposed for the future price path, at $361M or an average of $72M p.a.

We have seen evidence that there has been an improvement in digital maturity, albeit from a relatively low base, compared with last two price reviews. The evidence that can be sighted to support this finding includes:

- demonstrating uplift in capability in both identifying solutions and managing implementation
- effectiveness of a procurement process designed to deliver best value
- evidence of working within a constrained budget during the current price period including re-prioritising where necessary
- successful delivery of key initiatives in current price period – expenditure appears in the round to be prudent and efficient

Overall, the justifications for the unexpected changes to activities, and in some cases increases in costs, during the current price path compared with the IPART allowance appear to be reasonable. The overspend is relatively modest, with the changes relating to the impact of the floods and Covid on the business, Cloud adoption, licensing cost increases and increases in number of licences because of increased staffing numbers. We have seen a similar pattern at other Australian water utilities that we have reviewed.

One area of inefficient expenditure relates to the WAVE program, which represents the biggest area of capital expenditure during the current price path. WaterNSW acknowledges $1M of inefficient spend but we have identified a higher range due to the significant reduction in benefits being delivered (range from allowing $36.5M to only $6M of the $53.5M total capital expenditure). We understand that this would represent ex-post capex adjustment.

The step changes in the future price path relate to both opex and capex. For opex, this is driven by software licencing, people costs and the shift from on premise capex solutions to software as a service opex solutions (a pattern across all sectors). For capex, this relates to both significant increases in Business as Usual (BAU) capex and also one-off initiatives, notably the Asset Lifecyle Management and the Communications Network Upgrade.

While benchmarking has some limitations, which we set below, our review of digital spend as a percentage of total expenditure suggests that the rate of WaterNSW's proposed digital totex is significantly above other water utilities. This could suggest either that WaterNSW is not operating at an efficient level of digital expenditure or that its circumstances and/or operating environment are so different from all the other comparators to justify much higher levels of digital expenditure.

We have identified both an upper and lower range of capex and opex investment which draws on our findings from review of WaterNSW's performance and plans as well as its proposed rate of digital spend. At the upper end, we have made adjustments to specific programs or activities. Adjustments for the lower end for both capex and opex maintain the same level of overall digital investment as in the current price path in line with any

reduction in the overall total expenditure. We have set out the potential risks associated with the different scenarios.

5.2 Current expenditure

The current price path has evolved considerably compared with what was originally proposed. At the Greater Sydney pricing review, which commenced in July 2020, a large program of works was proposed but during the Rural Valleys and WAMC price reviews, which occurred a year later, WaterNSW revised its proposed digital program. As a result of this overhaul and also linked to the impact of the floods, digital capex expenditure was put on hold in FY21[54]. The revised program focused on a (at the time) recently finalised business case for the Water Added Value Environment (WAVE) program, which WaterNSW confirmed accounted for ~60% of the total digital capex proposed across WaterNSW for Greater Sydney, Rural Valleys and WAMC[55].

The increases in opex and capex, respectively 11% and 14% (12.5% overall) in the current price path are driven by:

- Impact of the floods – Digital team re-directed to provide additional support to operational activities including increased surveillance, incident resolution and managing systems on an expanded 24/7 roster.
- Cloud adoption – Transition to building and hosting applications in the cloud results in a shift from capex to opex, and appears to represent an increase in overall costs, which is a trend we have seen elsewhere impacting on all sectors in Australia and globally.
- Licensing cost increases – This is beyond WaterNSW's control and the organisation appears to be managing renewal expenditure in a prudent manner by leveraging prices negotiated by NWS Government where possible and undertaking market testing for best value offers or pursing longer-term contracts for higher discount levels if more appropriate – again, we have seen this cost pressure elsewhere.

We agree with WaterNSW's assessment that cloud-based software and platforms as a service (often referred to as SaaS and PaaS), appear to result in *"lower one-off capital expenditure to higher recurrent business as usual operating expenditure"*[56]. In fact, Sydney Water's view, as expressed in its Pricing Proposal, is that the customer impact of this shift is minimal:

> *Notably, digital assets have a relatively short depreciation life – typically five years for physical hardware and 10 years for software – meaning the impact to customer bills of using capex or opex is minimal. On-premise hardware and software are generally treated as an asset and depreciated, while cloud services are subscription based, so they are treated as opex. Overall, the impact is marginal and, with new efficiency schemes, will incentivise the best total expenditure solution for our customers*[57].

We are not convinced that the impact should be described as minimal. Firstly, while most digital assets do have relatively short depreciation lives, the large on premise capex investments would have a longer asset life typically of 15 to 20 years so the switch to opex can impact more directly on bills in these cases. Also, it is very debatable what the overall effect on expenditure levels is of this trend. There are three scenarios, that this could have no net effect on total expenditure, that this could potentially create a benefit by leading to a reduction in overall digital costs compared with the on premise solution, or that it is leading to an increase in total costs. We are not aware of any research, and perhaps it is too early to draw any firm conclusions given that this shift is still relatively new. However, our impression from anecdotal evidence, is that the subscription model gives digital suppliers more power and therefore opportunities to increase costs as the suppliers have a captive audience

[54] Actuals were zero for Rural Valleys and WAMC, with a nominal $1.22M spent under Greater Sydney.
[55] Page 14, Footnote 4 of WaterNSW Attachment 11, Digital expenditure, 30th September 2024
[56] Box 2-1 in Attachment 11, Digital expenditure, 30th September 2024
[57] Sydney Water Pricing Proposal, Chapter 4 Operational Expenditure, page 102.

once their solution has been selected. This is not good news for customers such as WaterNSW and it explains some of the step changes in opex costs that are being seen. We are therefore minded to concur with WaterNSW that this is a general trend which is outside of its control and leads to increases in total expenditure in the current, and also by extension, the future price periods.

5.2.1 Cost estimation

We think the robustness of cost estimation is an important measure of success. We asked WaterNSW to provide a summary of its high value investments completed in the current price path to understand the budget variances.

The five projects provided had an original business case value of $54.6M, representing 62% of the total of $88.3M digital capex expenditure forecast for the current period. This outturned at $56.2M, a difference of 2.9%.

Overall, the picture appears to be a positive one with relatively little variation although we are somewhat unsighted on whether the reason for the WCP Water Data reduction was a genuine saving or whether some of the activity was de-scoped or delayed as a result of the increased costs of the Customer & Water Market Systems (WMS) investment. The reasons for the increase in the WMS investment is discussed in more detail under the WAVE program in the next section.

Table 5-1 – Analysis of variations from original estimate to outturn costs for digital projects completed in current price path

Project	Completion date	Budget variation ($M)	Difference (%)
Data Centre Refresh	Oct-20	-0.6	-9.1%
Flood Plain Harvesting	Jul-23	-0.02	-3.6%
Water Delivery & Visualisation	Aug-24	-0.3	-2.4%
WCP Water Data	Aug-24	-3.29	-24.6%
Customer & Water Market Systems	June-25 (forecast)	5.8	28.1%
Total		**1.6**	**2.9%**

Source: Adapted from WaterNSW RFI SA-56 response

5.2.2 WAVE program

The implementation of the WAVE program was an output measure agreed with IPART to be delivered by FY24. It has three program streams, the Customer and Water Markets Program (WMS), the Water Delivery and Visualisation (WDV) Program and the Water Data (WD) Program. The objectives set were:

- Service and efficiency improvements by allowing low value tasks to be automated
- Centralised management of water information by improving access to up-to-date and reliable water information for personnel and customers
- Consolidation of ICT systems with harmonisation and integration of ICT landscape to drive operational efficiencies and enable improved performance of services through better insights from high integrity data
- Mitigation of risks through improving integrity and reliability of business processes and data management

We have considered the findings from the WaterNSW Systems and Process Review[58] which were positive about the investment approval process and overall governance. It is stated that the budget increased from the original business case as a result of the market engagement, better understanding of integration needs and changes to

[58] WaterNSW Systems and Process Review (December 2023) carried out by FTI Consulting on behalf of IPART. This included as part of Appendix 1 the WAVE Major Project Case Study (major capex and opex study).

the delivery model which all contributed to more detailed cost estimates. A suggested area for improvement in the report related to transparency of changes to the budgets, to *"provide greater clarity regarding how both capex and opex components are tracking on major projects and better support understanding of the context surrounding any proposed budget variations".* It was also concluded that *"overall, delivery of functional outcomes has been good, although there have been some user acceptance issues"* and highlighted the enhanced change management processes that WaterNSW has targeted to embed into new projects from the early stages to address this finding.

We understand the final outturn cost for WAVE is forecast to be $53.5M for the scope that is being delivered in the current price path. WaterNSW will have exceeded its forecast expenditure by approximately $5.8M[59]. The escalation in costs was as a result of work which was *"unanticipated and underestimated in terms of complexity at the program inception"* [60]. The impact has been felt wider too, because WaterNSW confirmed that to allow the digital team to address the WAVE program implementation, they have had to delay other programs, Remote Visual Monitoring, Advanced Analytics, the expansion of Operational Technology, Asset Maintenance, Asset Condition Monitoring and Field data capture. WaterNSW have referred to the first three as reprioritisations and the latter three as postponements, although in our view the effect is the same, that they have been delayed as opposed to shelved.

The Water Market System portal element of the WAVE program has all the signs of being a game changer for WaterNSW. It is both a self-serve portal for customers and a work management system for staff which improves both the service from a customer perspective and the efficiency of delivering activities from an internal perspective. But the benefits to date are very limited because functionality is being developed in a phased way over the current and future price paths, so it was only processing new customers at the time of our interviews, but year on year more functionality will be added.

The WAVE program has not therefore delivered on all its objectives and we think better planning and understanding would have led to a more efficient outcome. Service and efficiency improvements have not been demonstrated, and we assume this is because of the complexity and associated challenges which have taken much more time and effort to work through and because most of the functionality is still to be delivered, i.e. spend above allowance but less delivered for the WMS element:

> *Numerous scope and timeline changes impacted expected benefits, causing misaligned expectations. Due focus on the impact of these changes is required and is now included in the uplifted delivery methodology managed by the Digital Transformation Office*[61].

This was reinforced during our interviews, where there was an acceptance that mistakes had been made.

We appreciate WaterNSW's openness and transparency in this area and we asked for any potential imprudent and/or inefficient expenditure to be quantified for us to consider. WaterNSW identified three areas as inefficient expenditure totalling $1M in its response[62]:

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[59] This is based on assuming achievement of forecasted expenditure of $4 million in FY25 as per Attachment 11, Digital expenditure, 30th September 2024 and also confirmed in WaterNSW RFI SA-56 response.
[60] *"…expenditure is primarily related to the need to maintain a two-way synchronisation of data between the new platform (WMS) and the legacy platform – Water Licensing System (WLS). Substantial complexity is involved in the platform synchronisation due to the fundamental asynchronous underlying technology of the two platforms, sheer volume of customer records that also require extensive validation due to the Personally Identifiable Information (PII) nature of customer data, and the need to retain both platforms until all functionality in WLS can be replaced by WMS"* from Attachment 11, Digital expenditure, 30th September 2024.
[61] Page 18, Attachment 11, Digital expenditure, 30th September 2024.
[62] Source: WaterNSW RFI W-4E.

1. *$600k Exploration of features and benefits that was subsequently descoped [across WD/WDV/WMS programs]. There were a number of features and benefits that formed part of the original business case that was subsequently descoped, e.g. systems decommissioning that originally carried benefits.*
2. *$300K Mapping tool [WMS program] – was developed, however was not able to be used by customers based on original design intent. Once this was recognised, there was no further development placed into the mapping tool functionality, and it has since been reutilised and enhanced to enable customers to use it. So has served as a foundation for other functionalities – Mapping was originally designed for BLR and later repurposed for WSW, WU and Combined approvals that will go live in June 2025. On reflection, with the knowledge and experience we may have redirected this investment into other purposes from the start.*
3. *$100K –Development of the Manage Associations feature i.e. add a business [WMS program]. Not user friendly and did not meet the needs of customers. Customers have to call up and get assistance to complete or do not use it. Now rebuilding with Business 360.*

At the time of the last review, significant benefits were set out in the original Business Case totalling $40.9M. Some were not modelled or identified as intangible and not possible to quantify. In terms of quantified benefits, there were $3.1M per annum efficiency savings identified from FY24. While the costs have escalated, the benefits have significantly reduced. The latest benefits position (July 2024) is $6M and we have not seen any evidence that the $3.1M per annum efficiency savings have or will be realised through the current budget; it would appear that those quantified benefits are more likely to flow through from subsequent investments in the future price path.

Figure 5-1 – Wave Benefits Movement ($M)

Source: Slides 29 in Pack 2a Digital Presentation

5.3 Proposed expenditure

There are significant increases in overall digital expenditure proposed, although the variances do vary considerably by proposal. For Rural Valleys, the total expenditure represents an increase of 61%, which is then broken down to 94% in opex and 32% in capex.

Table 5-2 – Digital totex, opex and capex spend over current and future price paths ($FY25M)

Totex	2020-2025	2025-26	2026-27	2027-28	2028-29	2029-30	2026-2030	Variance $	Variance %
Greater Sydney	$64.1	$33.3	$30.5	$29.3	$26.2	$26.4	**$145.7**	$81.6	127%
Rural Valleys	$76.6	$28.1	$26.9	$25.5	$21.7	$21.3	**$123.5**	$46.9	61%
WAMC	$41.6	$24.0	$23.9	$22.1	$14.0	$8.1	**$92.1**	$50.4	121%
Totex	**$182.4**	**$85.4**	**$81.3**	**$76.9**	**$61.9**	**$55.8**	**$361.3**	**$178.9**	**98%**
Opex									
Greater Sydney	$42.6	$19.4	$18.3	$18.8	$20.0	$19.4	**$95.8**	$53.2	125%
Rural Valleys	$35.6	$13.1	$13.2	$13.7	$14.5	$14.7	**$69.1**	$33.5	94%
WAMC	$15.9	$6.8	$7.1	$7.4	$6.8	$4.9	**$32.9**	$17.0	107%
Opex total	**$94.1**	**$39.2**	**$38.6**	**$39.9**	**$41.2**	**$39.0**	**$197.8**	**$103.8**	**110%**
Capex									
Greater Sydney	$21.3	$13.9	$12.3	$10.5	$6.2	$7.0	**$49.9**	$28.4	132%
Rural Valleys	$41.1	$15.0	$13.7	$11.8	$7.3	$6.7	**$54.4**	$13.4	33%
WAMC	$25.8	$17.2	$16.8	$14.7	$7.2	$3.2	**$59.2**	$33.4	130%
Capex total	**$88.3**	**$46.1**	**$42.8**	**$37.1**	**$20.7**	**$16.8**	**$163.5**	**$75.1**	**85%**

Source: WaterNSW Attachment 11, pages 12 and 13 in Digital expenditure, 30th September 2024

In terms of the split between capex and opex, WaterNSW is exhibiting the continuation of the trend in the shift from capex to opex which we have seen in other water utilities we have reviewed in Australia and the UK.

Table 5-3 – Digital capex and opex splits over current and future price paths

Rural Valleys	**2020-2025**	**2025-2030**
Capex	54%	44%
Opex	46%	56%
WNSW	**2020-2025**	**2025-2030**
Capex	48%	45%
Opex	52%	55%

Source: AtkinsRéalis analysis

We think that there are two reasons that the WaterNSW capex spend is not showing as reducing more significantly:

- The type of investments being made are in some cases still bespoke in-house capex solutions because there are not widely available software or platform as a service options for WaterNSW on the market.
- Project opex associated with new capex investments and Software as a Service (SaaS) on-going subscription costs are being reported for regulatory purposes under capex[63].

As acknowledged by WaterNSW, the SaaS costs reporting is not consistent with statutory accounting but different approaches are being taken by different economic regulators across Australia, and it is not

[63] Specifically in relation to SaaS costs, WaterNSW states: *"According to accounting standards, SaaS costs are classified as operating expenses. However, the approach we have taken is to treat SaaS as regulated capex and this aligns with previous determinations. This means they are not included in regulated operating expenses and do not affect the BTS analysis".* In WaterNSW RFI SA-37 response this is further confirmed: "*SaaS costs are directly allocated to a 'core' opex project through timesheet reporting or invoices, which is flipped to capex for the regulatory treatment".*

unreasonable. It does however impact on any analysis of digital capex and opex splits in terms of comparing like for like, hence another reason why we have focused on total digital expenditure.

We do not agree with WaterNSW that non-network digital capex is increasing for most utilities as a percentage of total capex and as a percentage of revenue and costs, and thus that is a justification for its increases. While we think there is an element of truth that there are not always economies of scale with digital expenditure[64], we have also seen strong evidence that organisations adapt to live within their means and constrain spending by prioritisation within certain parameters.

The key drivers of expenditure in future price path are as follows:

- Step change in opex relates to base adjustment from FY23 BAU actual to FY25 budget for software licensing (increase by $5.8M per year) and People costs (increase by $8.7M per year).
- Step change in capex to $104M relates to both significant increases in BAU capex and also "one-off" Technology Roadmap initiatives:
  - BAU capex spend – $40M split almost evenly across Greater Sydney and Rural Valleys[65]. The major items are ICT renewals and replacements ($15M, including $6.8M for Data Centre investments), Security and network compliance ($10M) and the SCADA systems upgrade and renewals ($4M). The remainder relates to relatively small values for the continuous improvement program across 15 platforms.
  - Technology roadmap initiatives - $64M[66] with the most notable items being the Communications Network Upgrade ($20M), Asset Lifecyle Management ($15M) and Water Insights Portal ($8M).

5.3.1.1 Governance

There is evidence that there has been an improvement in digital maturity, albeit from a relatively low base, compared with last two price reviews. The changes that WaterNSW cites relate to:

- New ways of working – adopting both Agile project management approach that involves breaking the project into phases and emphasises continuous collaboration and improvement and Development, Security and Operations (DevSecOps) framework that integrates security into all phases of the software development lifecycle.
- Establishment of a Digital Portfolio Management Office – embedding project delivery frameworks, program and project governance, overseeing strategic planning and better governance and reporting.
- Implementation of Project Prioritisation Practices – for prioritising capital investments and develop an achievable roadmap.

This means that big ticket projects are managed differently now, which should promote more efficiency, increased speed in terms of delivery and more effective realisation of benefits. We make observations on these areas below.

There is also tighter governance in place with two key portfolio governance committees established to support the prioritisation and delivery of projects and manage risks alongside two existing groups:

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[64] *"Utility size does not appear to deliver economies of scale in ICT expenditure based on WaterNSW's assessment of comparable utilities"*, page 17 in Attachment 11, Digital expenditure, 30th September 2024.
[65] Remaining 22% ($11.4M) from the BAU Capex (total $51.4M) is allocated to WAMC. Source: WNSW RFI W-3.
[66] Remaining 38% from the $112M total of Roadmap initiatives are the standalone WAMC items for Water Market System project ($28M), Shared Technology Ecosystem Data Strategy ($11M) and Metering Systems ($9M), which are outside the scope of this review.

- Digital Ecosystem Oversight Committee (DEOC) provides oversight of programs that sit across the three agencies and is not driven by value.
- Digital Portfolio Committee (DPC) covers the entire digital portfolio, made up of all Roadmap and Business as Usual investments reviewing continuous efficiency, issues, risks and escalations, involving subject matter experts (SMEs).
- WAVE Program Review Committee (PRC) only focuses on this program and provides high level oversight reporting to the CEO and Board.
- A Digital Advisory Group to oversee the delivery of digital projects and benefits realisation.

In addition, projects with a value over $5M are subject to NSW Department for Customer Service assurance, with monthly reporting and health checks.

We have seen clear evidence to support the positive impact of these changes, but there are also areas for improvement highlighted below.

5.3.1.2 Efficiencies

Typically we look for and see a clear link between digital investments and the delivery of future efficiencies both for Information Technology and also for Operational Technology investments. WaterNSW has set out its business transformation under its 3 "big rock" initiatives, two of which have a strong link to the delivery of efficiencies through digital investments, namely the:

- Operational Transformation – field work improvements through better resource allocation, increased remote operations, better knowledge management.
- Digital Transformation – improved delivery model, defining service levels, improved cost and project structures, strategic vendor management frameworks to improve value and digital roadmap efficiencies

However, there is still very little visibility of what has been achieved by way of efficiencies and what it is proposed will be delivered from digital investments in the future. The big rock initiatives described above are qualitative rather than quantitative. A similar observation could be made about the Technology Roadmap, which it is stated will deliver significant economic benefits to customers across the broader sector[67] but it is not clear that these will deliver future efficiencies.

We understand that WaterNSW is developing a new tool and dashboard to monitor projected and actual costs savings by initiative (which is wider than digital initiatives, but will include them), which *"…will provide better visibility across the business on progress"*[68]. We would have expected more progress to have already been made, as we identified this as an area for improvement in previous reviews.

Of the overall 1% efficiency, we were informed that 11% contribution to 1% efficiency is from the Tech Roadmap initiatives. It is unclear if efficiencies could be delivered through the digital BAU capex and opex spend. We

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[67] *"…joint Technology Roadmap represents a unified strategy consisting of 13 programs (11 of which WaterNSW has responsibility to deliver) that will deliver significant economic benefits to customers across the broader sector. These benefits include more connected ways of working and sharing of applications between WaterNSW and its sector partners. This includes a commitment to remediation of legacy data, improved governance, and ongoing development of applications such as the Water Market and Metering systems, beyond WaterNSW processes in the Water Resource Management value chain".* Page 26, Attachment 11, Digital expenditure, 30th September 2024.

[68] Efficiencies presentation, 25th November 2024, Slide 156 on Efficiency improvements – Tracking.

asked if WaterNSW could provide any more information on the delivery of future efficiencies delivered through digital initiatives, and the answer was to all intents and purposes that this is not possible[69]:

> *While we have committed to an annualised 1% efficiency across the business we have not yet determined in detail how we will achieve this. We are focussed on several cross portfolio opportunities while encouraging portfolios to consider "localised" cost saving opportunities.*
>
> *The three "big rock" initiatives will result in reduced costs particularly in Operations and Digital but will also result in savings in other parts of the business. Furthermore the benefits associated with any of these or other initiatives may arise in one portfolio with much of the effort to achieve them being provided by another.*
>
> *So for example, revised digital systems will largely result in cost efficiencies in Operations. Changed procurement or contracting activities will provide benefits across several other portfolios and the land strategy will help absorb overhead costs and potentially reduced costs in Operations and in land tax.*
>
> *Attempting to break these down into specific portfolios would be somewhat arbitrary. However, all initiatives have an owner who is responsible for delivering the capability and driving the benefits. These will be tracked and reported to the Executive throughout the determination period.*

In terms of specific programs, we have made the following observations:

- For Asset Lifecycle Management, this program represents the largest total Economic Benefits, made up of both hard and soft benefits, and *"encompassing advantages for customers and business operations"* [70]. However, we are not convinced that the hard (financial) benefits will actually lead to efficiency savings as it is described as relating to *"Improve data quality and accessibility which would help to enable WaterNSW to optimise its assets life cycle management. Maintenance sequence and replacement decision"*. In addition, $4.6M of the $4.9M will only be realised in FYs 31 to 35 despite steady expenditure proposed across FYs 26 to 30.
- For the Water Insights Portal (total cost $7.8M), we think that while many of the benefits that are stated, while desirable, are not sufficiently or strongly justified (e.g. Community engagement, Community information & education, Customer notification), and where efficiencies are identified, they are not quantified.

Overall, our assessment is similar to previous reviews, where we have identified that identification and delivery of efficiencies associated with digital investments is an area where we believe there is room for improvement.

5.3.1.3 Benchmarking

Benchmarking digital expenditure allows for drawing out comparators and identifying useful insight although we recognise that there are some limitations[71], which means it can be something of a blunt instrument.

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[69] Source: WaterNSW RFI W-5(b).

[70] With a total cost of $15M, it is stated that the program delivers $23M in realised benefits, comprising $4.9 million in hard benefits and $18.2 million in soft benefits. Source: Summary of Benefits - BCR (Asset Life Cycle) in WaterNSW RFI SA-25 response.

[71] Limitations include: (1) Some qualitatively different characteristics within Australia between urban water utilities compared with bulk water suppliers, and when comparing overseas they may have serve populations with very different geographic and climatic operating environments; (2) Some water utilities include Operational Technology spend alongside their Information Technology budgets which would mean they are significantly

We include below our analysis of WaterNSW's expenditure and also the benchmarking analysis that we have access to for comparison. WaterNSW has not carried out any formal benchmarking of its own for the current period[72].

It should be noted that we have considered two scenarios for the next price path, firstly that based on WaterNSW's proposed total expenditure for Greater Sydney, Rural Valleys and WAMC in Scenario 1, and also based on the same total expenditure in the current price path in Scenario 2. This is because we believe the latter is more representative of the likely outcome from this review process whereby the totex will be reduced significantly. The key points to note are as follows:

- WaterNSW's digital spend is forecast to be 9.7% combined for the current price path as a percentage of total expenditure (or 11.7% for only Rural Valleys).
- The forecast for the next price path is 10.6% based on WaterNSW's proposal, or 19.3% based on our adjusted totex assumption (respectively 12.5% and 18.8% for only Rural Valleys).
- The range of technology spend is typically between 3.2% to 5.5% of total costs or revenue based on other data we have available (Sydney Water would be considered an outlier at 7% in the current price path).

Table 5-4 – Digital expenditure analysis for Greater Sydney, Rural Valleys and WAMC combined

	Current period actuals and FY25 forecast	Next period proposed (Scenario 1)	Next period adjusted totex (Scenario 2)
% digital capex of totex	4.7%	4.8%	8.7%
% digital opex of totex	5.0%	5.8%	10.6%
% digital of totex	**9.7%**	**10.6%**	**19.3%**
Digital capex split	*48.4%*	*45.2%*	
Digital opex split	*51.6%*	*54.8%*	

Source: WaterNSW Attachment 11 Digital spend and analysis of SIR

Table 5-5 – Digital spend benchmarking analysis from Australia, UK and globally

Comparisons	Digital totex as % of total expenditure	Costs or revenue?
Deloitte Chief Information Officer cross industry global survey (2018)	3.6%	Total revenue
Gartner survey of global mid-sized utilities (2022)	4.2%	Total revenue
Sunwater 2026-29 from 2024 Price Submission	3.7%	Total revenue
SA Water Regulatory Business Plan (2023)	3.9%	Total revenue
Yarra Valley Water 2023-28 Price Submission	5.2% or 6.5%[73]	Total revenue
Northumbrian Water (UK) 2015-2020 Business Plan	3.2%	Total costs
Yorkshire Water (UK) 2015-2020 Business Plan	4.3%	Total costs

larger, as is the case with WNSW and Sydney Water, while in other utilities these costs sit within projects; (3) There are sometimes limited opportunities for economies of scale with digital expenditure so relatively small organisations have to spend a larger proportion of their total expenditure to address the same needs or requirements; and (4) Businesses may be at different points in their investment cycles and/or level of digital maturity.

[72] Source: WaterNSW RFI SA-12.

[73] For Yarra Valley Water, the percentage depends on whether an "at risk" item of expenditure is included or excluded from the analysis. It would be 6.5% if included although FTI Consulting suggested that it was more appropriate to exclude.

Comparisons	Digital totex as % of total expenditure	Costs or revenue?
Severn Trent Water (UK) 2015-2020 Business Plan	5.0%	Total costs
Anglian Water (UK) 2015-2020 Business Plan	5.0%	Total costs
Sydney Water 2026-2030 from 2024 Price Submission	5.5%	Total costs
Sydney Water 2021-2025 Actuals and Forecast	7.0%	Total costs
WNSW 2021-2025 Actuals and Forecast	9.7%	Total costs

Sources: Analysis from Gartner, "IT Key Metrics Data 2023: Industry Measures - Insights for Midsize Enterprises", December 2022; Deloitte Insights, CIO Insider: Reinventing tech finance: The evolution from IT budgets to technology investments. January 2020; FTI Consulting, Review of ICT capital expenditure for SA Water for ESCOSA, November 2023; Atkins Cardno Sydney Water Corporation Expenditure and Demand Forecast Review for IPART, 2020; AtkinsRéalis Sunwater Expenditure Review, 2024; Sydney Water Pricing Submission 2024 and associated AtkinsRéalis analysis; and WNSW Attachment 11 Digital expenditure.

Notwithstanding the limitations that we recognise, there is no doubt that WaterNSW is a significant outlier in terms of its digital expenditure even based on its proposed level (10.6%) and it would be 'off the scale' based on the more likely adjusted totex (19.3%). This could suggest either that WaterNSW is not operating at an efficient level of digital expenditure or that its circumstances and/or operating environment are so different from all the other comparators to justify much higher levels of digital expenditure, e.g. an argument could be made because WaterNSW's focus is on managing as opposed to building new assets so the denominator is lower than with many of the comparators.

5.4 Recommended expenditure scenarios

5.4.1 Current Price Path

For the current price path, the one area where we have identified that a downward adjustment from the $53.5M expended should apply relates to the WAVE program for inefficient expenditure.

This relates firstly to the $1M reduction for the specific inefficiencies acknowledged by WaterNSW across the Customer and Water Markets, Water Delivery and Visualisation and Water Data (WD) sub programs for features de-scoped ($600k), the re-purposing of the mapping tool ($300k) and re-building of manage association feature ($100K).

The two other scenarios we have set out are justified on the grounds of the significant reduction in benefits now being delivered, and depending on the methodology employed would result in efficient expenditure of either $36.5M or $6M.

Table 5-6 – Digital ex post adjustment (across all three Determinations)

Base year adjustment	WaterNSW proposal	Upper range	Lower range	Very low range
Approach		WaterNSW identified inefficiencies	Future enabled benefits approach So cost = net benefits. Assuming 15 years of savings at $3.1M p.a., the total benefit/bankable benefit ratio and further costs of $10M (highly uncertain)	This equals the benefits realised to date
Expenditure (all valleys)	$53.5M	Allow $52.5M (-$1M)	Allow $36.5M (-$17M)	Allow $6M (-$47.5M)
Advantanges			Focuses on bankable benefits that should be enabled in the future	Holding WNSW accountable for non-delivery of benefits
Risks/ disadvantages	Does not take account of other benefits not delivered	Does not take account of other benefits not delivered	We do not have a clear breakdown of how much more it will cost to deliver these benefits in the future price path	Benefits are not the only driver for WAVE. This approach would be on an exception basis as not applied elsewhere

Source: WaterNSW RFI 6 W-E W-4E and slide 29 in Pack 2a Digital Presentation

5.4.2 Future Price Path

We have considered WaterNSW's future expenditure proposals and concluded the following:

- There are no activities or projects that could be considered outside the scope of the regulated service.
- Some business cases are still in development, and while we consider this as standard practice for digital expenditure and does not in itself justify a scope reduction, the benefits and in particular any efficiencies, are not sufficiently robust or compelling to justify the proposed level of investment.
- Some step change in digital opex costs can be explained by the general trend, which is outside of WaterNSW's control, of how digital solutions have evolved and leads to an increase in total expenditure in the current, and also by extension, the future price periods.
- WaterNSW proposed level of digital expenditure is significantly in excess of other utilities. WaterNSW has not made the case that its circumstances and/or operating environment are so different to justify a much higher level of expenditure.

5.4.2.1 Upper range scenarios

Capex

We have made our recommendations for the upper range scenario under the headings of retain, reduce and remove.

Retain

Overall, we have concluded that no adjustments should be made for the following for the upper range scenario as sufficiently justified both in terms of costs and benefits:

- Communication Network Upgrade ($20.3M) which supports better communications and technology in the field and drives better safety and increases in productivity.
- Asset lifecycle management and planning ($15M) based on delivering essential foundation systems for field mobility, promoting efficiency and better decision making as well as operational safety, although as noted above we think the scale of and speed that bankable efficiencies are delivered could be improved.
- Renewals End User Computer Equipment ($6.8M) because replacement costs have been built up on average lives (actuals) as opposed to expected lives, so there is already evidence that WaterNSW sweats these assets.
- Integrated Business Planning and Optimisation ($6.3M) based on delivery of efficiencies amongst other benefits.
- Cybersecurity Resilience ($3.8M) based on enhancement of cyber security maturity and which are not already included in other programs[74].

Reduce

We are proposing a 40% reduction for programs whose level of costs are not sufficiently justified:

- Future Workforce ($4.3M) costs are not sufficiently justified and the delivery of efficiencies is also uncertain.
- Risk Safety & Compliance ($3.2M) costs are not sufficiently justified. We also think WaterNSW should be looking at risk monitoring tools already on the market as there may for example be a viable Software as a Service option rather than looking to build a bespoke tool, so this could feasibly become a lower cost opex solution.

Remove

We are proposing that the following should be removed:

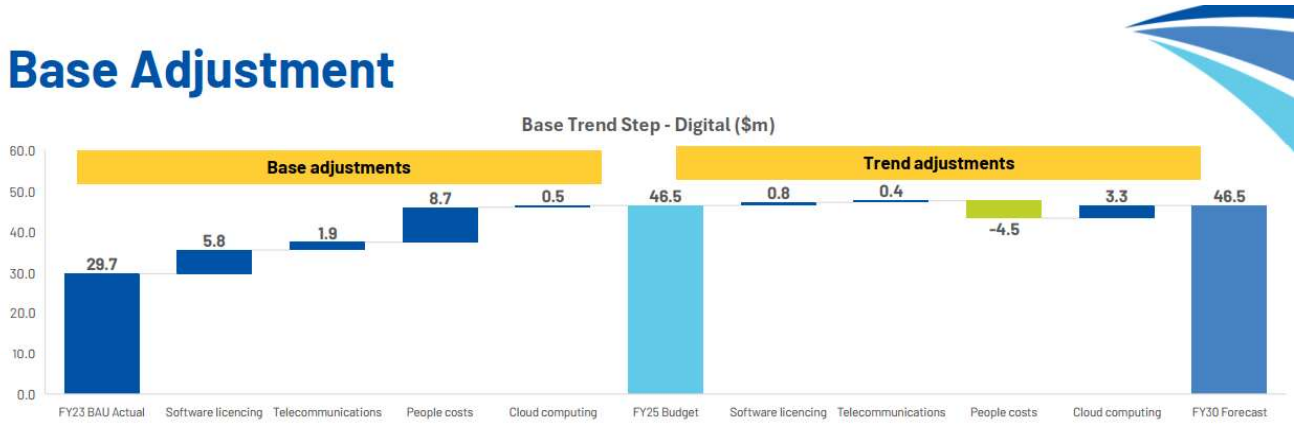
- Water Insights Portal ($7.8M) is not sufficiently justified. The benefits around community engagement, community information and education and customer notification while desirable are not mandatory or core. Based on a top down prioritisation this program could therefore be removed, or WaterNSW would need to deliver efficiencies elsewhere to take forward some or all components of this project in the next price path.
- Digital Operations Support ($3.3M) is described by WaterNSW as about examining the feasibility of advanced operations support for monitoring technologies and automated control systems, delivering enhanced operational capability. While we concur with the pursuit of enhanced operational capability, we do not believe the expenditure is justified to examine the feasibility. We think there are other mechanisms which provide better value for money such as horizon scanning and engagement with other water utilities to identify areas for future investment, and that any investment should be directed to implementation of a specific project or projects.

Opex

We have accepted the step changes proposed by WaterNSW for Telecommunications and Cloud Computing. We do not believe the People costs has been justified and we have also reduced the level of Software licencing increases.

[74] Overall security expenditure is higher. This is because under WNSW's DevSecOps model security is already embedded in the spend profiles for the relevant programs or projects. This is a logical approach which aligns with good practice.

Figure 5-2 – Step changes proposed for Digital ($M)



Source: Slide 7 in WNSW Presentation Pack 3 Future Period Opex Expenditure

People

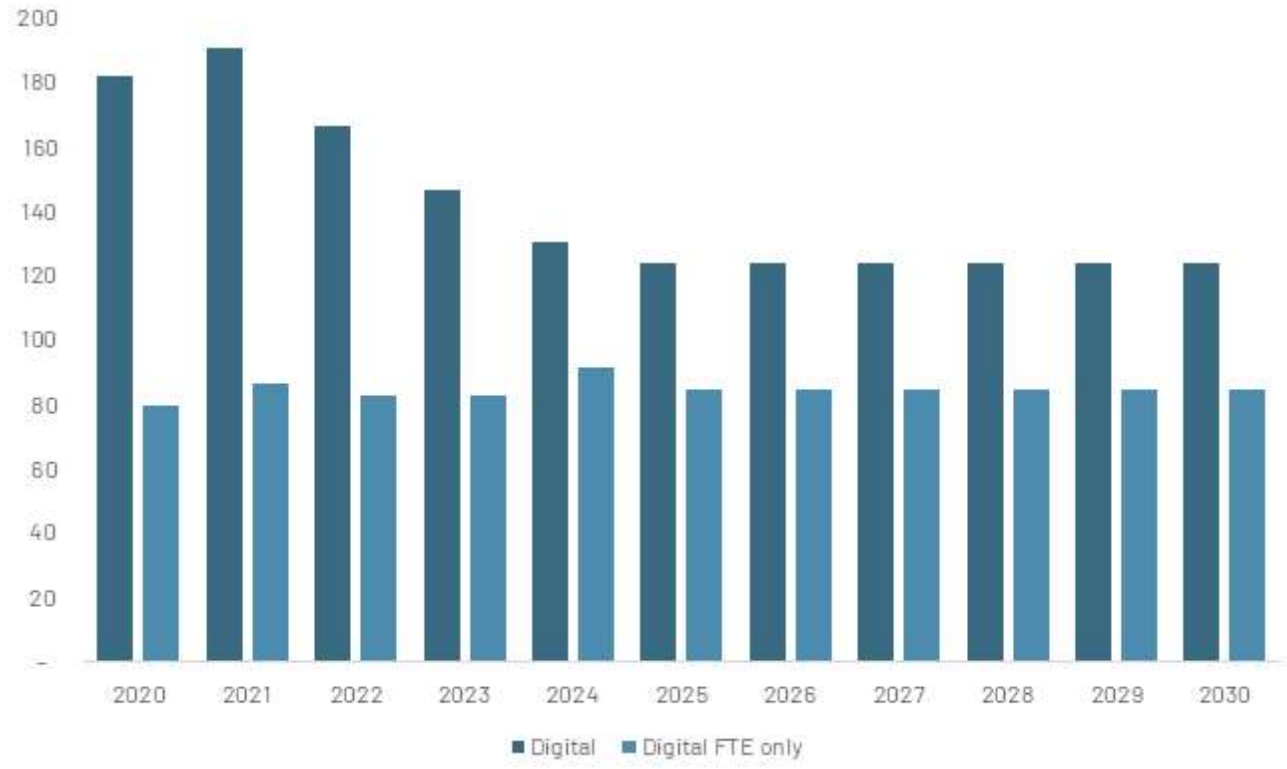
A significant increase in digital opex relates to People, with an increase in costs of $8.7M. The justification for the People costs increase is that this: *"… will increase to support the delivery of WaterNSW's strategic objectives over the 2025-30 determination period. WaterNSW is investing in closing the gap on critical new capabilities to increase efficiency of delivery and improved services. Our investments towards uplifting our capabilities fall under three key areas, these are:*

1. *Closing critical capability gaps on a prioritised basis, e.g. uplift in cybersecurity and operations teams to ensure adherence with Essential 8 maturity needs*
2. *New capabilities required as a result of new legislative and regulatory compliance obligations e.g. Operating Licence, SOCI Act amendments, Cyber Legislation, Privacy Act*
3. *Resources to support increasing demands from the NSW water sector e.g. Creation, maintenance and negotiation on data sharing agreements, costs to manage and comply with the data sharing agreements and management of Digital and Information Office (DIO) support arrangements".*

There are already significant capex and opex allowances to uplift the capabilities in the areas identified by WaterNSW. Furthermore, the digital headcount, as highlighted below, is remarkably stable over the future price path (it was 130 in FY24, and then 124 forecast from FY25 to FY30).

We asked about the trend adjustment of -$4.5M and it was explained that this is only delivered in FY30 and does not relate to the digital headcount reducing (hence why the numbers below are stable), and relates instead to internal staff moving from opex to undertaking *"..increased capital improvement works rather than engaging external contractors*" and thus having their costs capitalised.

Figure 5-3 – Digital headcount FTE and Contractors actuals and forecasts from 2020 to 2030



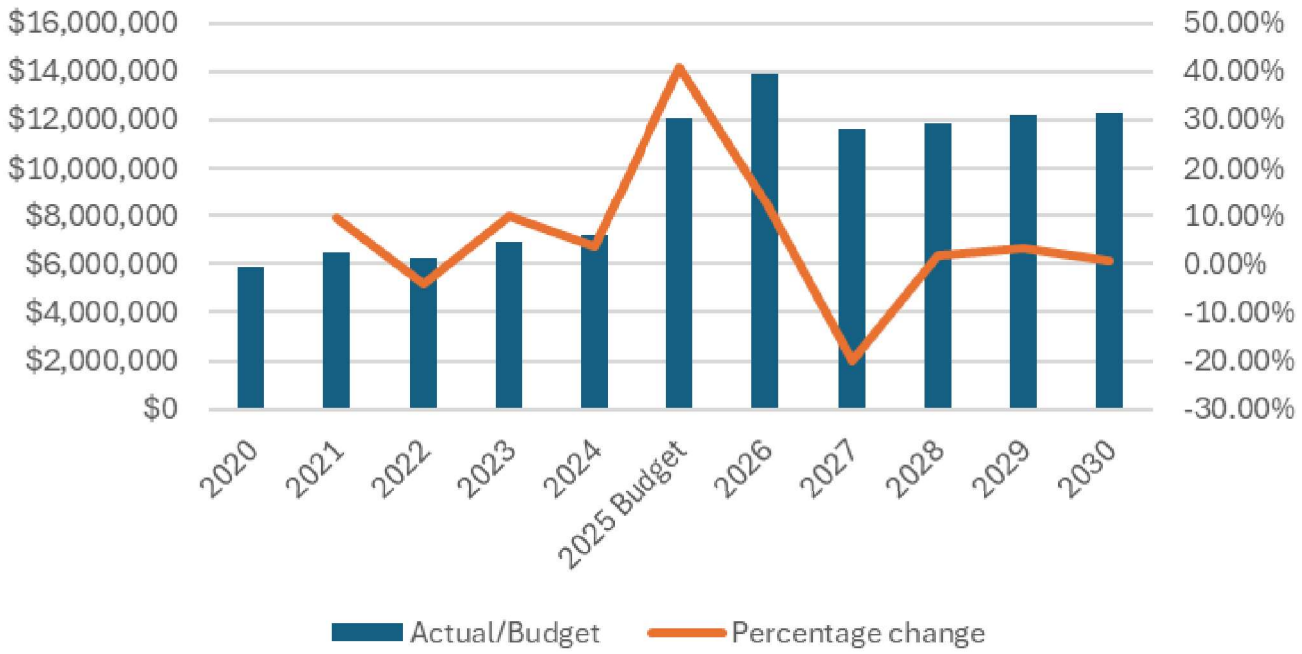
Source: WaterNSW RFI 4-C Digital FTE & Contractors 2020-30 Graphs and Tables

The significant increase in People costs has not been justified. The numbers are stable and the reduction proposed herein in the digital capex investment program will also impact on the need for that headcount. In addition, the increase in wider WaterNSW headcount has not been supported by this review, so some of the assumptions on additional people to serve are not expected to materialise. This equates to a reduction for Rural Valleys of $8.3M of its total opex over the five year period.

Software licensing

We have reviewed the case put forward by WaterNSW for the significant increase in software licensing costs. The chart below provides both the actual software licensing costs from FY20 to FY24 and the budgeted costs from FY25 to FY30. Figure 5-2 sets out a step change in costs of $6.6M.

Figure 5-4 – Software licensing and maintenance costs



Source: WaterNSW RFI W-4A

WaterNSW highlights that it *"..is anticipating significant price increases as major software contracts are renegotiated in the first years of the forward cycle"* [75]. They have also cited that four software platforms represent over 55% of their software licences and are expected to increase and that they have little to no choice because of the way that the market functions. This has translated into an increase of $33M in the future price path. [76] [77]

We concur that the increases in licences are over and above inflation. However, we think that WaterNSW has put forward a worst case scenario. We think an efficient approach would be to do more to restrict the number of licences and to reduce the number of applications to offset other increases in costs. In addition, the increase in wider WaterNSW headcount has not been supported by this review, so some of the assumptions on number of licences required will be subject to downward revision. Moreover, we have seen no evidence to justify the huge spike in costs between FY24 and FY25. We are proposing an increase which aligns much more closely with the increases in software costs we have seen requested elsewhere over the same period. This translates into an increase of $12M over the future price period, and a reduction for Rural Valleys of $3.8M of its total opex.

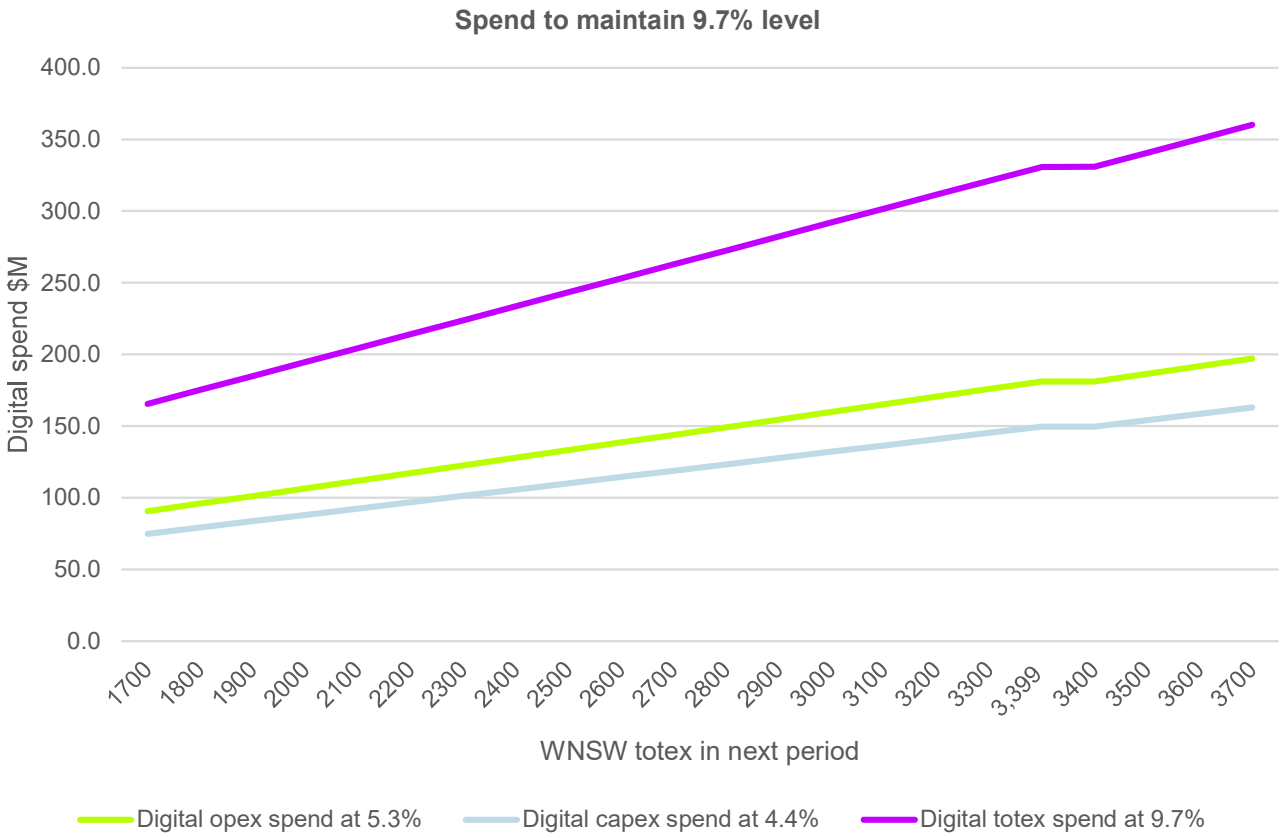
5.4.2.2 Lower range scenario

For the lower range bound, for any reductions over and above the upper range, the methodology that we have applied is to maintain the 9.7% overall rate of digital spend as a percentage of total expenditure from the 2021 to 2025 period. This rate is still significantly higher than any comparator from benchmarking data but it would represent a very significant reduction from WaterNSW's forecasts. Any adjustments should be done on the same basis of the existing split between digital capex and opex, which is 45.2% and 54.8% respectively[78].

[75] Pricing proposal, presentations and this quote is taken specifically from WaterNSW RFI W-4A.
[76] Source: WaterNSW RI W-4G.
[77] Source: WaterNSW Digital Presentation, Slide 5.
[78] These are rounded values for simplicity, the exact percentages have been provided to IPART.

For illustrative purposes, if the total expenditure allowed is $1,800M, this would translate into a digital capital program of $79.3M compared with WaterNSW's proposal of $3,399M totex and $163.M digital. Specifically for Rural Valleys, this would reduce digital capex from $54.4M to $27.1M and digital opex from $69.1M to $32.8M.

Figure 5-5 – Digital spend required to maintain 9.7% ratio of totex



Source: AtkinsRéalis analysis

Table 5-7 – Digital spend at 9.7% of totex

Totex	Digital opex - 5.3% of totex	Digital capex - 4.4% of totex	Digital totex - 9.7% totex	Comments
1,700	90.7	74.9	165.6	
1,800	**96.0**	**79.3**	**175.4**	Capex, opex and totex digital if 9.7% is applied to $1,800M totex
1,900	101.4	83.7	185.1	
2,000	106.7	88.1	194.8	
2,100	112.0	92.6	204.6	
2,200	117.4	97.0	214.3	
2,300	122.7	101.4	224.1	
2,400	128.0	105.8	233.8	
2,500	133.4	110.2	243.6	
2,600	138.7	114.6	253.3	
2,700	144.0	119.0	263.0	
2,800	149.4	123.4	272.8	
2,900	154.7	127.8	282.5	
3,000	160.0	132.2	292.3	
3,100	165.4	136.6	302.0	
3,200	170.7	141.0	311.8	
3,300	176.0	145.4	321.5	
3,399	**181.3**	**149.8**	**331.1**	WNSW's proposed totex for GS, RV and WAMC if 9.7% applied
3,400	181.4	149.9	331.2	
3,500	186.7	154.3	341.0	
3,600	192.1	158.7	350.7	
3,700	197.4	163.1	360.5	

Source: AtkinsRéalis analysis

We are not suggesting that WaterNSW could live within this envelope of expenditure. While we think the theory is sound, in practice we think there are significant risks in adopting such an approach to reducing WaterNSW's digital expenditure. The first would be that WaterNSW would have to prioritise its investments based on mandatory obligations, such as cyber security, as well as maintaining capability for basic business needs. There is the potential risk that WaterNSW would have to carry on using systems that are no longer supported by suppliers, with the inherent challenges that this poses. It is not clear that this level of expenditure would be sufficient and it could expose WaterNSW to operational, regulatory and other strategic risks. In addition, this is also likely to jeopardise the implementation of programs that deliver future efficiencies as well as other non-financial benefits both in 2026-30 and also the 2031-35 periods.

In response to our challenge to set out its bare minimum tolerance estimate, WaterNSW responded[79] as follows in relation specifically to digital capital expenditure, although much of the same would overlap and apply to operational expenditure too:

1. ***Bare Minimum Tolerance Estimate***

[79] Source: WaterNSW RFI W-6 (a).

The bare minimum technology investment required to sustain WaterNSW's critical services over the forecast period is approximately $72.32million, representing a reduction of 31% from the proposed $104.9 million[80].

This reduction, while technically feasible in the short term, exposes WaterNSW to high operational, regulatory, and strategic risks. As such, the recommended investment of $104.9 million remains essential to delivering secure, compliant, and future-ready services.

2. ***Risks Associated with Lower Investment Levels***

Reducing investment to the bare minimum poses significant risks across operational, compliance, and strategic domains:

a. Operational Risks:

- *Reduced Resilience: Increased vulnerability to system failures due to delayed upgrades of aging infrastructure (e.g., SCADA systems and telemetry).*
- *Service Disruptions: Potential delays in responding to customer requests and diminished capacity for real-time monitoring.*

b. Regulatory Compliance Risks:

- *Non-Compliance: Inadequate investment in cybersecurity and regulatory reporting systems could lead to breaches of SOCI or other legislative requirements.*
- *Missed Obligations: Failure to meet obligations under water reform initiatives and ministerial directives.*

c. Strategic Risks:

- *Missed Efficiency Gains: Delayed implementation of automation and advanced analytics will hinder WaterNSW's ability to optimize operations and achieve efficiency targets.*
- *Customer Impact: Reduced investment in customer-facing technologies could negatively impact service delivery and public perception.*

d. Workforce Risks:

- *Talent Retention Challenges: Operating on bare minimum resources may result in higher workloads, decreased morale, and difficulty attracting skilled staff.*

3. ***Key Areas of Impact at the Bare Minimum Level***

- ***Cybersecurity:*** *Basic security measures maintained, but advanced threat protection may not be implemented, increasing risk of breaches.*
- ***Core IT Services:*** *Focus limited to essential maintenance.*
- ***Operational Technology:*** *Deferral of critical upgrades to water management and monitoring systems, increasing the risk of equipment failures.*
- ***Customer Service:*** *Minimal investment in digital platforms, resulting in potential inefficiencies and slower response times.*
- ***Impact on Data Services to the Ecosystem:*** *Reduced investment in data integration and analytics services would hinder the ability to share critical water data with ecosystem partners effectively, such as government agencies, researchers, and third parties, limiting collaboration and innovation in water resource management.*

Summary: *While a bare minimum investment of $72.32 million may sustain basic operations, it exposes WaterNSW to high risks across compliance, operations, and customer service. It is important to note that this bare minimum figure is over and above the base operational expenditure (Opex) required to maintain current levels of service.*

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[80] We do not recognise the $104.9M value quoted. We recognise $163.5M for the total capital expenditure of which $112M represents the Technology Roadmap initiatives.

The additional $32.59 million ensures these risks are mitigated effectively, enabling WaterNSW to meet its obligations and support its strategic vision.

We strongly recommend maintaining the $104.9 million investment level to balance risk and achieve sustainable, forward-looking outcomes for WaterNSW and its stakeholders.

5.4.2.3 Summary of adjustments for Rural Valleys

We have summarised potential adjustments to digital spend below. We recommend alongside any decision about the level of digital expenditure that WaterNSW undertakes a root and branch review in order to understand why it appears to be an outlier compared with other utilities.

Table 5-8 – Proposed adjustments to digital spend for Rural Valleys in current and future periods

Area	Not strongly justified in current period	WaterNSW proposal for next period	Upper range scenario	Lower range scenario
Approach	WAVE expenditure identified by WaterNSW as inefficient and also reduction where benefits have not been realised	Very significant increase in capex and opex compared with the current period	Reduction of Future Workforce and Risk, Safety & Compliance, and removal of capex for Water Insights Portal and Digital Operations Support Opex reductions for People costs and Software licencing costs.	Align with digital spend at 9.7% of totex for amount over and above upper range scenario. The exact value would depend on the size of WaterNSW's revised total expenditure. For illustrative purposes, we have selected a value of $1,800M, which translates into $175.4M.
Capex	Range of -$1M to an allowance of $36.5M or $6M.	$54.4M	$46.6M	$27.1M
Opex (total for FY26 to 30)	N/A	$69.1M	$56.9M	$32.8M
Risks	We do not have a clear breakdown of how much more it will cost to deliver these benefits in the future price path. Benefits are not the only driver for WAVE	Inefficient level of expenditure, outlier compared with rate of digital expenditure in other utilities	Potentially some efficiencies at risk and also customer experience impacted by capex reductions. Cost control measures will be required to deliver against reduced opex	WaterNSW would have to focus on mandatory obligations and maintaining basic business needs. Exposure to a range of potentially significant operational, regulatory compliance, strategic and workforce risks
Advantages	Accountability for non-delivery of benefits.	Deliver full capability and all identified benefits, and future proofing WaterNSW for emerging challenges	Still represents a significant increase on current period and much higher rate of digital totex compared with other utilities	WaterNSW's digital investment would still be at the higher end of benchmarked costs

Source: AtkinsRéalis analysis

APPENDICES

Appendix A. Scope of Works

This appendix presents an extract from the IPART scope of works for water expenditure reviews for WaterNSW as provided at tender stage, for information purposes. We note that some of these items (i.e. Task 3 and much of Task 4) are covered in a separate review document.

Objectives

The objectives of this consultancy are:

- a high-level review of each business's proposal in terms of the expenditure it is planning, and how that expenditure is justified
- a more detailed review of key elements of each business's proposed operating expenditures and capital expenditures for efficiency and deliverability
- an overall assessment of whether the level of risk each business is taking (both financially and operationally) is appropriate.

Description of services

Tasks in a complete expenditure review

Assuming IPART chooses to conduct a complete expenditure review (see quoting section below), there are 2 main tasks:

- Review of historical and forecast operating expenditure (OPEX)
- Review of historical and forecast capital expenditure (CAPEX)

Task 1 Detailed review of operating expenditure

As part of the price review, IPART will make a decision on the efficient operating expenditure in each year of the next determination period.

To assist IPART in this task, the consultant is required to assess the adequacy, appropriateness and efficiency of the business's levels of operating expenditure. The consultant must assess and report on the business's operating expenditure: for the period from 1 July 2025 to 30 June 2030.

1. Historical operating expenditure: for the period 1 July 2020 to 30 June 2025.

   In undertaking this task, the consultant should:

   a. Review the variations in operating expenditure from what was allowed in the 2020 price determination for the business and, where assessed as material, comment on the reasons for this variation
   b. Comment on the extent to which the operating expenditure incurred since the last determination has delivered the service standards on which the expenditure allowance was based

2. Proposed operating expenditure: for the period 1 July 2025 to 30 June 2030.

The consultant must assess, report and provide recommendations on the efficient level of proposed operating expenditure. Under the 3Cs framework, businesses will use a 'base-step- trend' approach to calculating operating expenditure. That is, expenditure will be made up of:

a. Base — the efficient recurring expenditure required each year (reflecting genuine recurring expenditure and taking into account an efficient business's costs on average over the range of likely conditions over the period.)
b. Step — changes that are typically the result of new requirements or new ways of doing things, so past expenditure or trends cannot predict this change in expenditure.
c. Trend — the predictable change in recurring expenditure over time due to input price changes, population/demand growth and improvements in productivity.

The consultant will need to review all 3 components, assessing whether assumptions are reasonable, and costs are efficient. In particular, it will be essential to interrogate the 'base' component of costs, because costs in this base feed into financial incentive mechanisms.

In making its recommendations, the consultant should consider how a reasonably efficient business in a reasonably competitive market might respond to the challenges of those market forces over time. This may include considering how a business in that environment would:

- have sought to optimise its mix of operating cost inputs
- invest in business efficiency initiatives and systems
- seek to engage with third-party providers, or in this case the private sector.

Task 2 Detailed review of capital expenditure

The consultant will be required to undertake a detailed review of the business's planned capital expenditure from 2024-25 to 2029-30. This should include an assessment of the reasonableness of the business's capital program as a whole, within the context of its long-term plans and the assumptions underlying them.

In undertaking this task, the consultant must for each year from 2024-25 to 2029-30 make recommendations on the efficient level of capital expenditure in each service, namely:

- Water
- Wastewater
- Stormwater.

In making its recommendations, the consultant should have reference to the maturity and effectiveness of WaterNSW-Rural's and WAMC's key business systems and processes, including their:

- Asset Management System
- Risk Management System
- Procurement processes
- Cost estimation,

In making its recommendations, the consultant should consider the deliverability of the proposed capital programs.

While not a prominent feature of the 3Cs framework, we may also require the consultant to review the efficiency of capital expenditure in certain circumstances, or as required. IPART will agree with the consultant up-front (once the business proposals are in) if this is required.

Providing a range of efficient expenditure

In assessing expenditure, the consultant should provide a range of efficient expenditure (not a point estimate). The consultant should also provide clear advice to IPART on the factors that would inform how it should reach a decision within that range. This is in recognition that businesses' proposals are multi-dimensional – a balance of cost, performance, and risk, and so a degree of uncertainty in project scope and costs is inevitable.

The range should cover 2 scenarios:

- Low case: the minimum expenditure that the business needs to conduct its essential operations (ie any projects that could be deferred, are deferred)
- High case: the efficient expenditure that the business needs in order to continue to grow and set up for success into the future.

Task 3 Review of MDBA and BRC costs

Both the Murray Darling Basin Authority (MDBA) and the Border Rivers Commission (BRC) recover costs from WaterNSW-Rural and WAMC for the respective services they deliver to licence holders. IPART does not regulate these inter-jurisdictional organisations directly. However, the prices we set need to cover the efficient costs that they deliver, as their respective costs are recovered from prices that WaterNSW-Rural and WAMC charge their respective customers.

For each of WaterNSW-Rural and WAMC the consultant must review the proposed MDBA and BRC costs, including advice on appropriate user share and allocation between WAMC and WaterNSW-Rural.

Task 4 Additional tasks for the review of WaterNSW-Rural

The consultant must undertake:

1. A targeted review of WaterNSW user shares

2. A review of WaterNSW's consent transaction and miscellaneous charges

3. A review of WaterNSW's performance against past output measures and to propose new output measures for the next determination period (in line with operating and capital expenditure recommendations).

Considerations in conducting the expenditure review

In reviewing both capital and operating expenditure, consultants should have regard to a range of broader issues including:

1. Investment planning and asset management practices and processes
The consultant should review long-term capital planning so that the medium term (i.e., proposals for the 5 years of the determination period) can be considered in the context of its longer-term plans.

The consultant should consider:

a. Whether the longer-term capital investment strategy is the most efficient, and whether processes supporting this including procurement processes, whole of life cycle planning and assessment of capital and operating expenditure trade-offs are best-practice and therefore likely to result in prudent and efficient investment decisions

b. The key assumptions that are driving expenditure (e.g., asset replacements, demand forecasts, growth assessments, environmental requirements, licensing standards), including comment on the reasonableness of these assumptions and how they have been considered and tested by the business

c. The consistency of the business's proposed medium term capital expenditure program with its longer-term program of capital expenditure

d. The robustness of systems for linking asset management decisions with current and future levels of service and performance requirements

In 2023, IPART commissioned a FTI Consulting to review and make recommendations to IPART on WaterNSW's key systems and processes. Consultants should consider that report, and rely on its findings as necessary, in any capacity they deem appropriate. FTI's Final Report to IPART will be made available to consultants.

2. Attitude to risk

Rural bulk water suppliers are monopoly service providers, and so may not face strong market forces that govern their attitude to risk. The consultant should look at WaterNSW-Rural and WAMC's approach to risk wholistically, and comment on:

a. Whether the rural water businesses are optimising trade-offs between prices and service levels efficiently (that is, in a way that a competitive business might)

b. Employing an appropriate level of risk when planning for asset renewals and service growth. This may include whether:

— risk appetite is appropriate

— actual and/or forecast risk position is in line with the efficient risk appetite.

c. The sophistication of any risk systems the businesses use to inform decision-making.

3. Ambition in cost efficiency strategy

Under the 3Cs model, businesses are required to propose and justify a cost efficiency strategy which includes an annual efficiency factor for both CAPEX and OPEX. The consultant should review this efficiency strategy and assess whether it is justified/appropriate.

Appendix B. Response to WaterNSW's feedback on the draft expenditure review reports

IPART appointed Aither to carry out the expenditure review for WaterNSW's Greater Sydney Determination in parallel to this review.

WaterNSW issued a letter to IPART on 19 March 2025 setting out a response to both the Rural Valleys and Greater Sydney Draft Expenditure Reports. This included a 45 page attachment setting out the details of WaterNSW's concerns.

Aither and AtkinsRéalis have prepared a joint response to the points raised by WaterNSW using a template provided by IPART. This response is summarised below.

Table B-1 – Response to the points raised in the section "Issues common to both expenditure review reports"

WaterNSW feedback	WaterNSW response page reference	Consultant Response
Capital Expenditure		
Program level recommendations contradict project findings	p. 7	We do not consider that there is a contradiction. The expenditure reviews have examined a sample of projects/programs and drawn conclusions from these where necessary. This is standard practice which WaterNSW will be familiar with from previous reviews. It is not clear how there can be a contradiction at Valley level in the report given that it sets out Determination not Valley level figures.
Findings on policy-related projects have not addressed Government policy requirements	p. 4, p. 7-8	Our recommendations are part of an expenditure review and are not intended as a binding constraint on the need for projects. The ranges are based on the logic agreed with IPART and set out in the report. Neither the Warragamba Dam Resilience project nor the selected solution is specifically required under Dams NSW legislation or regulations. We recommend the Final Business Case be undertaken, and if an option is determined to be appropriate it should proceed to construction. WaterNSW may recover costs through a cost pass through mechanism or similar. Based on the material reviewed, Dam Safety NSW has not made a specific direction to WaterNSW in relation to Cataract Dam. If it is the case that this direction exists it is expected that it would form part of the regulatory submission.
Lack of understanding of WaterNSW's regulatory obligations	p. 8	We can confirm that we are aware of these regulatory obligations and have taken them into consideration in our review.

		We are only in a position to recommend expenditure for which we have been provided robust justification and evidence of ability to deliver. The reasons for the inclusion or otherwise of capex in the recommended ranges are set out in our reports.
Consultants did not consider customer feedback	p. 4, p. 8-9	We confirm that we have considered customer feedback and WaterNSW's customer and community engagement as summarised for example in Appendix 2 of its submission. IPART's Handbook sets out that it expects "businesses to demonstrate how they ensure customers understand the overall impact of their preferences and willingness to pay". In its submission WaterNSW makes it clear that it has not assessed willingness to pay. Instead it presented things such as a ranking of customers priorities as support for its proposed significant increases in expenditure. On the specific point raised in the letter about customer support for Water Insights we note that this appears to be ranked 32nd in the customer advisory group ranking of priorities. We do not consider this to be robust justification for expenditure.
Early engagement review (by FTI consulting) did not appear to be incorporated	p.4-5, p. 9-10	We can confirm that we have read and taken into consideration the early engagement review undertaken by FTI. We do not consider the findings of the expenditure review to be inconsistent with those of the early engagement review. The FTI review focused on systems and processes whereas our review focused on the pricing proposal and supporting documents. We note that the letter does not give specific examples of inconsistencies. Many of the 'cross-cutting' comments in the Rural Valleys report are based directly on what was said by WaterNSW staff at interview and in some cases the information used as the justification for the business's proposed opex step changes (e.g. the data gaps justifying the crane safety opex step change).
We note that both consultants recommend reductions to some projects and programs that were not raised or prosecuted during the interview or request for information (RFI) process	p. 4	Aither included specific words that limited application of this review to those projects we reviewed (p. iv) and maintains that this occurred in practice. In the Rural Valleys review, given the large number of projects/programs we examined a sample of projects/programs and have drawn conclusions from these where necessary. This is standard practice which WaterNSW will be familiar with from previous reviews.
Aither has incorrectly suggested that WaterNSW has not engaged with Government or Sydney Water on the Warragamba Climate Resilience Project, and that until we do, they imply that there is no justification for the project. Aither also calls out the lack of community engagement, despite the evidence we provided that the project is part of a whole of government initiative under the Hawkesbury-Nepean Disaster Adaptation	p. 5	The records of engagement provided for review do not provide any indication of stakeholder support (or otherwise) for the project, from either community or government. Aither has adjusted the wording in its report

Plan work being led by the NSW Reconstruction Authority, and contained in the jointly developed LTCOP with Sydney Water (Attachment 24 of our submission).		
Operating Expenditure		
Base year assumption: ▪ WaterNSW contends that if the appropriate adjustments are made to the base year, the future operating expenditures are largely unaffected. ▪ FY24 is not a representative base year, and cannot be used without adjustment. ▪ The use of the 2021 Determination for the lower bound is not a reasonable starting point as it relies on forecasts from four years ago that were made under a different regulatory framework ▪ WaterNSW does not accept the consultants' criticism that WaterNSW's use of FY23 as the base year instead of FY24 is misaligned to IPART's Handbook.	p. 10-11	We agree with WaterNSW that the choice of base year could result in the same FY25 forecast, but only if, as specified in the Handbook the efficiency of the base year had been demonstrated, and only appropriate base year adjustments had been applied. As noted in the Rural Valleys report, we consider that WaterNSW has not demonstrated the efficiency of its proposed base year and has proposed numerous adjustments which do not meet the Handbook definition. Whilst the feedback asserts that FY24 is not a representative year in the absence of any analysis or figures to quantify this assertion it is difficult for us to take this into account. We also note that WaterNSW has identified that Rural Valley's overheads may be overstated in FY23 highlighting the challenges of using that as a base year instead.
Inconsistent application of principles/approaches and the 3Cs framework: ▪ Base Year ▪ Base year adjustments ▪ Trends and escalation ▪ Upper and lower bounds ▪ Treatment of SAAS costs	p.3, p. 11-13	We consider that these differences demonstrate how independent the two reviews are and reinforce the fact that two separate reviews have drawn similar overall conclusions.
Comments regarding WaterNSW financial analysis ▪ WaterNSW's view is that it provided substantial analysis outlining the drivers for the variances.	p. 13-14	The Handbook requires that businesses provide reasons for any material deviations over the period. We do not agree that it was "naive to expect any entity should to look to reconcile actual outcomes to assumptions developed in 2020…. The allowance does not and should not require an entity to invest resources in a detailed line by line synopsis of what has changed from 2020 given the magnitude of change". The variance in overheads in WaterNSW's proposed base year (FY23) was +$8.5M which is material at the Rural Valleys level and WaterNSW was not able to provide a robust explanation, even stating that it was "possible that RV's overhead allocation in FY23 was overstated".
Prudent operating costs: ▪ The consultants treat many regulatory obligations as "optional"	p. 14	Where the proposed increase in costs relate to existing regulatory obligations that have not changed, we have assessed this proposed increase against the requirements for a step

and have reduced required expenditure accordingly. ▪ The lower range recommended would result in less revenue than what we receive today, to deliver greater services and functions imposed under our new Operating Licence and a raft of legislative instruments.		change in operating expenditure under the IPART Handbook. If the proposed increase in operating expenditure relating to the existing regulatory obligation does not meet the requirements for a step change, this does not mean that we consider this obligation to be optional, but rather the information provided by WNSW was insufficient to justify a step change in expenditure related to an existing obligation that WNSW has been required to meet under the current regulatory period (and therefore would already have costs in the base year in complying with the obligation).
Base Trend Step: ▪ WaterNSW strongly refutes the statement that WaterNSW has not applied the Base-Trend-Step (BTS) approach in line with IPART's 3Cs framework.	p.14-15	This feedback does not set out any ways in which our statement is incorrect. We address the comments on the different elements of the BTS below.
Base Year Adjustments: ▪ The consultant has stated that only three of the twenty baseline adjustments applied by WaterNSW meet the intent of IPART's Handbook. We do not agree and suggest that the consultant has applied an incorrect interpretation of what could be classified as step changes or a trend component.	p. 15	We can confirm that whether something is classed as a base year adjustment or step change has not significantly affected the recommended expenditure ranges as all of WaterNSW's proposed changes have been assessed and included where justified.
Step adjustments: WaterNSW disagrees with how the consultants have treated the following proposed step changes: ▪ Land management ▪ Crane Safety ▪ Electrical Safety ▪ Opex from New Capex ▪ Grant Expiry	p.16-18	This feedback is largely an assertion that WaterNSW does not agree with the lower range recommendations. It does not set out clearly any ways in which our recommendations are factually incorrect. For lease capex in Rural Valleys, the 'upper' range adjustments to base overheads opex largely take the overhead figures back to FY23 levels before the change in cost treatment. The 'lower' range is also based on the allowance before the change in cost treatment. As such we do not consider change is required. We have amended the report to make this point clearer. On opex from capex, we note that the range of expenditure allows IPART to make these choices in an informed manner. On Rural Valleys electrical safety improvements, we would be open to amending this recommendation if WaterNSW is able to demonstrate that it had no electrical safety expenditure in its prior allowances. For Rural Valleys land management we are not persuaded that WaterNSW did not incorporate land management in its cost base previously. From a GS perspective, the upper bound of the recommended ranges for these step changes reflects that which was proposed by WaterNSW. The lower bound of the range reflects our interpretation of the IPART Handbook in relation to the requirements for step changes.

Trend adjustments: WaterNSW disagrees with how the consultants have treated the following proposed trend changes: ▪ Insurance ▪ Labour	p.18-20	On insurance, four of the five premiums set out in the figure in the Rural Valleys report relate to the Pacific insurance market and one relates to the global market. All are indicative of similar trends. We can confirm that we have considered the case made by WaterNSW for real terms labour cost increases which we do not consider to be compelling.
A flawed approach to providing alternative opex forecasts: ▪ Lower bound approach using FY22 determination. The lower range recommended would result in less revenue than what we receive today, to deliver greater services and functions imposed under our new Operating Licence and a raft of legislative instruments. ▪ Upper bound approach of using FY24 as the baseline	p. 20-21	We consider the logic for these approaches to be well explained in the reports. The previous Determination allowance has been applied (with an increase for well explained variance) for Rural Valleys lower range because of the lack of explanation of variance. The variance is different between the Determinations. Taking as an example FY24 when Greater Sydney's opex was below the allowance whereas Rural Valleys was significantly above it.
Customer Considerations		
WaterNSW considers it is misleading that consultants have stated that considering the scale of increase (and consequent impact on customers) WaterNSW has provided surprisingly little formal documentation such as business cases demonstrating decision-making logic, efficiency and consideration of the impacts and benefits to customers.	p.21	The response does not make it clear how the statement is misleading. As a concrete example, WaterNSW has not provided a business case for its largest proposed opex increase (operating model) setting out the benefits to customers.
Considering the majority of the proposed adjustments and steps are driven by regulatory change and obligations, there was very little scope for customers and WaterNSW to propose alternative approaches, albeit our pricing proposal did outline three alternative approaches for IPART to consider.	p. 21-22	We consider that there was significant scope for WaterNSW to propose alternative approaches. The largest single proposed increase in operating expenditure relates to WaterNSW's operating model and the largest proposed step change relates to a compliance uplift with existing requirements.
In some instances, we believe the consultant has overstepped their remit in attempting to assess what is fair for customers, rather than applying the lens of what is prudent and efficient expenditure (noting in other cases the consultants have ignored customer preferences completely).	p. 21-22	Adjustments to the proposed expenditure have been based on the approach outlined in the Introduction section of our report and are for scope, efficiency, service level, external assumptions and potential reforms to operating environment. No adjustments have been specifically made by making an assessment of what is fair for customers to pay.
Absence of Risk Assessments		
WaterNSW observes that the risks associated with capital expenditure reductions across Rural Valleys and	P, 6, p. 22	We acknowledge that there are risks with expenditure allowances which are lower than those proposed by WaterNSW and these have been outlined in the report.

Greater Sydney of between 37% and 70% and operating expenditure reductions of between 12% and 25% are extensive, but have only been given cursory attention by the consultants.		We also note that the recommended range of expenditure for RV actually encompasses an increase in spend compared to historical levels. We note that from a Greater Sydney perspective, the average annual recommended upper-bound range for operating expenditure is equivalent to historical operating expenditure (noting there was a significant one-off increase in operating expenditure in 2022-23 – excluding this one year, there is a recommended increase in operating expenditure on historical levels).
Capitalised overheads need to be reallocated		
Simple "rules of thumb" are not likely to accurately calculate the impact on opex from a lower capex program. WaterNSW suggests that once IPART has landed on a small number of realistic scenarios for capex and opex for the draft determination, WaterNSW is asked to recalculate the overhead and capitalisation allocations across Rural Valleys, Greater Sydney and WAMC. This is likely to be the most accurate way to ensure a "no surprises" approach to assess the pricing impacts of expenditure reductions prior to the draft determinations.	p. 22	We have clearly set out the approach we have taken to capitalised overheads in our report.

Table B-2 – Response to points raised in the section "WaterNSW comments on the AtkinsRéalis draft report (Rural Valleys)"

WaterNSW feedback	WaterNSW response page reference	AtkinsRéalis Response
Digital Expenditure		
Flawed Benchmarking Approach: The water sector presents challenges for benchmarking. Given WaterNSW's unique structure, benchmarking results should not be relied upon.	p. 5-6, p. 32-34	We recognise that there are limitations to a benchmarking approach and have highlighted these in our report. This is the reason it has been applied to the lower range only.
WaterNSW does not accept removal of Water Insights under the upper range scenario.	p. 32-33, p. 35-36	We note that Water Insights appears to be ranked 32nd in the customer advisory group ranking of priorities. We consider that there is a lack of evidence of strong customer support for this increase in expenditure.
WaterNSW does not agree with AtkinsRéalis low and very low range ex post adjustments to WAVE.	p. 32-33, p. 37	We consider it reasonable to consider the prudency of expenditure if the benefits identified do not clearly justify the level of expenditure. The adjustments made in the 'low' and 'very low' ranges reflect the reduction in benefits being delivered.

WaterNSW does not accept reduction in People costs.	p. 32-33, p. 37-38	The core issue underlying our adjustment for People costs is that there are already capex and opex allowances to uplift capability and that the digital headcount is forecast to be relatively stable over the period.
WaterNSW does not accept reduction in Software Licensing costs	p. 32-33, p. 38	We are not recommending a reduction but simply a lower increase than proposed by the business. Our view, as set out in the report, is that WaterNSW has proposed a worst case scenario and that the adjustment to people costs will also have an impact on the requirements for licensing.
WaterNSW does not accept the lower range scenario. It carries "significant risks" does not align to principles of ensuring the business achieves efficient recovery of costs and does not represent a fair sharing of risks	p. 32-33, p. 38	We are cognisant of the risks with the lower range scenario and these are outlined in the report including that WaterNSW would need to focus on mandatory obligations and maintain basic business needs and may face exposure to a range of potentially significant operational, regulatory compliance, strategic and workforce risks.
Capital Expenditure		
The report significantly misunderstands and mischaracterises WaterNSW's legislative obligations, particularly in relation to the environmental obligations legislated in the Fisheries Management Act (1994) and Water Management Act (2000). Section 4.9 of the AtkinsRéalis report ("Environmental Planning & Protection) assesses the Fishway and Cold Water Pollution projects, providing a lower and upper bound for expenditure. However, fundamental errors in both bounds materially impact WaterNSW's ability to meet its legislative obligations. WaterNSW considers the consults misunderstand and mischaracterise legislative obligations in relation to Dam Safety Compliance, and Drought Project (Other).	p. 39-42	We are cognisant of the legislative and regulatory requirements of WaterNSW. The expenditure review is based on an assessment of the expenditure proposed by the business in its pricing proposal and takes account of the robustness of the justification provided by the business and the confidence that the business can deliver. We note that for the lower range we have allowed all the proposed Dam Safety Compliance projects with a deferral of a single project to avoid an overly front loaded capex programme. The adjustment made for the Drought Project (Other) in the lower range was to reflect that emergency legislation in the event of a drought may allow for the reinstatement and operation of the scheme. The lower range is to reflect the minimum expenditure that the business needs to conduct its essential operations (i.e., any projects that could be deferred, are deferred).
The methodology used to adjust the Rural Valleys renewals program was based upon a selective analysis of content not discussed during interviews and presents a high-risk approach. Environmental Planning & Protection, The methodology ignores any application of sound asset management practices as the basis for determining a prudent level of investment in key infrastructure supporting a critical program of works. proposes a 'backwards looking' level of investment which provides no consideration or alignment to the actual	p. 39, p. 42-43	Given the significant number of projects and programs, we have examined a sample of projects/programs and drawn conclusions from these where necessary. This is standard practice which WaterNSW will be familiar with from previous reviews. As set out in our report, we consider that WaterNSW's proposed projects are not closely linked to asset condition or performance data, and that the benefit assessment and prioritisation methodology applied by WaterNSW does not sufficiently justify an increase of 31% on recent actual expenditure. We have therefore considered the data available to us such as asset health and historical expenditure levels.

works proposed by WaterNSW as part of the renewal program. appears inconsistent with the requirement of the IPART Water Regulation Handbook (July 2023)		
The draft report does not appropriately account for cost sharing arrangements that influence project funding and delivery. It is apparent that the consultant has erred by overreaching in opining on matters that outside of the scope of an expenditure review. all recommendations that are based on who should pay for an activity or investment should be removed.	p. 39, p. 42	We have not commented on user shares. It appears likely that this feedback relates to comments in the report about whether customers pay for expenditure items. We consider this to be a valid consideration for an expenditure review and consistent with the Water Regulation Handbook which references customer willingness to pay.
The basis of program level findings is unclear, and valley level findings were not provided with the draft report as opposed to the practice in prior reviews. We were unable to replicate the calculations for the 'low' and 'high' expenditure scenarios,	p. 5, p. 43	We have not seen these attempts to reproduce our numbers so cannot comment on these difficulties. However, we have considered the feedback and acknowledge that the lower range for renewals has been based on the 2021 allowance which included efficiencies, and that using these as the basis of pre-efficiency allowances would result in double counting. We have made an amendment to our report to correct this for the lower range. The upper range remains unchanged as it was based on recent actuals.
Project Level Findings Contradict Program Level Analysis – Oberon to Duckmaloi Pipeline	p. 43-44	We are not sure how the figures quoted for Renewals for Fish River have been calculated by WaterNSW and note that the allocations based on the report findings are significantly higher than the $12.3M and $20.3M figures quoted.
Regarding the Toriganny Weir renewal, AtkinsRéalis states (Section 4.11.1) "WaterNSW…did not provide any evidence of having investigated with the Ministry as to a requirement to construct a fishway at the site, particularly given that no fishway currently exists at this site" (Pg 133). This statement is factually incorrect.	p. 44-45	At interview and within the business case for the Toriganny Weir renewal WaterNSW did state that it had confirmed with the Ministry that a fishway would be required as part of carrying out renewal works to the weir. However, as part of Request For Information SA41 we requested a copy of the Ministerial written order as required under Section 218 Clause 1 of the Fisheries Management Act 1994 that would require WaterNSW to undertake any fish pass works. In response to this RFI only written communications regarding the Dam Safety Upgrade offset programme were provided which does not include Toriganny. We have amended our report to provide better clarity on this item.

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