

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

TO Bruce Hodgins, Strategic Advisor, Hutt City Council

COPIED TO Pete Wells, Manager Service Planning, Wellington Water; Kevin Locke, General Manager Customer Operations, Wellington Water; Jenny Livschitz, Group Chief Financial Officer, Hutt City Council

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

DATE 2 February 2023

Action sought

	Action sought	Deadline
Bruce Hodgins Strategic Advisor, Hutt City Council	Note the contents of this paper	None

Contact for telephone discussion (if required)

Name	Position		1st Contact
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Purpose

1. This paper provides supporting detail requested by the Hutt 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 the earlier advice to Council dated 2 December 2022 (*'Advice to Hutt City Council (HCC) Regarding Three Waters Operating Expenditure for the 2023/24 Annual Plan'*).

Recommended action

2. It is recommended that Council:
 - a. **note** that Hutt City Council's confirmed OPEX investment in Three Waters is \$25.602m for inclusion in the 2023/24 draft Annual Plan for public consultation including the \$1.490m uplift approved by Council on 20 December 2022;
 - b. **note** that Wellington Water recommends an OPEX budget of \$29.974m 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 \$25.602m;
 - 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

3. In our preliminary advice to you dated 4 November 2022 (*'Preliminary Three Waters 2023/24 Annual Plan OPEX advice for Hutt 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 2 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 12 January 2023, 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 including the additional funding of \$1.490m approved by Council on 20 December 2022.

Wellington Water's recommended Three Waters Operating Investment

Wellington Water's recommended OPEX budget for the 2023/24 financial year is \$29.974m

6. Table 1 provides a breakdown of Wellington Water's recommended changes to the 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	Current Approved Budget FY22/23	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	1,736	1,578	2,014	436	28%
	Operations	56	55	66	11	20%
	Planned Maintenance	923	1,205	1,564	359	30%
	Reactive Maintenance	3,055	3,788	4,927	1139	30%
DW Total		5,769	6,626	8,571	1,944	29%
Stormwater (SW)	Monitoring & Investigations	977	635	965	330	52%
	Operations	26	26	30	4	15%
	Planned Maintenance	770	781	1,025	245	31%
	Reactive Maintenance	759	699	975	276	39%
SW Total		2,532	2,141	2,995	854	40%
Wastewater (WW)	Monitoring & Investigations	1,237	1,276	1,655	379	30%
	Operations	98	107	110	3	3%
	Planned Maintenance	598	672	749	77	11%
	Reactive Maintenance	1,664	1,538	1,665	127	8%
	Treatment Plant	344	315	249	(65)	(21%)
WW Total		3,941	3,907	4,428	520	13%
Wastewater Joint Venture (WWJV)	Monitoring & Investigations	2847	231	435	203	88%
	Operations	20	20	23	3	15%
	Planned Maintenance	501	867	646	(221)	(25%)
	Reactive Maintenance	366	500	593	93	19%
	Treatment Plant	6,197	7,002	8,119	1,117	16%
WWJV Total		7,367	8,620	9,816	1,196	14%
Management Total	Management and Advisory Services	3,354	4,308	4,164	(144)	(3%)
Grand Total		22,963	25,602	29,974	4,372	17%

7. Since our advice of 2 December 2022, further information has become available resulting in an additional \$0.736m to be proposed over our recommended budget of \$29.238m. This is due to:
 - changes to the power estimate within the Treatment Plant investment category (additional \$0.569m); and
 - the omission of budget in FY2023/24 for the continued development of the asset register within the Monitoring and Investigations investment category (additional \$0.167m).
8. 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.

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 which was not accounted for in our 2 December 2022 advice.
16. A total budget of \$5.069m is recommended to meet forecast monitoring and investigations costs. This is an uplift of \$1.349m over the FY2023/24 LTP allocated budget of \$3.720m. Table 2 below provides the breakdown of the recommended budget by water type.

Table 2: 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	1,578	2,014	436
	Stormwater	635	965	330
	Wastewater	1,276	1,655	379
	Wastewater Joint Venture	231	435	204
	Total	3,720	5,069	1,349

17. The recommended increase to the Monitoring and Investigations investment category is for:
- investigations, including for inflow and infiltration studies to drive water quality, stormwater network and catchment master plans, growth modelling, an overflow strategy, and a flood management strategy; the Hutt Valley Joint Venture trunk mains; to meet increased levels of service for the Active Leak Control Programme; resilience, fireflow, pressure management, and reservoir structural assessments; and wastewater overflow reduction and frequency
 - 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 and the development of pump station asset management documents
 - increased laboratory costs and new sampling programmes required to meet changing water regulation and new resource consent requirements.
18. The Monitoring and Investigations investment category contains some unavoidable costs for activities already committed or to meet statutory requirements.
19. Of the \$0.960m recommended budget for monitoring activities within the Monitoring and Investigations investment category, most is considered unavoidable costs required to undertake sampling and testing activity, or monitoring to meet consent requirements. This also covers HCC’s share of software which had not previously been budgeted for.
20. Within the investigations activities, approximately \$1.790m 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.
- General investigations account \$1.456m of the recommended Monitoring and Investigations budget. These investigations include a mix of unavoidable activity, and activity that could be deferred, depending on their association with compliance to safety regulations. The risks of not funding these items are varied, but mainly relate to significantly limiting WWL’s ability to understand the life and condition of assets, and the ability to prepare for future climate change (modelling), to report emission reductions, and to understand how we can achieve 2050 emissions targets.
- 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 \$1.119m of the recommended Monitoring and Investigations budget for FY2023/24. This is an increase of \$0.354m above the \$0.765m 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 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
- Human health monitoring (HHMP) is a component of the budget for wastewater investigations. The requested budget for these activities, which typically incur costs of around \$10,000 to \$15,000 per event, is \$0.242m. A significant portion of this budget (approximately \$60,000) is unavoidable being necessary for mitigating potential impacts on human health.

Operations

21. 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.
22. A total budget of \$0.229m is recommended to meet forecast operations costs. This is an uplift of \$0.021m over the FY2023/24 LTP approved budget of \$0.208m 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
- additional preventative maintenance to maintain the capacity and capability of control system assets.

23. Table 3 below provides the breakdown of the recommended budget by water type.

Table 3: 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	55	66	11
	Stormwater	26	30	4
	Wastewater	107	110	3
	Wastewater Joint Venture	20	23	3
	Total	208	229	21

24. Figure 1 highlights that the recommended budget for FY2023/24 is only marginally higher than the forecast expenditure in FY2022/23, and below the actual expenditure in FY2021/22.

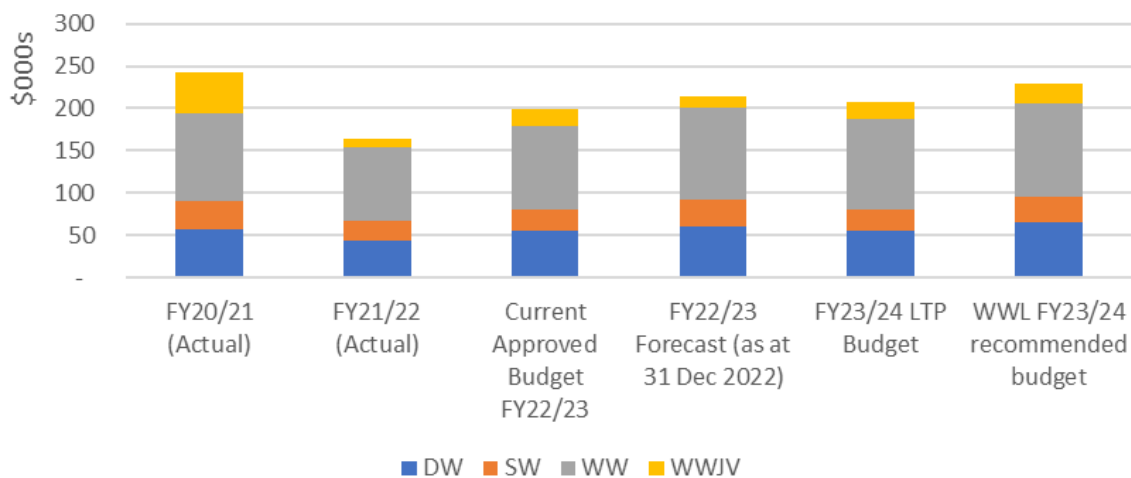


Figure 1: Actual, budget, forecast and proposed operations budgets for FY2020/21 - FY2023/24

25. 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 (\$0.046) 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

26. The planned maintenance investment category includes water and wastewater pump station, utility and network asset maintenance, and stormwater maintenance activities.
27. A total budget of \$3.984m is recommended to meet forecast planned maintenance costs. This is an uplift of \$0.460m over the FY2023/24 LTP allocated budget of \$3.525m. Table 4 below provides the breakdown of the recommended budget by water type.

Table 4: 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	1,203	1,564	359
	Stormwater	781	1,025	245
	Wastewater	672	749	77
	Wastewater Joint Venture	867	646	(221)
	Total	3,525	3,984	460

28. 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 is 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.
29. Figure 2 highlights the growth in the recommended budget for FY2023/24, reflecting the factors noted above driving cost increases.

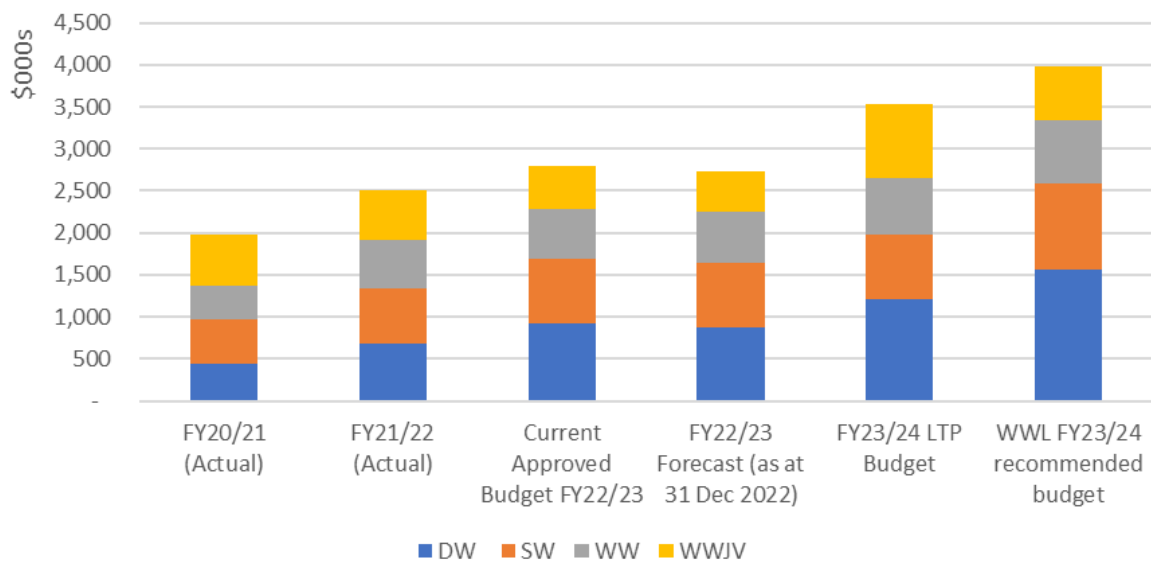


Figure 2: Actual, budget, forecast and proposed planned maintenance budgets FY2020/21 - FY2023/24 (\$000s)

30. 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 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

31. A total budget of \$8.161m is recommended for reactive maintenance activities. This is an uplift of \$1.635m from the FY2023/24 LTP approved budget of \$6.526m (including the additional \$1.020m approved by Council on 20 December 2022).
32. Table 5 below outlines Wellington Water’s recommended changes to the allocated Reactive Maintenance FY2023/24 OPEX budget.

Table 5: 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	3,788	4,927	1,139
	Stormwater	699	975	276
	Wastewater	1,538	1,665	127
	Wastewater Joint Venture	500	593	93
	Total	6,526	8,161	1,635

33. 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.
34. 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.
35. Figure 3 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 3, Wellington Water’s recommended budget increase is consistent with current trends, noting that current forecasts for FY2022/23 indicate expenditure of \$7.066m for reactive maintenance.

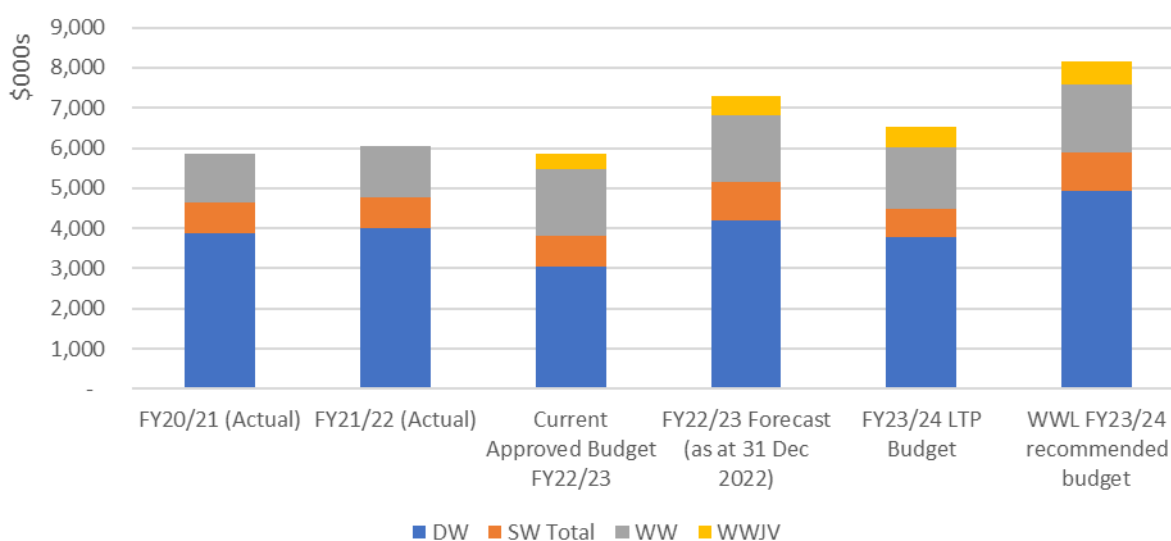


Figure 3: Actual, budget, forecast and proposed reactive maintenance budgets FY2020/21 - FY2023/24

36. Within the Reactive Maintenance investment category recommended budget, \$0.425m could be deferred, however, there is a risk in doing so. This funding is being requested to enable an uplift in strategic leak repairs as part of the Sustainable Water Supply and Demand programme (\$0.225m), and carbon reduction for the wastewater joint venture (\$0.200m). We strongly recommend as a priority, consistent with Council’s early signals, increased investment in Sustainable Water Supply activities.
37. Approximately \$6.159m of 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 4) 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 backlog of unresolved leaks remains high at 325. 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, which is 41% higher than the total backlog of the previous financial year, suggests that a greater number of repairs will be necessary to prevent further escalation of the backlog.

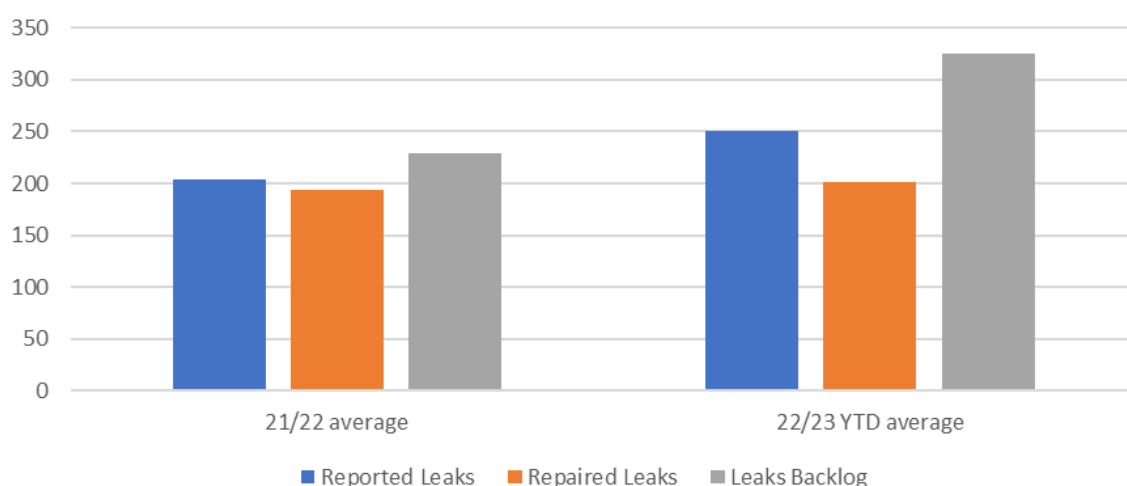


Figure 4: Reported, Repaired and Backlog Leaks – FY21/22 – FY 22/23 (Year to date)

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 job backlog sits at over 1,014 jobs (see Figure 5) and increases to this number would likely result in increased customer dissatisfaction.



Figure 5: Number of open jobs (June 2020 - January 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 37% 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 investigations¹.
40. Wellington Water advises that 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 \$8.368m, which is \$1.052m above the LTP allocated budget of \$7.316m, as indicated in Table 6 below:

Table 6: Summary of proposed Treatment Plant OPEX for FY2023/24 by water type

Investment Category (\$000s)	Water Type	2023/24 LTP Budget	2023/24 Proposed Budget	Increase above LTP Budget
Treatment Plant	Wastewater	315	249	(65)
	Wastewater Joint Venture	7,002	8,119	1,117
	Total	7,316	8,368	1,052

42. As a proactive measure, Wellington Water has already implemented cost savings by deferring treatment plant investigations, resulting in a reduction of \$0.65m in the wastewater budget. This has

¹ This is different to the OPEX budgets for all other activities delivered by Wellington Water which are separated under the relevant investment category.

been reflected in the recommended budget numbers and explains why the proposed budget is lower than the LTP approved budget.

43. In addition to general inflation factors, the following key drivers account for the increase in the recommended Treatment Plant budget (both Wastewater and Wastewater Joint venture):
- a 15% increase has been assumed over projected costs for FY2022/23 for gas
 - the cost of power is expected to increase in FY2023/24 by 55% over the current FY2022/23 budget²
 - the tariff for sludge disposal is increasing from \$207/tonne in FY2022/23 to \$347/tonne for FY2023/24 (including GST and the plant operator’s 9% markup)
 - 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
 - increase in outfall pipe maintenance – we have budgeted an allowance for two incidents in FY2023/24 based on current trends.
44. Figure 6 highlights the growth in the recommended budget for FY2023/24, reflecting the factors noted above driving cost increases.

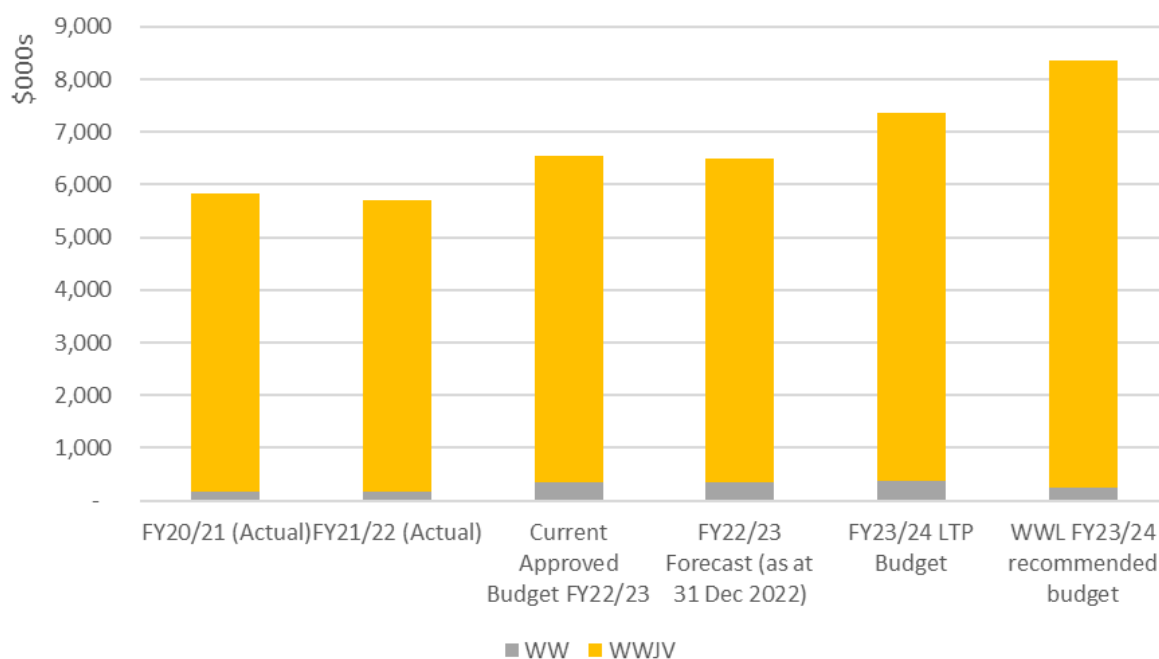


Figure 6: Actual, budget, forecast and proposed Treatment Plant budgets FY2020/21 - FY2023/24

45. Reducing treatment plant planned maintenance would increase the likelihood of equipment malfunction and failure. This could result in a severe disruption to treatment plant 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 an adequate level of preventative maintenance is maintained to minimise the risk of equipment breakdown and ensure continuity of service.

² Figures based on the January 2023 approved electricity tender recommendation.

Management and Advisory Services

46. A total budget of \$4.164m is recommended for Management and Advisory Services. This is \$0.144m lower than the allocated LTP budget of \$4.308m (including the uplift approved by Council on 20 December 2022).
47. The reason for this difference is due to a difference in the information held between Wellington Water and the Council's systems which has since been resolved. It is recommended this difference be used to address the shortfalls identified within other investment categories.