

**Supplementary advice to Greater Wellington Regional Council regarding Three Waters Operating Expenditure for the 2023/24 Annual Plan**

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TO Sue McLean, Kaiwhakahaere Matua Ratonga Rangapū / General Manager – Corporate Services, Greater Wellington Regional Council (GWRC)

COPIED TO Peter Wells, Head of Service Planning, Wellington Water; Jeremy McKibbin, Group Manager Network Management, Wellington Water

FROM Julie Alexander, Group Manager Network Strategy & Planning, Wellington Water

DATE 14 February 2023

Action sought

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	Action sought	Deadline
<b>Sue McLean</b> General Manager - Corporate Services, GWRC	<b>Note</b> the contents of this paper	None

Contact for telephone discussion (if required)

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Name	Position		1st Contact
Julie Alexander	Group Manager Network Strategy & Planning, Wellington Water	021 815 162	
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## Purpose

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1. This paper provides supporting detail requested by Greater Wellington Regional Council (the Council) on the recommended increases to Wellington Water Limited's operating expenditure (OPEX) budget for the FY2023/2024 Annual Plan. It updates the earlier advice to Council dated 30 November 2022 (*'Advice to Greater Wellington Regional Council (GWRC) Regarding Three Waters Operating Expenditure for the 2023/24 Annual Plan'*).

## Recommended action

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2. It is recommended that Council:
  - a. **note** that Greater Wellington Regional Council's current confirmed OPEX investment in Three Waters is \$20.104m for the financial year (FY2023/24);
  - b. **note** that Wellington Water recommends an OPEX budget of \$25.969m is needed for FY2023/24 to meet current levels of service and that a budget below this level will result in a reduction in the level of service provided for Council assets;
  - c. **agree** to increase the FY2023/24 OPEX budget above \$20.104m;
  - d. **advise** Wellington Water of the process, including the impacts of our advice on Council's Significance and Engagement Policy, timeframes and any further information needed to support progressing the development of Council's Annual Plan and the associated Council public consultation process; and
  - e. **note** that this advice will be proactively released and published on Wellington Water's public website, subject to any redactions consistent with the Local Government Official Information and Meetings Act 1987, within 30 working days of being sent to Council.

## Background

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3. In our preliminary advice to you dated 8 November 2022 (*'Preliminary Three Waters 2023/24 Annual Plan OPEX advice for Greater Wellington Regional Council'*) we signalled risks with keeping Council's OPEX budget at the current Long Term Plan (LTP) approved level. We also noted possible OPEX cost increases to address those risks, where known.
4. Our 30 November 2022 advice provided an update and included recommendations on the level of OPEX we considered necessary to maintain and operate Council's Three Waters assets in FY2023/24.
5. On 5 December 2022, staff from Wellington Water Limited met with Council officers to discuss our advice. Council officers requested Wellington Water provide additional rationale to support our proposed budget increases above approved levels. This paper seeks to provide that detail and also updates some of the figures previously provided to reflect further information that has since become available.

## Wellington Water's recommended Three Waters Operating Investment

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### Wellington Water's recommended OPEX budget for the 2023/24 financial year is \$25.969m

6. Table 1 provides a breakdown of Wellington Water's recommended changes to the allocated drinking water OPEX budget for FY2023/24 by investment category.

Table 1: Summary of proposed operational expenditure for FY2023/24 by investment category (\$000)

Water	Investment Category	FY22/23 LTP Budget	FY23/24 LTP Budget	FY23/24 Proposed Budget	Variance FY23/24 LTP vs FY23/24 Proposed Budget	Variance FY23/24 LTP vs FY23/24 Proposed budget (%)
<b>Drinking Water (DW)</b>	Monitoring & Investigations	2,915	3,031	4,906	1,875	62%
	Operations	1,603	936	1,968	1,032	110%
	Planned Maintenance	1,862	1,802	2,324	523	29%
	Reactive Maintenance	106	525	526	1	0%
	Treatment Plant	4,584	4,548	6,307	1,759	39%
<b>DW Total</b>		<b>11,070</b>	<b>10,842</b>	<b>16,031</b>	<b>5,190</b>	<b>48%</b>
<b>Management Total</b>	Management & Advisory Services	8,236	9,263	9,938	674	7%
<b>Grand Total</b>		<b>19,306</b>	<b>20,104</b>	<b>25,969</b>	<b>5,864</b>	<b>29%</b>

7. Since our advice of 30 November 2022, further information has become available resulting in an additional \$0.133m to be proposed over our recommended budget of \$25.836m. This is due to the omission of budget in FY2023/24 for continued development of the asset register within the Monitoring and Investigations investment category (additional \$0.133m).
8. Detail on the drivers and rationale for the budgets proposed in Table 1, the relative priorities of expenditure, and potential risks from lower levels of investment are outlined in the following sections.

#### *Investment prioritisation*

9. Most activities within the proposed OPEX budget are considered unavoidable and will need to be covered by Council. These costs relate to activities that are mandatory or cannot be avoided or deferred as they are essential for the delivery of safe drinking water or for the operation and maintenance of Councils assets. For example, costs required for the day-to-day operation of critical services where the consequence of failure is very high or for maintaining compliance with legislation, regulation, or industry standards.
10. In the following sections we have highlighted the costs Wellington Water advises are unavoidable where this is currently known. However, it is important to note that there may be additional unavoidable costs that have not been specifically identified. Wellington Water therefore strongly recommends against increasing OPEX budgets to only address the known unavoidable costs.
11. It is possible the budgets for the Reactive Maintenance, and Monitoring and Investigations investment categories could be reduced by making strategic decisions to discontinue or reduce certain activities. However, this comes with increased risks to service delivery. These risks are explained further in the following sections.

#### *General factors contributing to budget increases across all investment categories*

12. Consistent with industry-wide trends, Wellington Water is seeing significant cost increases across all activities within its service delivery portfolio. Cost increases associated with higher labour, consultant/contractor and material costs as well as growth factors and rising demand for water have contributed to the budget shifts across all investment categories in Table 1. Additional factors driving changes within specific investment categories are summarised in the relevant sections below.

13. To accurately reflect current market conditions, a 10% increase has been applied to labour and plant allocations across all investment categories. This adjustment considers the impact of inflation, which was lower at the time LTP budgets were initially set. This adjustment will ensure that resources are allocated in a manner that is consistent with current economic conditions.

### **Monitoring and Investigations**

14. The monitoring and investigations investment category includes activities such as condition assessments, regulatory compliance, consents management, water sampling and testing, investigations and asset management.
15. A total budget of \$4.906m is recommended to meet forecast monitoring and investigations costs. This is an uplift of \$1.991m over the FY2023/24 LTP allocated budget of \$3.031m.
16. The recommended increase to the Monitoring and Investigations investment category is for:
- Completing activities previously deferred due to past budget constraints. Activities within the Monitoring and Investigations investment category often offer the most discretion within proposed budgets for reduction. However, Wellington Water is at a point where a number of these activities now need to be completed and cannot continue to be deferred without risking dependent work programmes, for example capital delivery
  - condition assessments (accounting for \$0.530m of the recommended increase) – this would include completing condition assessments on Very High Criticality Assets (VHCA) targeting ‘not inspected’ assets previously unable to be inspected<sup>1</sup>, identifying High Criticality Assets and assigning preliminary condition scores and undertaking more detailed condition testing of complex assets and bulk water pipes. More specifically:
    - i there are approximately 40 critical assets within Council’s Water Treatment Plants that have not had condition assessment undertaken
    - ii more detailed investigations are needed on a number of the more complex assets, for example pumps, in both water treatment plants and in pump stations to raise the confidence in the condition rating. These items have long lead time if they require replacement so it is important there is confidence in condition ratings
    - iii Some 8% of critical pipes have been assessed to be in a poor or very poor condition – the confidence in these assessed scores is low and needs to be improved
    - iv the current LTP FY21/22 - 23/24 budgets ranging between \$0.060m - \$0.070m per year for condition assessment is significantly below recommended best practice for an asset base of this size and adds substantial risk of unplanned asset failure due to lack of asset knowledge.
  - bringing documentation up to industry standards – developing facility specific asset management plans for critical assets, maintenance plans and progressing the asset register
  - labour and plant allocations – 10% uplift applied over the FY2022/23 budget, accounting for \$0.223m of the recommended increase
  - investigations (accounting for \$1.258m of the recommended increase) – including for the Raw Water Source investigation to determine the feasibility of staging the Te Marua Scheme expansion; plant reliability and critical spares investigations to better understand the reliability of Council Treatment Plant assets, failure modes and improvements to managing critical assets; and dam safety investigations

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<sup>1</sup> Some Water Treatment Plant assets were unable to be inspected during site visits for the Very High Criticality Asset Condition Assessment Project for a number of reasons including being in confined spaces, at height, and some assets logged on the plant and instrumentation drawings had been removed from the plant.

- Development of a cyanotoxin protocol required by regulation by November 2023 for managing cyanotoxin risk. This item is currently unbudgeted within the approved FY2023/24 budget and accounts for \$0.050m of the recommended increase.

17. Figure 1 highlights the growth in the recommended budget for FY2023/24, reflecting the factors noted above driving cost increases.

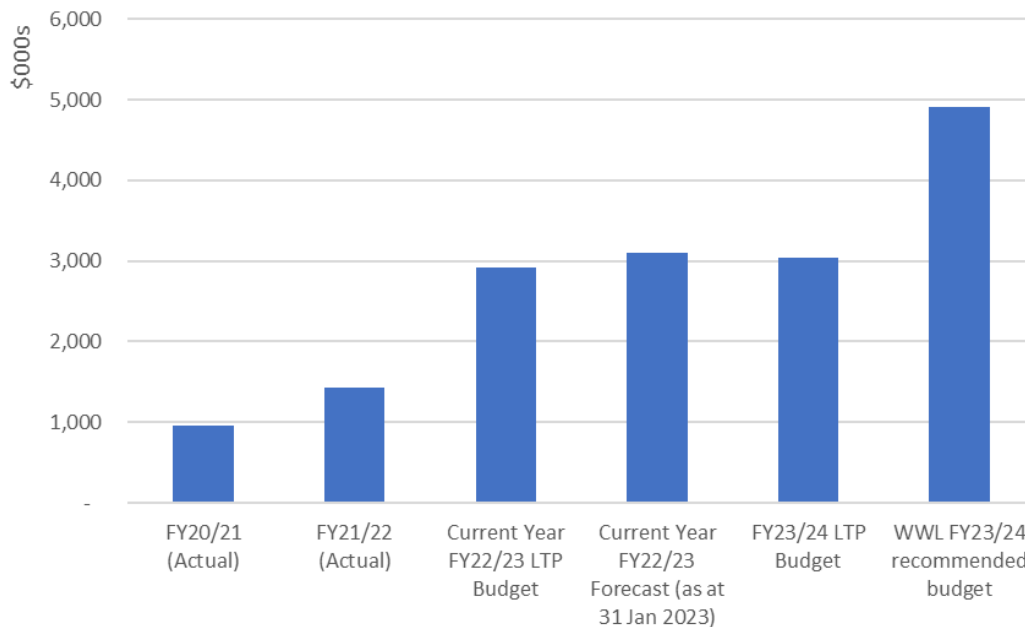


Figure 1: Actual, budget, forecast and proposed monitoring and investigations budgets FY2020/21 – FY2023/24 (\$000s)

18. The Monitoring and Investigations investment category contains some unavoidable costs for activities already committed or to meet statutory requirements.
19. Of the \$0.914m recommended budget for monitoring activities within the Monitoring and Investigations investment category, most is considered unavoidable costs required to undertake bulk water sampling and testing activity, monitoring to meet consent and other regulatory requirements and consents management. This also covers specific software as a service costs shared across all six councils which was previously not budgeted for in the approved FY2023/24 LTP.
20. Of the recommended investigations activities budgeted, approximately \$0.864m could be deferred. However, this comes with risks including:
- limiting our ability to understand the life and condition of assets
  - limiting our ability to prepare for future climate change (modelling), to report emission reductions, and to understand how we can achieve 2050 emissions targets
  - impeding the timely execution of future renewal initiatives and risks:
    - i failing to identify and address potential infrastructure failures or weaknesses, leading to costly repairs or even potential failure of the system
    - ii being able to comply with regulatory requirements which could result in fines and penalties
    - iii being able to plan for long-term maintenance and replacement needs which could lead to unexpected expenses and service interruptions
    - iv reduced ability to improve the overall quality and reliability of the water supply for consumers.

- Of the recommended condition assessments activities budgeted, a portion could be deferred. However, Wellington Water recommends that at a minimum the balance of the highest risk and priority Very High Critical Assets (VHCA) and Highly Critical Assets (HCA) should be completed. Wellington Water requires sufficient funding for condition assessments to inform and guide the development of capital delivery programmes. Without the knowledge obtained through thorough condition assessments:
  - i maintenance efforts will be increasingly reactive and based on issues as they arise, leading to increased costs and less efficient use of resources. Reactive maintenance often results in a higher average cost of maintenance than proactive maintenance.
  - ii the frequency of repairs required and duration of outages impacting consumers are likely to increase.

Not completing enough condition assessments to support the capital works programme can result in:

- i inadequate budgeting – without a comprehensive understanding of the condition of the assets, it may be difficult to estimate costs of the capital works programme and budget accordingly
- ii the capital works programme may not address the most critical issues or may not be optimized for the specific needs of the assets. This can lead to inefficiencies and wasted resources
- iii safety hazards may be overlooked, putting workers and the public at risk
- iv unnecessary repairs may be made, increasing costs and diverting resources away from more critical issues
- v reduced asset lifespan – without proper condition assessment assets may not be maintained properly, which can lead to a reduction in their useful lifespan and result in increased costs over time.

## Operations

21. The Operations investment category includes the control systems covering the IT, electrical, instrumentation and automation systems for Council’s water assets; operating equipment; bulk water telecommunication systems; and water source area pest control and biodiversity activities.
22. A total budget of \$1.968m is recommended to meet forecast operations costs. This is an uplift of \$1.032m over the FY2023/24 LTP approved budget of \$0.936m due to:
  - inflation and higher costs for goods and services (\$0.235m of the recommended increase)
  - increased control system preventative maintenance required due to aging plant and need for more spares to undertake repairs and/or renewals and increased requirements from the regulator for system testing which feeds into compliance reporting (\$0.164m)
  - increased equipment costs (additional \$0.018m)
  - increased laboratory costs (additional \$0.009m)
  - management, monitoring and support costs for Council’s Control System IT operational technology network and infrastructure (\$0.500m previously unbudgeted)
  - continue biodiversity and pest control activity at current levels (additional \$0.103m)<sup>2</sup>

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<sup>2</sup> Note, this is activity costed and delivered by Council.

23. Figure 2 highlights that the FY2023/24 budget is well below the current year (FY2022/23) budget and current year forecast expenditure. The recommended budget more accurately reflects the costs required for this investment category accounting for the cost increases signalled above.

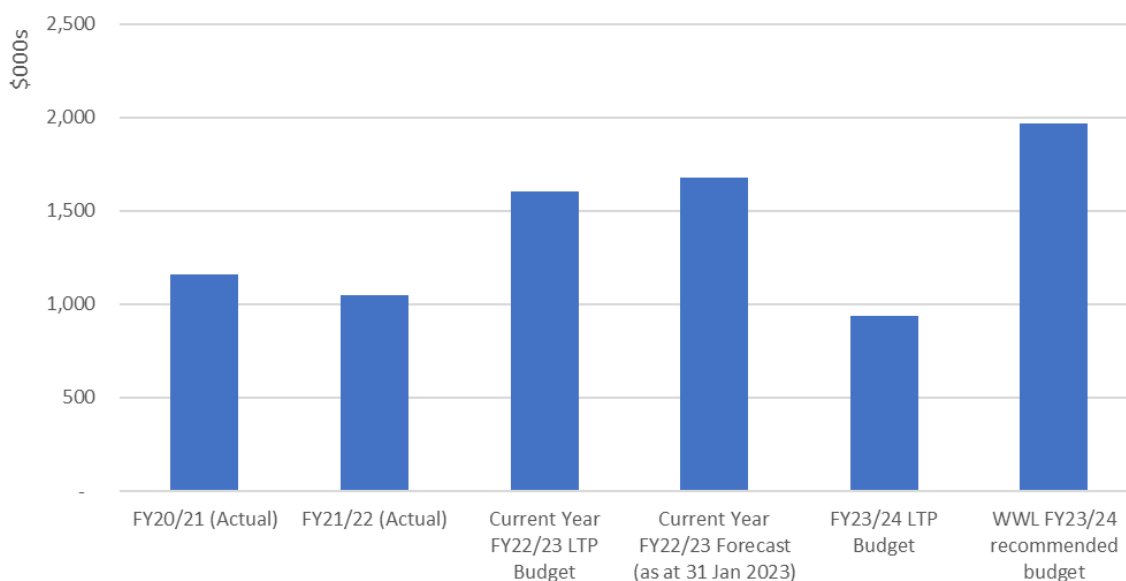


Figure 2: Actual, budget, forecast and proposed operations budgets for FY2020/21 - FY2023/24

24. Wellington Water advises that the majority of the proposed budget for Operations is unavoidable, being necessary to cover the costs essential for the running of Council's control system assets, for regulatory compliance purposes and for protecting the region's water quality. A small proportion of the budget allocated for preventative maintenance of control systems could be deferred. However, this could result in significant risks, including:
- equipment failure – without proper maintenance, control system assets can malfunction or break down in some cases resulting in immediate loss of service, leading to disruptions in water supply and potential safety hazards
  - system downtime – if control system assets are not maintained, they may require more frequent repairs or replacements, leading to extended downtime and decreased efficiency
  - increased costs – neglecting preventative maintenance can lead to more costly repairs and replacements in the long run, as well as increased energy consumption and labour costs.
25. Approximately \$0.018m of the budget for operations equipment could be reduced. However, without new and replacement tools there could be operations failures with potentially delayed and more expensive repairs (likely by contractors) to follow.

### Planned Maintenance

26. The planned maintenance investment category includes planned maintenance activities across Council's distribution pump station, network, and reservoir assets.
27. A total budget of \$2.324m is recommended to meet forecast planned maintenance costs. This is an uplift of \$0.523m over the FY2023/24 LTP allocated budget of \$1.802m due to:
- inflation and higher costs for goods and services (\$0.240m of the recommended increase)
  - distribution pump station, network, and reservoir assets require ongoing maintenance to meet required operational service levels due to growth and water demand pressures (\$0.269m of the recommended increase). Any reduction in funds will result in a drop in level of service and increased risks of environmental and supply risks.

- additional funding is required for integrated meter management preliminary establishment work to support the focus on Sustainable Water Supply and Demand. Without effective meter management, it is difficult to identify and address water loss, wastage and other inefficiencies in water use and network management. This resulting increased demand leads to unnecessary strain on water resources and supply infrastructure.

28. Figure 3 highlights the growth in the recommended budget for FY2023/24, reflecting the factors noted above driving cost increases. While the forecast for FY2022/23 is currently tracking an underspend, expenditure is expected to pick up in the second half of the year so this forecast will likely increase.

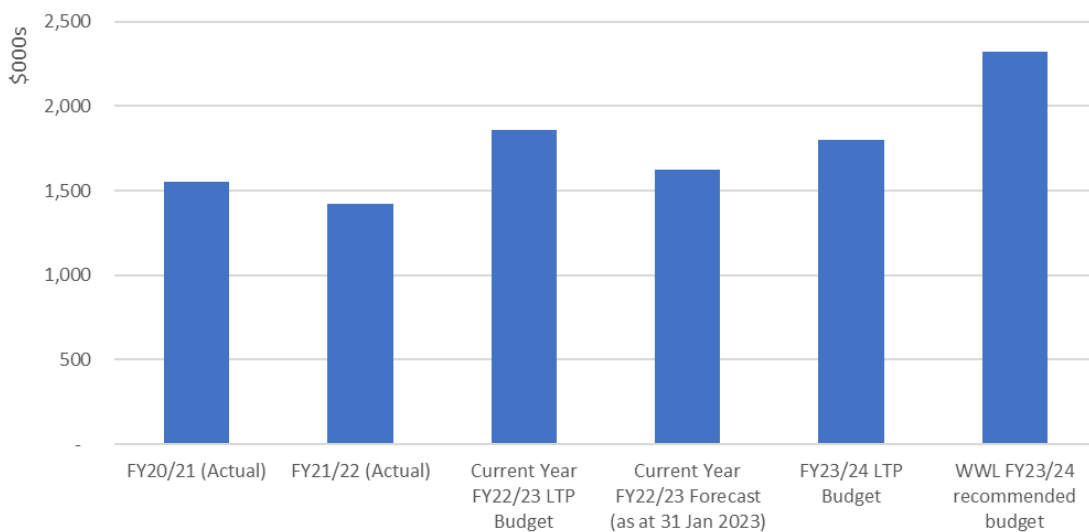


Figure 3: Actual, budget, forecast and proposed planned maintenance budgets FY2020/21 - FY2023/24 (\$000s)

29. A large proportion of the Planned Maintenance budget is attributed to salary costs allocated to these activities and is therefore considered unavoidable. Wellington Water advises that the proposed Planned Maintenance budget is unavoidable being necessary to ensure Council’s assets are maintained to required operational service levels.

**Reactive Maintenance**

- 30. A total budget of \$0.526m is recommended for reactive maintenance activities. This is an uplift of \$0.001m from the FY2023/24 LTP approved budget of \$0.525m.
- 31. For bulk water, Wellington Water does not expect the same levels of increase in reactive maintenance costs likely to be required for other areas of the network. The relatively small increase proposed to the Reactive Maintenance investment category budget is for network, pump station and reservoir unplanned maintenance.
- 32. Figure 4 shows previous reactive maintenance expenditure, forecast expenditure for FY2022/23 against budget and the proposed increase. Figure 4 shows that the current FY2022/23 budget is forecast to be significantly below the amount required to meet anticipated reactive maintenance costs. Wellington Water advises that the FY2023/24 budget better reflects anticipated reactive maintenance costs.



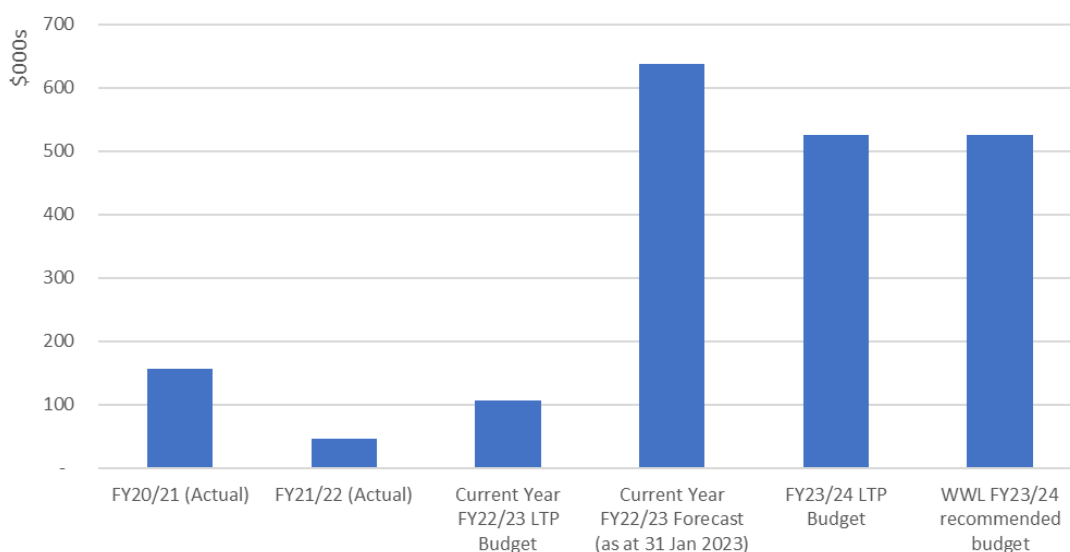


Figure 4: Actual, budget, forecast and proposed reactive maintenance budgets FY2020/21 - FY2023/24

## Treatment plant

33. The Treatment Plant investment category groups all activities relating to the operation of Council's Water Treatment Plants. This includes planned and reactive maintenance, operations, and investigations<sup>3</sup>.
34. The recommended budget for Treatment Plant for FY2023/24 is \$6.307m, which is \$1.759m above the LTP allocated budget of \$4.548m. Wellington Water advises that the majority of the proposed budget is unavoidable, covering activities essential in delivering the region's bulk water supply.
35. Wellington Water, through our budget-setting process, has identified reductions of approximately - \$0.168m across the Treatment Plant reactive maintenance and operations areas. This is reflected in the recommended budget numbers.
36. The biggest driver for the cost increase recommended to the Treatment Plant budget is the result of significant increases in chemical costs, accounting for \$0.997m of the uplift. Wellington Water advises that chemical costs are unavoidable, being a direct input required in providing safe drinking water to the community.
37. Based on communication with Wellington Water's CO<sub>2</sub> supplier, BOC, we are expecting an almost 100% increase in the total cost of CO<sub>2</sub> from \$1,878/tonne to \$3,736/tonne (excl. GST)<sup>4</sup>. This is the result of supply issues, with all CO<sub>2</sub> now being imported. These prices are expected to continue for at least the next two years until a more long-term New Zealand-based plant can become operational.
38. For the 2022 calendar year, 493.3 tonnes of CO<sub>2</sub> was used across both the Te Marua and Wainuomata Treatment Plants (332.9 tonnes at Te Marua and 160.4 tonnes at Wainuomata). Wellington Water has assumed a 7% increase in the volume of CO<sub>2</sub> for the 2023 calendar year resulting in an estimated total cost of \$2.008m (including approximately \$0.075m associated with onsite storage container rental at both sites).
39. The quantity of chemicals required in water treatment directly correlates to demand for water – as water demand increases, so does the volume of chemicals needed. Figure 5 below shows water

<sup>3</sup> This is different to the OPEX budgets for all other activities delivered by Wellington Water which are separated under the relevant investment category.

<sup>4</sup> Includes new product price of \$3386/tonne, delivery costs of \$263/tonne, and Emission Trading Scheme costs of \$87/tonne (variable price depending on the market)

demand for the period 1 January 2022 to 8 January 2023. Compared to this time last year, drinking water average daily demand has increased from 170.66ML/d to 189.98ML/d.

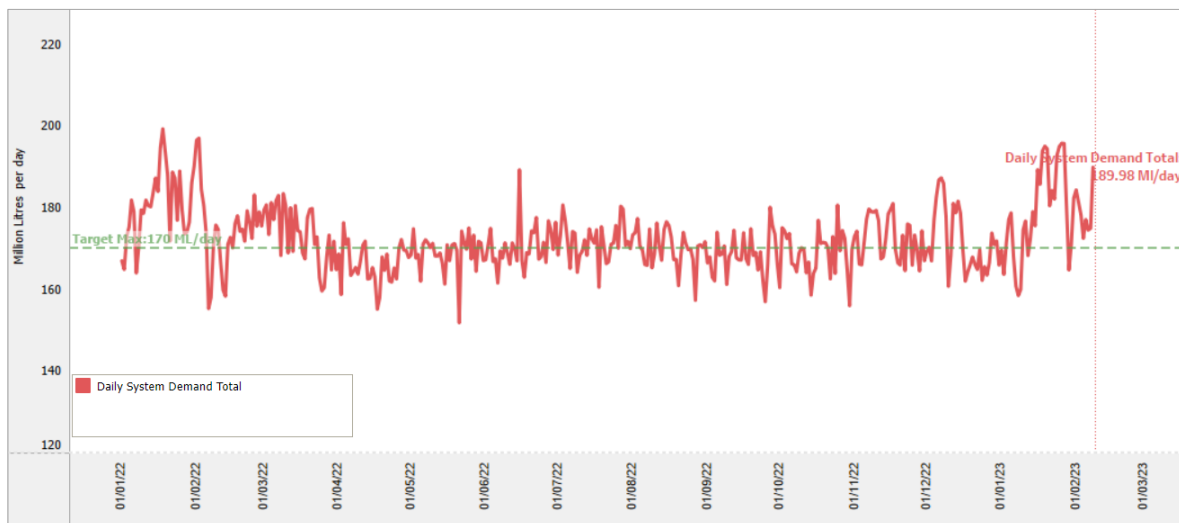


Figure 5: Daily Demand for Water 01/01/22 to 8/02/2023 (Million Litres per day (ML/d))

40. In addition to chemical cost increases, the following key drivers account for the recommended uplift to the Treatment Plant budget:
  - Labour and plant allocations – 10% uplift applied over the FY2022/23 budget, accounting for \$0.810m of the recommended increase
  - Planned maintenance – proposed increase to reduce the backlog of corrective and preventative maintenance (\$0.113m increase)
  - Consent monitoring across Council’s treatment plants which is currently unbudgeted within the approved FY2023/24 LTP budget (\$0.002m)
41. Figure 6 highlights the growth in the recommended budget for FY2023/24, reflecting the factors noted above driving cost increases.

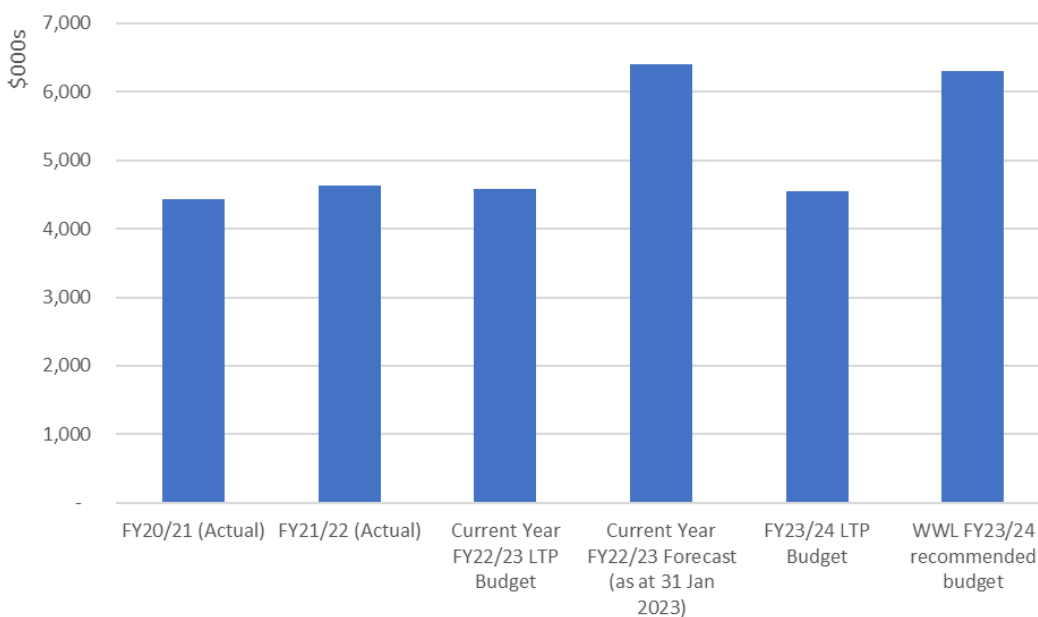


Figure 6: Actual, budget, forecast and proposed Treatment Plant budgets FY2020/21 - FY2023/24

42. Approximately \$0.112m of the Treatment Plant budget could be reduced by decreasing planned maintenance. However, reducing treatment plant planned maintenance would increase the likelihood of equipment malfunction and failure, resulting in:
- severe disruption to treatment plant operations, particularly during times of high water demand. Such disruptions could have a significant negative impact on service levels and the ability to deliver safe and reliable drinking water to the community
  - public health risks from the potential for improperly treated drinking water
  - maintenance becoming increasingly reactive and based on issues as they arise, leading to increased costs and less efficient use of resources. Reactive maintenance often results in a higher average cost than planned maintenance.
43. As such, it is crucial that an adequate level of preventative maintenance is maintained to minimise the risk of equipment breakdown and ensure continuity of service.

### **Management and Advisory Services**

44. A total budget of \$9.938m is recommended for Management and Advisory Services investment category. This is an increase of \$0.674m approved FY2023/24 LTP budget of \$9.263m.
45. At the time of setting the LTP, a \$1.500m increase was built into the Management Fee across all councils from FY2022/23 to FY2023/24 which was equivalent to approximately 7.5% made up of 2.5% inflation and 5% additional activities (covering extra anticipated work).
46. Inflation over the past 12 months has been significantly higher than 2.5%, therefore the Management and Advisory services budget for FY2022/23 is subsequently insufficient to cover all required activity.
47. To account for this, the budget for FY2023/24 has been increased by 5% to retrospectively recover the costs incurred by Wellington Water in FY2022/23. A further increase of 5% has been applied for the higher rates of inflation than assumed in the LTP for FY2023/24.
48. The Management and Advisory Services investment category also includes an uplift of approximately 2% to cover cyber security not currently budgeted for.
49. Cyber security costs are currently being covered by stimulus funding. At the time the 2021-31 LTP was developed, we did not know the extent of work required for cyber security and associated ongoing costs. Therefore, this programme has not been budgeted for beyond FY2022/23. At a minimum, ongoing funding of current cyber security activity needs to continue. The ~2% increase in the Management and Advisory Services budget covers this activity.