

**Supplementary advice to Porirua City Council regarding Three Waters Operating Expenditure for the 2023/24 Annual Plan**

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TO Andrew Dalziel, General Manager Infrastructure, Porirua City Council

COPIED TO Pete Wells, Head of Service Planning, Wellington Water; Ian Dennis, Manager Transition Programme, Wellington Water

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

DATE 16 February 2023

**Action sought**

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	<b>Action sought</b>	<b>Deadline</b>
<b>Andrew Dalziel</b> General Manager Infrastructure, Porirua City Council	<b>Note</b> the contents of this paper	None

**Contact for telephone discussion (if required)**

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<b>Name</b>	<b>Position</b>	<b>1st Contact</b>
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## Purpose

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1. This paper provides supporting detail requested by the Porirua City Council (the Council) on the recommended increases to Wellington Water Limited's operating expenditure (OPEX) budget for the FY2023/2024 Annual Plan. It updates our earlier advice to Council dated 22 December 2022 ('*Advice to Porirua City Council (PCC) 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 Porirua City Council's confirmed OPEX investment in Three Waters is \$8.439m for the financial year (FY2023/24)
  - b. **note** that Wellington Water recommends an OPEX budget of \$14.096m 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 \$8.439m;
  - 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 4 November 2022 ('*Preliminary Three Waters 2023/24 Annual Plan OPEX advice for Porirua City 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 22 December 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 31 January 2023, Council requested (via email) further detail be provided in relation to the OPEX advice delivered in December 2022. This paper seeks to provide that detail and 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 \$14.096m

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

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

Water Type	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 (%)
Drinking Water (DW)	Monitoring & Investigations	479,640	443,000	916,277	473,277	107%
	Operations	54,737	90,000	104,711	14,711	16%
	Planned Maintenance	600,394	229,000	544,673	315,673	138%
	Reactive Maintenance	1,837,257	1,584,000	2,755,159	1,171,159	74%
<b>DW Total</b>		<b>2,972,028</b>	<b>2,346,000</b>	<b>4,320,820</b>	<b>1,974,820</b>	<b>84%</b>
Stormwater (SW)	Monitoring & Investigations	586,800	272,000	533,749	261,749	96%
	Operations	17,251	12,500	20,826	8,326	67%
	Planned Maintenance	708,138	164,000	746,000	582,000	355%
	Reactive Maintenance	644,500	526,000	889,726	363,726	69%
<b>SW Total</b>		<b>1,956,689</b>	<b>974,500</b>	<b>2,190,301</b>	<b>1,215,801</b>	<b>125%</b>
Wastewater (WW)	Monitoring & Investigations	824,634	483,120	1,114,266	631,146	131%
	Operations	54,505	47,000	63,556	16,556	35%
	Planned Maintenance	622,682	363,000	690,000	327,000	90%
	Reactive Maintenance	959,212	986,000	1,678,664	692,664	70%
<b>WW Total</b>		<b>2,461,033</b>	<b>1,879,120</b>	<b>3,546,486</b>	<b>1,667,366</b>	<b>89%</b>
	Monitoring & Investigations	-	-	80,000	-	-
	Planned Maintenance	113,000	113,000	114,000	1,000	1%
	Reactive Maintenance	-	-	118,450	-	-
	Treatment Plant	1,726,020	1,726,020	2,157,944	431,924	25%
<b>WWJV Total</b>		<b>1,839,020</b>	<b>1,839,020</b>	<b>2,470,394</b>	<b>631,374</b>	<b>34%</b>
Management Total	Management and Advisory Services	<b>1,299,905</b>	<b>1,400,364</b>	<b>1,568,408</b>	<b>168,044</b>	<b>12%</b>
<b>Grand Total</b>		<b>10,528,675<sup>1</sup></b>	<b>8,439,004</b>	<b>14,096,409</b>	<b>5,657,405</b>	<b>67%</b>

- Detail on these changes as well as 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. The Better-off funding for FY23/24 (\$2.039m) has not been included in the total LTP budget of \$8.439m shown in Table 1.
- The Better-off funding breakdown for next FY year is shown below in Table 2. It covers several investment categories, with the majority of the better-off funding covering reactive maintenance activities. The total amount of Better-off funding approved for FY23/24 is \$2.039m, but this number may vary depending on the final total Better-off funded activity spend in FY22/23.

<sup>1</sup> Better-off funding of \$2.554m included in this total amount

Table 2 Better-off funding breakdown by investment category and activity

Investment Category	Activity	FY2023/24 recommended budget	% covered by Better-off funding
Monitoring & Investigations	Active Leakage Control	172	100%
Monitoring & Investigations	Roving Team Inflow and Infiltration	320	100%
Monitoring & Investigations	Meter Reading	63	100%
Planned Maintenance	Area Water Meters	105	100%
Reactive Maintenance	Unplanned Maintenance	5,442	25%

#### Investment prioritisation

9. Some 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 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. Wellington Water strongly recommends that the proposed budget for the following investment categories is imperative for delivering these essential services:
  - Treatment Plants
  - Operations
  - Monitoring
  - Management & Advisory Services
12. It is possible the budgets for the Planned Maintenance, Reactive Maintenance, 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

13. 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.
14. To accurately reflect current market conditions, a 10% increase has been applied to labour and plant allocations across all water types and investment categories. This adjustment considers the impact of inflation, which was lower at the time when 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

15. The monitoring and investigations investment category includes activities such as condition assessments, resource consent compliance monitoring, water sampling and monitoring, investigations, design studies, asset management, and the development of an asset register.
16. A total budget of \$2.644m is recommended to meet forecast monitoring and investigations costs. This is an uplift of \$1.446m over the FY2023/24 LTP allocated budget of \$1.198m. Table 3 below provides the breakdown of the recommended budget by water type.

Table 3: Summary of proposed Monitoring and Investigations OPEX for FY2023/24 by water type

Investment Category (\$000s)	Water Type	2023/24 LTP Budget	2023/24 Proposed Budget	Increase above LTP Budget
Monitoring & Investigations	Drinking Water	443,000	916,277	473,277
	Stormwater	272,000	533,749	261,749
	Wastewater	483,120	1,114,266	631,146
	Wastewater Joint Venture	0	80,000	80,000
	<b>Total</b>	<b>1,198,120</b>	<b>2,644,292</b>	<b>1,446,172</b>

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

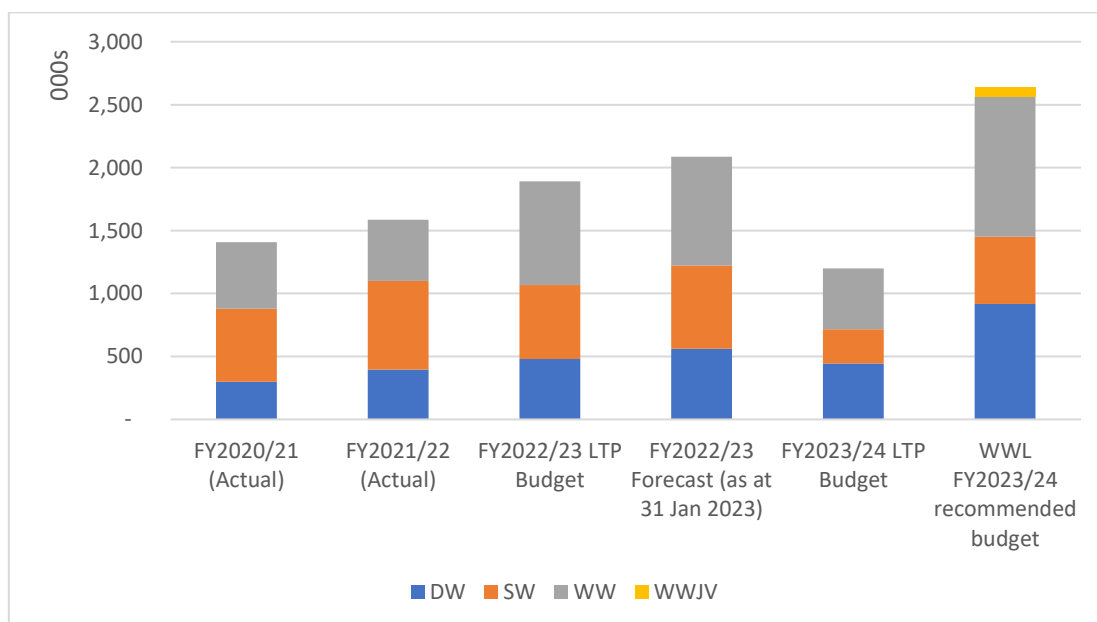


Figure 1: Actual, budget, forecast and proposed Monitoring & Investigations budgets for FY2020/21 - FY2023/24

18. The recommended increase to the Monitoring and Investigations investment category is for:
  - Inflow and infiltration studies to drive water quality, climate change investigations, wastewater overflow reduction studies, general sampling and investigations, and an increased programme of active leak control.

- condition assessments – to complete condition assessment on High Criticality Assets (HCA) assets, physical pipe inspections, testing of critical pumps, wastewater treatment plant pump and blower performance testing.
  - increased laboratory costs and new sampling programmes required to meet changing water regulation and new resource consent requirements.
19. The Monitoring and Investigations investment category contains some unavoidable costs for activities already committed or to meet statutory requirements.
  20. Of the \$0.716m recommended budget for monitoring activities within the Monitoring and Investigations investment category, almost all is considered unavoidable costs required to undertake sampling and testing activity or monitoring to meet consent requirements. This also covers PCC's share of software which had not previously been budgeted for.
  21. Within the investigations activities, approximately \$0.348m could be deferred. However, this comes with risks. The following activities account for most of the investment expenditure in this investment category. The risks of not providing sufficient budget for these in FY2023/24 are noted below.

A reduction in the investigations budget would result in renewals investigations being deferred. This would impede 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 capacity to respond to, and recover from, natural disasters or other emergencies
  - v reduced ability to improve the overall quality and reliability of the water supply for consumers.
- Condition assessments account for \$0.542m of the recommended Monitoring and Investigations budget for FY2023/24. This is an increase of \$0.317m above the \$0.225m budgeted in FY2022/23. It is recommended operational condition assessment budgets are increased to enable the balance of the highest risk and priority Very High Critical Assets (VHCA) and Highly Critical Assets (HCA) to be assessed. Wellington Water requires sufficient funding for condition assessments to inform and guide the development of our 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

22. The Operations investment category includes the control systems covering the electrical, instrumentation and automation systems for Council’s stormwater, wastewater, and potable water assets. It is important these systems are operational for controlling and monitoring Council’s treatment plant, pump station, flow meter and valve assets.
23. A total budget of \$0.189m is recommended to meet forecast operations costs. This is an uplift of \$0.040m over the FY2023/24 LTP approved budget of \$0.149m due to:
- labour and plant allocations – 10% uplift applied over the FY2022/23 budget across all water types
  - software licences for Scada and hardware maintenance
24. Table 4 below provides the breakdown of the recommended budget by water type.

Table 4: Summary of proposed Operations OPEX for FY2023/24 by water type

Investment Category (\$000s)	Water Type	2023/24 LTP Budget	2023/24 Proposed Budget	Increase above LTP Budget
Operations	Drinking Water	90	105	15
	Stormwater	13	21	8
	Wastewater	47	64	17
	<b>Total</b>	<b>150</b>	<b>190</b>	<b>40</b>

25. Figure 2 highlights the growth in the recommended budget for FY2023/24, reflecting the factors noted above driving cost increases. Figure 2 also shows that the recommended budget for FY2023/2024 is not significantly greater than the LTP budget and highlights the pattern of increased spend in this category since FY 2020/2021.

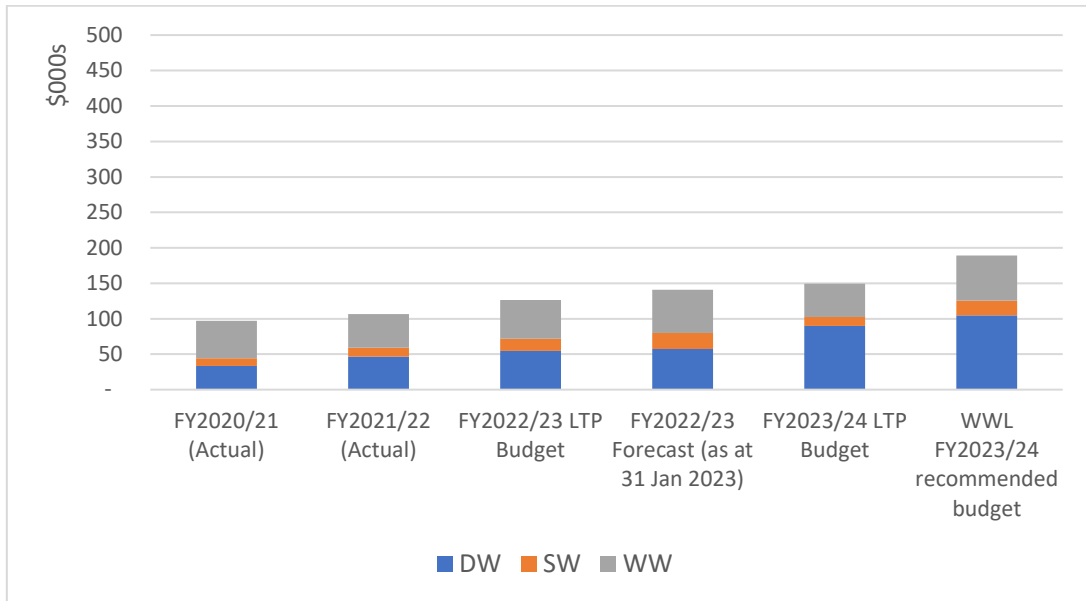


Figure 2: Actual, budget, forecast and proposed operations budgets for FY2020/21 - FY2023/24

26. 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 control system assets. A small proportion of the budget (\$0.061) allocated for preventative maintenance of control systems could be reduced. However, this could result in significant risks including:
- equipment failure – without proper maintenance, control system assets such as valves, pumps, and control panels 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
  - environmental risks – poorly maintained control systems can lead to leaks or spills, which can have negative impacts on the environment and local communities.

### Planned Maintenance

27. The planned maintenance investment category includes maintenance activities for water and wastewater pump stations, utility and network assets, and stormwater activities.
28. A total budget of \$2.095m is recommended to meet forecast planned maintenance costs. This is an uplift of \$1.226m over the FY2023/24 LTP allocated budget of \$0.869m. Table 5 below provides the breakdown of the recommended budget by water type.



Table 5: Summary of proposed Planned Maintenance OPEX for FY2023/24 by water type

Investment Category (\$000s)	Water Type	2023/24 LTP Budget	2023/24 Proposed Budget	Increase above LTP Budget
Planned Maintenance	Drinking Water	229	545	316
	Stormwater	164	746	582
	Wastewater	363	690	327
	Wastewater Joint Venture	113	114	1
	<b>Total</b>	<b>869</b>	<b>2,095</b>	<b>1,226</b>

29. A large proportion of the recommended budget increase in the Planned Maintenance investment category is due to inflation and higher costs for goods and services. Other reasons for the increase include:
- growth and water demand are putting pressure on maintenance programmes to ensure pump stations and other assets across the network are being maintained to required operational service levels
  - additional funding required for non-residential demand management. This is to support the focus on Sustainable Water Supply and Demand
  - reservoir maintenance, pump station maintenance and area water meters and flushing wastewater pipe activities.
30. Figure 3 highlights the growth in the recommended budget for FY2023/24 compared with the 23/24 LTP approved budget, reflecting the factors noted above driving cost increases. It is also worth noting that our recommended budget is very similar to LTP approved FY 2022/23 budget and that the LTP compliant budget for FY 2023/24 is significantly lower than prior years spending.

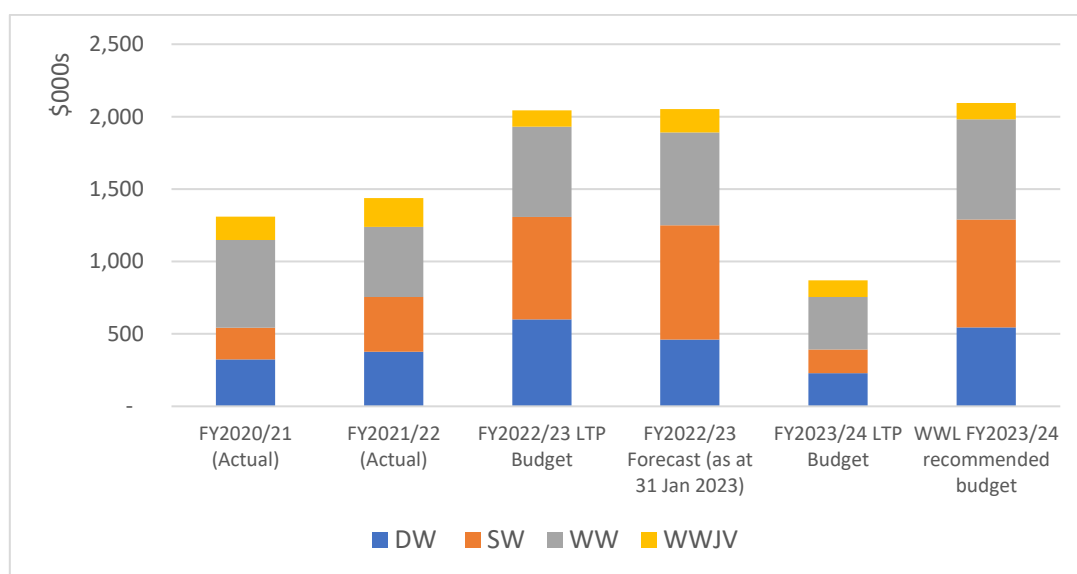


Figure 3 Actual, budget, forecast and proposed planned maintenance budgets FY2020/21 - FY2023/24 (\$000s)

31. It is possible for some reductions within the Planned Maintenance investment category. However, not providing funding to the recommended levels comes with the following risks:
- If funding for drainage investigations is reduced, Wellington Water will have reduced capacity to respond to pollution events in waterways and will not be able to:
    - respond to environmental impacts in accordance with global stormwater consents
    - fully plan or deliver a structured infiltration and inflow investigation programme to increase asset capability, capacity and life.
  - If there is any reduction to work on water loss management, Wellington Water’s ability to triage leaks and complete repairs will be limited, restricting our high-priority efforts to manage leakage through the water loss programme.
  - If network planned maintenance is reduced, Wellington Water will have limited ability to deliver planned activities across linear assets, impacting on asset life, and therefore levels of service (failures would occur sooner, and could be more expensive to repair if they have not had sufficient planned maintenance).
  - If pump station inspections are reduced, the potential for overflows increases, potentially leading to enforcement action. Odour complaints would likely increase, and Wellington Water would have to adopt a ‘run to failure’ asset management approach.
  - If non-critical valve maintenance is reduced, maintenance backlogs will further increase, risking the potential for assets to not operate when required, particularly in response to mains failures.

### Reactive Maintenance

32. A total budget of \$5.442m is recommended for reactive maintenance activities. This is an uplift of \$2.346m from the FY2023/24 LTP approved budget of \$3.096m.
33. Table 6 below outlines Wellington Water’s recommended changes to our allocated Reactive Maintenance FY2023/24 OPEX budget.

Table 6: Summary of proposed Reactive Maintenance OPEX for FY2023/24 by water type

Investment Category (\$000s)	Water Type	2023/24 LTP Budget	2023/24 Proposed Budget	Increase above LTP Budget
Reactive Maintenance	Drinking Water	1,584	2,755	1,171
	Stormwater	526	890	364
	Wastewater	986	1,679	693
	Wastewater Joint Venture	0	118	118
	<b>Total</b>	<b>3,096</b>	<b>5,442</b>	<b>2,346</b>

34. While dependent on the number of failures, reactive maintenance costs are anticipated to increase based on failure trends experienced to date, the average age of assets and the anticipated resulting rates of renewal/replacement.

35. The main reasons for the recommend increase to the Reactive Maintenance investment category budget include:
- significant cost increases associated with higher labour, consultant, contractor and material costs
  - to reduce the backlog in stormwater and potable water network maintenance including leak repairs
  - leaks are more expensive to detect and repair given the uplift of 20% in contractor costs. They are also becoming increasingly more complex to repair.
36. Figure 4 shows previous reactive maintenance expenditure, forecast expenditure for FY2022/23 against budget and the proposed increase reflecting the factors noted above. As shown in Figure 4, Wellington Water’s recommended budget increase is consistent with current trends, noting that current forecasts for FY2022/23 indicate expenditure of \$3.858m for reactive maintenance.

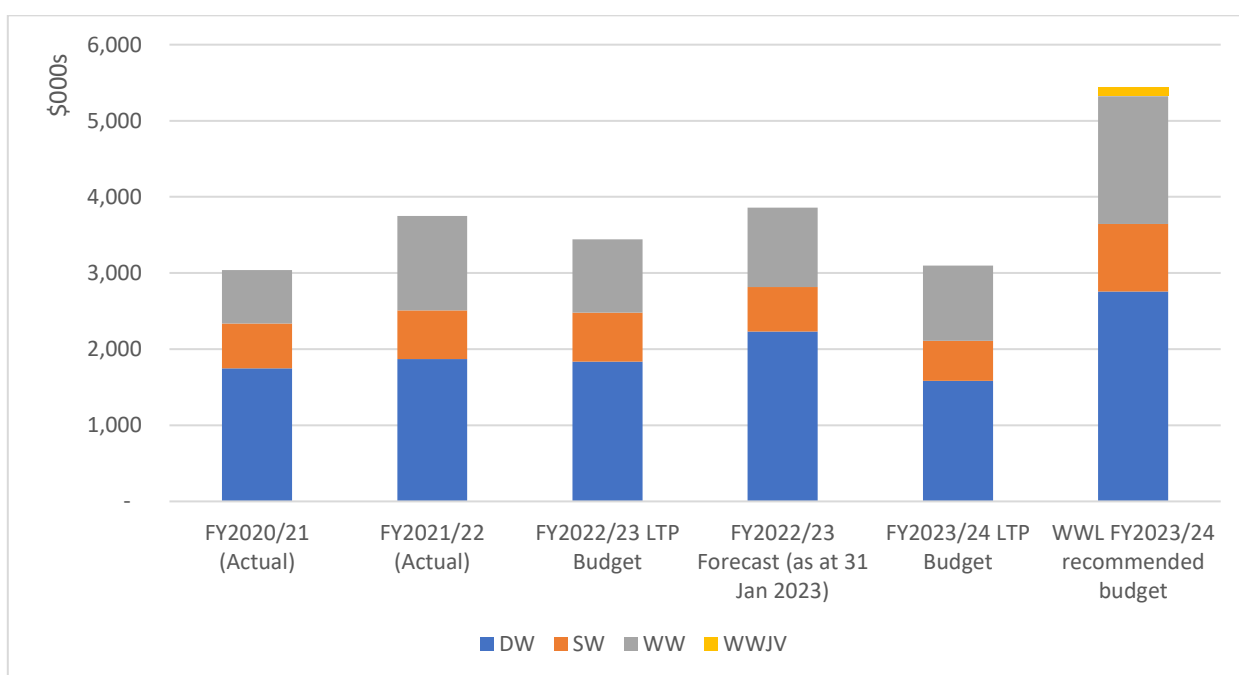


Figure 4: Actual, budget, forecast and proposed reactive maintenance budgets FY2020/21 - FY2023/24

37. The reactive maintenance budget could be reduced by actively choosing to reduce or stop responding to certain unplanned network maintenance jobs for all water types, including the joint venture. The risks with reducing the budget for unplanned network maintenance in FY2023/24 include:
- A reduction or a complete stop of non-urgent instructed works, such as the installation of new valves to reduce the size of a shutdown area, or customer requests/complaints. The consequence of not doing instructed works is that we fail to improve the efficient operation of the network, so water outage areas become bigger, resulting in longer outages with a greater number of customers affected.
  - A reduction in targeted subcontractor spend would reduce the available resources to attend to customer calls, by only attending to high priority or medium priority (P1 and P2) work requests. This means that the non-urgent work backlog will grow.

An analysis of leakage data (see Figure 5) reveals that despite undertaking a comparable number of repairs during the first half of the current financial year (FY2022/23) compared to the previous financial year (FY1021/22), the January 2023 backlog of unresolved leaks remains high at 359. This is due to an increase in the number of reported leaks in the current financial year (FY2022/23),

which is already exceeding the total number of reported leaks for the entirety of the previous financial year. While there are no specific projections for the number of leak repairs forecast to be completed in the coming financial year (FY2023/24), the current backlog number suggests that a greater number of repairs will be necessary to prevent further escalation of the backlog.

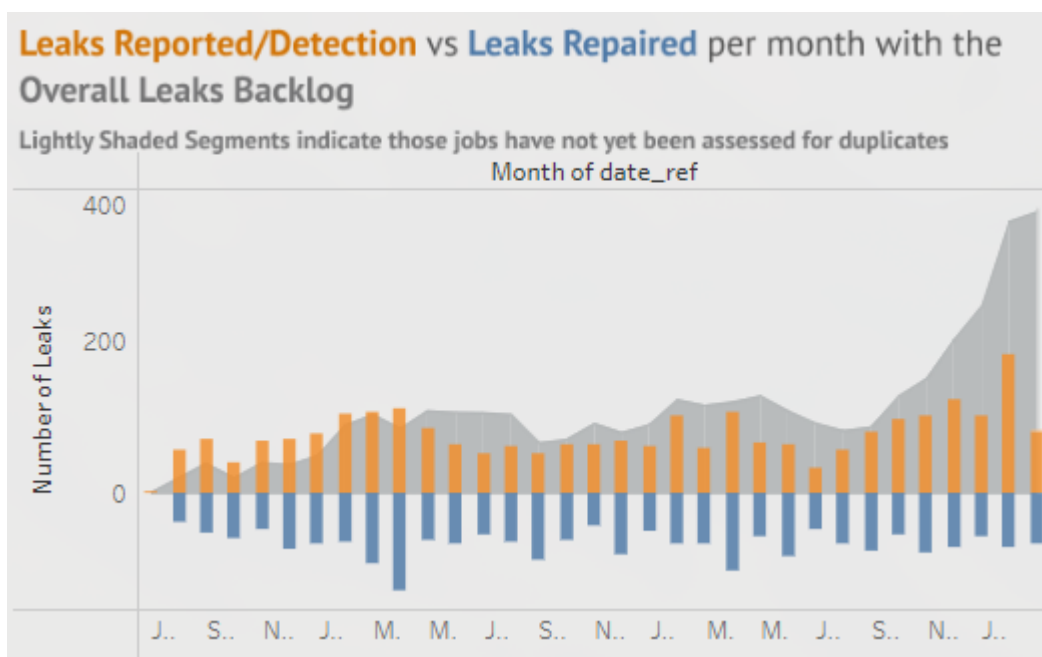


Figure 5: Reported, Repaired and Backlog Leaks – July 2020 – Feb 2023

Any significant reduction of subcontractor spend will likely drive skilled workers elsewhere and securing them back, if additional funding becomes available, will take time. We note that the current customer service request backlog sits at 547 (see Figure 6 below) and increases to this number would likely result in increased customer dissatisfaction.



Figure 6: Number of open jobs (Customer Service Requests) June 2020 - January 2023 as of 15 Feb 2023

- It has been observed that since the first quarter of FY2022/23, the unit price for wastewater and stormwater jobs has experienced a roughly 17% increase. As a result, completing the same number of jobs in the second quarter has become more costly in comparison to the first quarter. Any additional pressure on the reactive maintenance budget is likely to have a significant impact on Wellington Water’s ability to provide appropriate levels of service in FY2023/24.
  - A reduction in after-hours jobs would reduce costs given the penal rates applied. After hours work is mainly governed by the type of work required. There could be a significant risk to local businesses with this approach, as water supplies may be cut during the working day to address issues that could otherwise be addressed at night.
38. It is important to note that the proposed operating budget for FY2023/24 does not account for any allocation of funds for unforeseen emergency events. These types of expenses are typically handled through separate funding channels by the Council.

## Treatment plant

39. The Treatment Plant investment category groups all activities relating to the operation of both wastewater and wastewater joint venture treatment plants. This includes planned and reactive maintenance, operations, and investigations<sup>2</sup>.
40. Wellington Water advises that the majority of the proposed budget for Treatment Plants is unavoidable, covering activities essential in delivering this service.
41. The recommended budget for Treatment Plants for FY2023/24 is \$2.158m, which is \$0.432m above the LTP allocated budget of \$1.726m.
42. In addition to general inflation factors, the following key drivers account for the increase in the recommended Treatment Plant budget:
  - a Consumer Price Index (CPI) of 20% has been assumed impacting management and overhead costs (not included within Wellington Water’s general Management and Advisory Services fee) and maintenance and operational costs
  - variation in the contract with the Plant Manager, Veolia, which is currently under negotiation
43. Figure 7 highlights the growth in the recommended budget for FY2023/24, reflecting the factors noted above driving cost increases.

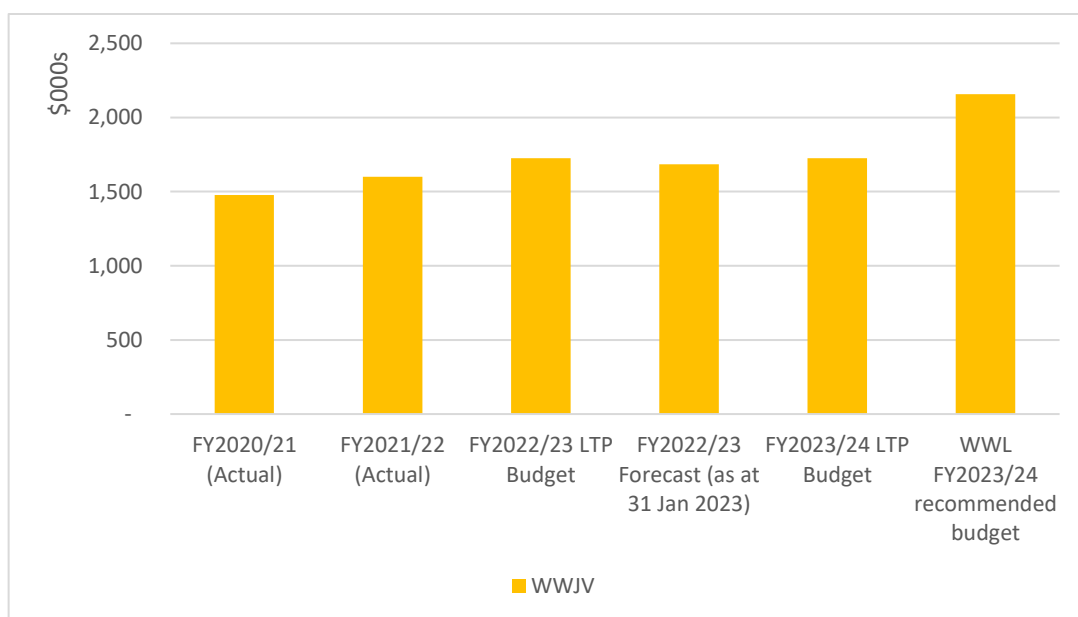


Figure 7: Actual, budget, forecast and proposed Treatment Plant budgets FY2020/21 - FY2023/24

44. Reducing treatment plant planned maintenance would increase the likelihood of equipment malfunction and failure. This could result in a severe disruption to Wellington Water’s operations. Such disruptions could have a significant negative impact on service levels from decreased efficiency in the treatment of wastewater and potential environmental degradation associated with the release of untreated wastewater. As such, it is crucial that we maintain an adequate level of preventative maintenance to minimize the risk of equipment breakdown and ensure continuity of service.

## Management and Advisory Services

45. A total budget of \$1.568m is recommended for Management and Advisory Services. This is \$0.168m higher than the allocated LTP budget of \$1.400m.

<sup>2</sup> This is different to the OPEX budgets for all other activities delivered by Wellington Water which are separated under the relevant investment category.

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.
49. 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.