

Purpose: Articulation to Councils risks that Wellington Water are not resourced to control and the alignment to Wellington Water overarching risks.

Item	Issue	Circumstances	Overarching Risk	Overarching Risk Context
1	Murphy Street Interceptor overflow	WWL operational and customer response plans in-place. Interim work will have limited impact on flooding of private property with wastewater contaminated stormwater. Response plan focuses on tolerating the risk and minimising public health risk. Three key customers have been informed. Investigation to understand required remedial action underway.	Unplanned critical three waters asset failure	The interceptor system is beyond capacity from the excessive inflow and infiltration meaning that we have uncontrolled discharges to the road and private property. Insufficient funding of asset condition surveys has resulted in WWL being unable to accurately predict where and when WCC assets will fail. Unplanned asset failures require immediate responses which impact on provision of core services.
2	Western WWTP outfall pipeline damage due to rainfall and surrounding environment.	Outfall in an unstable environment and requires significant OPEX and CAPEX investment to remain operational. Options report prepared, awaiting investment decision.		Repeated occurrences of known stormwater asset failures and consequential damage to wastewater infrastructure caused by severe weather events. Known defects in the storm water capacity cause repeated and predictable surface flooding of roads and properties. There is the potential for stormwater flooding to be contaminated with sewage potentially causing public health and environment issues.
3	Inlet Pump Station at Moa Pt is in a very poor condition.	The likelihood of failure is high. Consequence of failure would be very likely to lead to prosecution due to an untreated discharge to the short outfall. Options are available for the Inlet Pump Station. Significant CAPEX will be required to mitigate the risk.		Investment may need to be re-prioritised to meet the asset condition and redundancy requirements.
4	Michael Fowler Storm Tank and Stormwater main - proposal to build over it.	Storm tank requires access for maintenance/operations and end of life replacement and does not have odor treatment. The tank is also not designed for additional structures to be constructed over or beside it. Stormwater main is a large aged asset constructed from bricks.		Building over critical infrastructure compromises the resiliency and reliability. Historic WCC growth planning had not allowed for regional and city infrastructure 3 Water limitations. Historic development / buildings constructed over stormwater and wastewater infrastructure. Critical wastewater and stormwater assets are compromised by Council approvals that don't factor infrastructure asset management, operations and associated increased costs due to changes in land use.
5	Condition of Very high criticality assets under Wellington Airport land. Several significant pipe lengths have been revealed in very poor condition.	Currently working through investigation and contingency plans and planning for renewal. Discussions with Airport continue. Structural assessment on taxi way crossing has confirmed protection is in place around the pipe which hasn't been affected.		Resiliency of critical three waters infrastructure co-located on restricted and/or regionally significant infrastructure site. Three waters assets with the potential to impact regionally significant assets. Carrying remedial works in these locations is very complex and can result in major disruption to the community. There is significant cost associated with these situations.
6	Southern landfill sludge facility resiliency is becoming mechanically fragile.	Changed the renewal strategy for the Sludge facility at the landfill meaning that operational costs are increasing, and reliability is decreasing.		Extending plant components beyond their economic life to align with the sludge minimisation project introduces an increased risk of asset failure. This has the potential to impact landfill operations and the Moa Point WWTP compliance.
7	Reservoirs condition means they are vulnerable to contamination.	Ageing reservoir assets require increasing levels of operational maintenance in a constrained operational funding environment. This increases the risk of contamination of water supply. Programme of works identified for remediation, funded through reprioritisation of other work. This will potentially have impacts on other assets i.e., deferring proactive operational maintenance and capital pipe renewals.		Asset condition has the potential to compromise the provision of safe drinking water. WWL budgets in compliance with the LTP which highlight areas of insufficient funding to maintain, operate and repair assets. Reprioritisation of OPEX and CAPEX spend will have flow on impacts to other areas. Failures of critical assets impacts the ability to provide safe and healthy water to our communities.
8	Significant and growing renewals back log in water and wastewater due to age profile of pipe materials.	Aging infrastructure, leakage, blockages / overflows, seepage. Increased capex spend but this still does not address the backlog.		Results in more operational cost impacting proactive maintenance. WWL budgets in compliance with the LTP which highlight areas of insufficient funding to maintain, operate and repair assets. CAPEX spend is insufficient to address the backlog. Over time poor condition impacts means more failures and lower levels of service impacting operational spend. Industry capacity is constraining our ability to deliver on the required backlog of capital renewals. Building industry capacity requires sustained ongoing uplift of CAPEX and OPEX funding.
9	Wastewater main near BP Horokiwi services parts of Newlands continual failures and difficult to maintain. Legacy land development site where the accepted solution has proved to be extremely difficult to maintain reliably.	Wastewater main has failed twice causing untreated wastewater to discharge to the environment and incur significant OPEX cost. If this goes again this will be significant and will require significant repair. On-going monitoring suggests we have another leak. Long term solution is to re-route the pipe. Condition assessment complete. Need to be considered for investment. Pipe services a number of properties in the Newlands area.		Assets located in unstable environment and poor asset development. Historic development of wastewater infrastructure compromised by Council approvals that don't factor infrastructure asset management, operations and associated increased costs due to high maintenance infrastructure. Limited alternative solutions available. This type of system would not be accepted in current land development environment.

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10	Coastal stormwater outfalls experiencing sea level risk resulting in increased sedimentation and need for more frequent clearing.	<p>The OPEX budgeted provided by WCC does not include adequate allowance for the costs of responding to sea level rise.</p> <p>Response to maintain levels of service are not optional and result in un-forecasted pressures on the OPEX budget.</p>	Operational funding	<p>Insufficient OPEX to maintain current levels of service.</p> <p>WCC has not agreed a level of service that will be provided within the agreed budget.</p> <p>WWL budgets in compliance with the LTP which highlight areas of insufficient funding to maintain, operate and repair assets.</p> <p>WCC has not communicated to the public the expected reduction in services.</p>
11	Closed Landfill leachate Houghton Bay.	<p>Legacy landfill closed in 1971, however leachate from the old landfill gets into the stormwater culvert below the landfill.</p> <p>There is a dry weather diversion to wastewater, however this frequently overtops and results in leachate discharging to Houghton Bay with associated environmental and aesthetic (orange discharge, foam and hydrocarbon odor).</p> <p>Resolution requires landfill remediation.</p>		<p>Non-three waters asset issues impacting already constrained OPEX budgets. Due to the discharge going into stormwater we have been forced into managing this issue.</p> <p>The core issue relates to a grandfather landfill which was not designed to modern standards and is proving very difficult to mitigate effects along with current community expectations. This should be a contaminated site issue rather than a stormwater infrastructure issue.</p> <p>Ongoing expenditure of all already tight OPEX budget on non-three waters infrastructure issues.</p>
12	Global stormwater consent impacted by plan changes.	<p>Changes to the Regional Plan and Waitua implementation means there may be changes/review of the global stormwater consent. This may lead to a need for more investment to meet any proposed conditions.</p>		<p>New level of service for stormwater quality set through Regional plan and Waitua implementation plant that we may not be able to meet.</p> <p>There is no funding allocated in the LTP.</p> <p>Investment may be required to meet the environmental and consent conditions.</p>
13	Severe weather events result in OPEX Budget exceedance.	<p>The OPEX budgeted provided by WCC does not include adequate allowance for the costs of responding to severe weather events.</p> <p>Response to events are not optional and result in un-forecasted pressures on the OPEX budget.</p>		<p>Insufficient OPEX to maintain current levels of service.</p> <p>WCC has not agreed a level of service that will be provided within the agreed budget.</p> <p>WWL budgets in compliance with the LTP which highlight areas of insufficient funding to maintain, operate and repair assets.</p> <p>WCC has not communicated to the public the expected reduction in services.</p>
14	Moa Point condition is leading to on-going compliance issues. The redundancy of Moa Point is inadequate for major maintenance while ensuring compliance can be met.	<p>Operating plant at or near capacity results in an increased likelihood of breakdowns and/or compliance failure.</p> <p>We are working with Veolia on updating asset management planning and condition assessment. Early signals are that more than double the existing expenditure is required to maintain the level of service.</p> <p>The Moa Point plant has come to a time in its asset life where major renewals and operational intervention is required to ensure it meets both capacity and compliance requirements. This means investment will be required in the short term. The lack of redundancy means that any maintenance and renewal is complex and risks compliance because treatment capacity is not available.</p>	Treatment of wastewater	<p>Treatment capacity cannot be ensured due to the condition of the asset and inadequate redundancy.</p> <p>Investment may need to be re-prioritised to meet the asset condition and redundancy requirements.</p> <p>Repeated occurrence of known wastewater treatment plant asset failures</p> <p>Known defects in the waste assets occur resulting in environmental impact – clarifier 3 failure, UV system at end of life and spares are no longer available in NZ – spares ordered awaiting delivery in a constrained supply chain environment. Continued levels of non-compliance lead to escalating instructions (abatement notices and prosecution).</p>
15	Completely reliant on Southern Landfill acceptance of sludge from wastewater treatment plants.	<p>If the sludge minimisation project does not go ahead our ability to meet consent requirements will be compromised.</p> <p>There are not any other options for landfill disposal in Wellington region, potentially requiring sludge to be transported to Waikato region.</p>		<p>Non-compliance with consents and discharge of high levels of sludge to the environment.</p> <p>Alternative options would be very operationally expensive.</p> <p>Discharges of sludge would cause cultural and environmental harm.</p> <p>High likelihood of prosecution.</p>
16	Cyber risk is growing globally and as a critical infrastructure organisation the right level of investment must be made to protect against cyber attack.	<p>Cyber security requires a number of controls that must be kept current.</p>	Cyber security breach	<p>Successful cyber attack has the potential to impact services to customers.</p>
17	Water demand for Wellington City is outstripping supply due to water loss in the network and growth.	<p>Demand driven by network age and condition, water loss, private side water loss and growth.</p> <p>Resourcing constraints are impacting our ability to mitigate / reduce the loss (metering, data, backlog ,etc.).</p> <p>Operational funding for finding and fixing leaks is constrained.</p> <p>Aging network and increasing renewals backlog is compounding the leakage issue.</p> <p>Despite increasing funding for leak repairs the issue will be ongoing because of the growing leak backlog.</p>	Water supply shortage	<p>Condition of the network impact's ability to supply sufficient water to customers.</p> <p>Demand outpaces supply capacity and Level 3 restrictions or worse are required for the region during summer.</p> <p>Cost of additional source capacity for the region is significant (800m+).</p> <p>WWL budgets in compliance with the LTP which highlight areas of insufficient funding to maintain, operate and repair assets.</p> <p>The increasing reactive leak repair costs impacts on other proactive maintenance work.</p> <p>This leads to knock on impacts on operational funding across all activities including proactive maintenance and therefore increases reactive costs over time as assets age and deteriorate.</p>