

## Attachment B: Quarterly Update - Waters Planning Projects – October 2020

Project Description	Current Update (key matters)	Next Steps and Identified Risks
<b>Planning Projects</b>		
<b>Wastewater Projects</b>		
<p><b>Eastern Corridor wastewater study</b></p> <p>Study purpose is to review corridor needs and progress a concept to renew and upgrade the existing wastewater trunk network (including pump stations) from the boundary of Te Tumu to the Te Maunga wastewater treatment plant.</p> <p>Much of the upgrades to the wastewater system along the eastern corridor are required regardless of whether Te Tumu is being developed to accommodate growth in Papamoa and Wairakei and to address existing operational and renewal issues.</p>	<ul style="list-style-type: none"> <li>• Feasibility study has been finalised and identified a preferred route alignment. Natural hazards resilience a key consideration in options assessment.</li> <li>• Finalised feasibility study has been presented to UFTD committee on the 9th of June and endorsed in principal.</li> <li>• An independent consultancy (ALTA) review costs and revised budgets from last LTP are being entered into the proposed LTP.</li> </ul>	<ul style="list-style-type: none"> <li>• After confirmation of budget availability through the LTP process projects will progress to preliminary design and detailed design for staged delivery.</li> <li>• Develop a programme of communication and engagement with the community as the project will go through a range of established urban areas and communities.</li> </ul>
<p><b>Western Corridor Wastewater Study</b></p> <p>Study purpose is to identify preferred trunk network (including pump stations) to service the western growth area, including Tauriko West, Lower and Upper Belk, Keenan, Joyce and Merrick Road areas. Some of these areas have been confirmed by the SmartGrowth Partnership for urbanisation while others are potential long-term growth options. The network would connect to the Southern Pipeline via Maleme Street, Greerton. A core consideration for this study is the staging to service the various planned and potential growth areas over time.</p>	<ul style="list-style-type: none"> <li>• The feasibility study has been finalised and endorsed the proposed solution. It also endorsed the timely implementation of the interim part of the solution subject to budget being available.</li> <li>• The preliminary design of the interim solution has been commissioned and is being progressed.</li> <li>• Project costs are being entered into the proposed LTP.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue design and delivery of interim part of solution.</li> </ul>

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<p><b>Te Maunga Ocean Outfall Project</b></p> <p>The ocean outfall is a critical component of the public wastewater network. It is in poor condition (both landward and marine sections) and cannot physically withstand the pressures required to deliver the consented maximum discharge rate of 900 L/s. Increasing wastewater flows due to growth are also raising the average daily volumes and peak flows placing further pressure on the outfall system.</p> <p>These constraints mean that Council must, to build resilience and mitigate the consequence of failure undertake a review into the future of the marine section and upgrade the landward section.</p> <p>The landward upgrade is programmed to commence in the 2020/21 financial year (late 2020) and the marine section is currently programmed in the LTP to be operational by 2028.</p>	<ul style="list-style-type: none"> <li>• The need for this project is being discussed with the Wastewater Review Committee. Members of the committee raised concerns about the use of the previous desludging pond as a flow balancing pond. The full removal of this pond would require a wider assessment of storage and flow management options throughout the network.</li> <li>• The feasibility of relining the existing marine section of the outfall pipe has been assessed and concluded that relining is generally possible. Further tests to confirm the condition of the existing pipeline need to be carried out before a final call on this option and the potential cost can be made. This is currently being delayed due to COVID.</li> </ul>	<ul style="list-style-type: none"> <li>• Landward upgrade – First stage of a two-stage procurement process has commenced for procurement of a contractor for construction. Community engagement campaign will commence 1 October 2020 to inform local residents of the project</li> <li>• Pipe Condition Survey has commenced. First stage completed and waiting for a suitable weather window to complete the survey.</li> <li>• Continue discussions with Wastewater Management Review Committee.</li> <li>• Continue with the implementation of the landward section of the coastal outfall.</li> <li>• Carry out a review of the coastal outfall options in consideration of the identified issues. This will be done in line with the strategic wastewater planning and modelling project and will take the form of an Indicative Business Case which is due to commence in October.</li> <li>• Proceed with engagement of a cultural advisor to prepare an overarching cultural engagement plan to encompass the majority of wastewater workstreams underway. The plan would ensure that Council has a cohesive approach to cultural engagement going forward. This Plan would be presented to the Wastewater Management Committee for their endorsement prior to its implementation.</li> </ul>

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<b>Planning Projects</b>		
<b>City Intensification (Te Papa)</b>	<ul style="list-style-type: none"> <li>• Te Papa intensification scenario has been modelled, and strategic network upgrades have been identified and incorporated in the proposed LTP.</li> <li>• In addition, budgets for local network upgrades have been identified through a spatial planning exercise and have been entered into the proposed LTP. This exercise also identified areas where intensification in Te Papa can be facilitated more easily or require wastewater upgrades first. This has been based on Te Papa intensification maps used for public engagement.</li> <li>• Further refinements of infrastructure investment requirements are underway to facilitate Te Papa intensification plan.</li> </ul>	<ul style="list-style-type: none"> <li>• After confirmation of budget availability through the LTP process projects will be further refined through feasibility studies.</li> </ul>

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Project Description	Current Update (key matters)	Next Steps and Identified Risks
<b>Planning Projects</b>		
<b>Water Supply Projects</b>		
<p><b>Western Corridor Water Supply Study</b></p> <p>Study purpose is to identify preferred water supply trunk network to service the western growth area, including Tauriko West, Lower and Upper Belk, Keenan, Joyce and Merrick Road areas. Some of these areas have been confirmed by the SmartGrowth Partnership for urbanisation while others are potential long-term growth options. A core consideration for this study is the staging to service the various planned and potential growth areas over time.</p> <p>The western corridor is and will be serviced by the existing water take at Joyce Road.</p>	<ul style="list-style-type: none"> <li>The Western Corridor Water Supply Study has been delivered and is internally being reviewed.</li> <li>As part of this work it has become apparent that the city's water supply is under more pressure than previously understood. This will largely be relieved when the Waiari water supply comes on stream – currently scheduled for 2022. Further investigations through the development of the 30 Year Infrastructure Strategy for Water Supply identified the critical pieces of work to address this issue.</li> <li>Identified projects have been entered into the proposed LTP.</li> </ul>	<ul style="list-style-type: none"> <li>Servicing additional growth areas in the western corridor is constrained in the short-term due to availability of water supply from our existing water takes and treatment plant capacity until the new water take from Waiari and all related network upgrades have been carried out. This may also have implications for the ability to accommodate large water users.</li> <li>The next step is to complete the study and report it to UFTD.</li> </ul>
<p><b>Eastern Corridor Water supply</b></p> <p>(extension of current pipeline work from Waiari to the Mount)</p>	<ul style="list-style-type: none"> <li>Stage 1 is currently being delivered by the PMO.</li> <li>Stage 2 (Welcome Bay roundabout to Mangatawa) requires a feasibility study before it can move forward to delivery.</li> <li>Stage 3 (Mangatawa to Mount Maunganui) concept option report has been received.</li> <li>Updated budgets are being entered into the proposed LTP.</li> </ul>	<ul style="list-style-type: none"> <li>The Papamoa and Mount suburbs are currently being supplied with water from the Joyce Treatment Plant. The extension of the Waiari water supply all the way to the Mount is critical to take off pressure on the Joyce supply network so capacity can be reallocated to service growth in the western corridor.</li> <li>The key next step for planning is to complete the Stage 3 option report and report to UFTD.</li> </ul>
<p><b>City Intensification (Te Papa)</b></p>	<ul style="list-style-type: none"> <li>Te Papa intensification scenario has been modelled, and strategic network upgrades have been identified and incorporated in the proposed LTP.</li> <li>In addition, budgets for local network upgrades have been identified through a spatial planning exercise and have been entered into the proposed LTP. This exercise also identified areas where intensification in Te Papa can be facilitated more easily or require wastewater upgrades first. This has been based on Te Papa intensification maps</li> </ul>	<ul style="list-style-type: none"> <li>After confirmation of budget availability through the LTP process projects will be further refined through feasibility studies.</li> </ul>

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<b>Planning Projects</b>		
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	<p>used for public engagement.</p> <ul style="list-style-type: none"><li>• Further refinements of infrastructure investment requirements are underway to facilitate Te Papa intensification plan.</li></ul>	

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Project Description	Current Update (key matters)	Next Steps and Identified Risks
<b>Planning Projects</b>		
<b>Stormwater Projects</b>		
<p><b>Tauriko West comprehensive stormwater consent</b></p> <p>The purpose of this project is the preparation of a comprehensive stormwater resource consent for this growth area to be lodged at the time of the plan change notification to ensure good alignment of stormwater and land use planning.</p> <p>The resource consent will guide how developers manage stormwater in Tauriko West. Stormwater infrastructure costs fall on developers not the Council.</p>	<ul style="list-style-type: none"> <li>• An initial planning assessment against current policy and regional plan provisions has been carried out.</li> <li>• A stormwater design philosophy has been drafted for the Tauriko West development area, which will form the basis of the stormwater management plan and any associated consent applications. Landowners and developers are currently providing input into this document.</li> <li>• A stormwater management plan to support the comprehensive consent application is currently being developed taking into consideration the proposed changes to the National Policy Statement and National Environmental Standard for Freshwater Management.</li> <li>• Consultant services have been procured to prepare the comprehensive stormwater consent application which will be processed by the Bay of Plenty Regional Council.</li> </ul>	<ul style="list-style-type: none"> <li>• Complete stormwater design philosophy.</li> <li>• Progress development of stormwater consent application.</li> <li>• The final National Policy Statement National and National Environmental Standards for Freshwater have been gazetted. They have a strong focus on the protection and enhancement of wetlands and streams. Depending on the interpretation of provisions, it could have significant impacts on urban development. A key point we are currently discussing with BOPRC is, if there is a possibility to realign a stream to create more developable land.</li> </ul>
<p><b>Te Tumu stormwater</b></p> <p>Council is preparing a Stormwater Strategy with landowners to guide the philosophy and implementation of stormwater management in Te Tumu. Most of the infrastructure will be delivered by developers, with the exception of the Kaituna Overflow which is to be delivered by Council.</p> <p>The Kaituna overflow is a proposed stormwater channel to allow excess floodwater in Papamoa, Wairakei and Te Tumu to spill into the Kaituna River rather than flood the community. Planning for a</p>	<ul style="list-style-type: none"> <li>• The Stormwater Strategy is being completed. However, this will require reassessment in light of recent freshwater reforms to understand any changes that may be required as a result of the new national policy.</li> <li>• Natural hazard assessment is being undertaken for a range of hazards in Te Tumu to mitigate risk. Building on learnings from Canterbury earthquakes, the overflow channel design will need significant geotechnical works to mitigate risks from the banks spreading in an earthquake.</li> </ul>	<ul style="list-style-type: none"> <li>• Undertake a review of the stormwater strategy considering the new NPS freshwater management.</li> <li>• Update flood modelling and risk assessment once updated BOPRC Kaituna River model is available.</li> <li>• Continue natural hazard investigation and mitigation to understand various options and costs.</li> <li>• Continue engagement with Regional Council and tangata whenua on stormwater planning.</li> <li>• Risks include effects on project viability through national policy changes, opposition to works, and further cost estimate escalation. Council is engaging with stakeholder to understand and mitigate these risks.</li> </ul>

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<b>Planning Projects</b>		
<b>Stormwater Projects</b>		
<p>flood relief overflow on the coast has been ongoing since the 1990s, and in 2008 the Kaituna overflow was consented through the Papamoa Comprehensive Stormwater Consent. The Kaituna overflow channel is required to be constructed as part of the development of Te Tumu. It will be integrated into the development to provide amenity and recreational values as well as flood management</p>		
<p><b>Nanako Stormwater Consent</b></p> <p>A stormwater consent is required to enable discharge of stormwater to the Nanako Stream to enable development of residential zoned land in the Pyes Pa West (The Lakes) area, primarily the undeveloped land in the vicinity of Kennedy Road. The consent will require construction of stormwater devices like ponds, and wetlands, as well as improvements to Kennedy Road where this acts as a dam.</p>	<ul style="list-style-type: none"> <li>Stormwater consent application has been lodged with BOPRC. Stage 1 of the consent (Kennedy Road component) is expected to be granted soon. Stage 2 of the consent (downstream part) is expected to be limited notified to current landowner.</li> </ul>	<ul style="list-style-type: none"> <li>Progress required land acquisitions – initial discussions with landowners identify that there are some risks around land acquisition. If necessary, Council has compulsory acquisition powers under the Public Works Act. It appears that land acquisition processes may delay the ability to deliver the stormwater system necessary to enable land development to continue north of Kennedy Rd.</li> <li>Commence physical works for stormwater solution for land south of Kennedy Rd once consent is granted.</li> </ul>
<p><b>City Intensification (Te Papa)</b></p>	<ul style="list-style-type: none"> <li>The Te Papa design sprint identified that the idea of opening up overland flow/stream corridors with the aim of reducing the amount of flood prone areas is sensible. These blue/green networks would also contribute to the amenity value of the area.</li> <li>Cost estimates for the for 30-year infrastructure strategy and 10-year LTP have been made and will be entered into the proposed LTP.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to explore establishment of blue/green network for Te Papa and general stormwater network capacity for 10-year rainfall event LOS.</li> </ul>

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<b>Planning Projects</b>		
<b>Stormwater Projects</b>		
<b>Large Dam Safety Upgrades (City Wide)</b>	<ul style="list-style-type: none"> <li>• A desk top assessment identified around 40 dams in the Tauranga city area, which would be covered by the new dam safety regulation. In our asset database we only have 3 dams listed.</li> <li>• A meeting with Trustpower Dam Safety Expert was held during Level 4 lockdown and emphasised planning related issues identified by TCC staff. (Operational matters were also covered in this meeting.)</li> <li>• A programme including operational budgets for initial dam assessments and a capital works estimate has been developed and is being put forward to council to consider as part of the LTP process.</li> </ul>	<ul style="list-style-type: none"> <li>• The new regulation is likely to be approved soon after the upcoming central government elections. The operations team will then have to implement procedures for looking after these dams.</li> </ul>

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<b>Planning Projects</b>		
<b>Three Waters Modelling Projects / 30 Year Infrastructure Strategy</b>		
<b>Water Supply Modelling</b>	<ul style="list-style-type: none"> <li>The water supply planning model has been updated and is now available to support LTP and 30-year infrastructure planning.</li> <li>Through the update and planning work on the 30-year infrastructure strategy it has come to light that the existing model has some shortcomings and that it would be of advantage to consider the build of a new planning model using different software. This will be put forward to consider as part of the LTP process.</li> </ul>	<ul style="list-style-type: none"> <li>Next steps are to continue to:               <ul style="list-style-type: none"> <li>Use the model to test water demand management options in regard to their effects on the water supply network, and</li> <li>Explore hydrological model option for resilience planning to fully understand the cities vulnerability of instream low flows and demand needs. This will be put forward to consider as part of the LTP process.</li> </ul> </li> </ul>
<b>Wastewater modelling</b>	<ul style="list-style-type: none"> <li>Dry weather models including all network pipes in place for the whole city. However, wet weather situations are not satisfactorily reflected in model.</li> <li>A strategic model (reflecting the main trunk network) is currently being built, which will be calibrated to simulate wet weather events. A good understanding of the network performance during wet weather is critical to understand risks of potential overflows into our streams and harbour.</li> <li>Strategic monitoring of wet weather flows in the network is accompanying the build-up of the strategic model.</li> <li>Initial results of the strategic model have been used to inform the proposed LTP. However, further refinements will be expected thereafter for the following LTP.</li> <li>The calibrated strategic model has been delivered and has been used for intensification modelling.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to refine the strategic model, so it is fully calibrated against wet weather flows.</li> <li>Use model to help inform a Level of Service discussion with the community as proposed in the 30 Year Infrastructure Strategy.</li> </ul>

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<b>Planning Projects</b>		
<b>Stormwater modelling</b>	<ul style="list-style-type: none"> <li>• Flood models are in place for all areas in Tauranga.</li> <li>• Updates to these models are ongoing to include new developments across the city, updated information on climate change (e.g. rainfall intensities and sea level rise) and general modelling improvements.</li> <li>• All urban flood models have been updated to support Plan Change 27 (TCC Flood Hazard).</li> <li>• The development of a hydrological model for everyday flows with an added water quality function to inform decisions under the new National Policy Statement and National Environmental Standards for Freshwater is being put forward as part of the LTP process.</li> </ul>	<ul style="list-style-type: none"> <li>• Refine presentation of flood model outputs, so flood plains, overland flow paths, and flood prone areas are clearly distinguished on our future flood maps.</li> </ul>
<b>30 Year Infrastructure Strategy</b>	<ul style="list-style-type: none"> <li>• A specific 30-year Infrastructure Plan for each of the three waters has been prepared and is currently being refined. These plans provide the basis for the water related parts of the overarching TCC 30 Year Infrastructure Strategy, provide direction for strategic decision making, and inform LTP development.</li> </ul>	<ul style="list-style-type: none"> <li>• Present key aspects of these strategies to council as part of the LTP Asset Management presentation in October.</li> </ul>